PUB. 140

SAILING DIRECTIONS (PLANNING GUIDE)

★

NORTH ATLANTIC OCEAN AND ADJACENT SEAS

★

Prepared and published by the
NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY
Springfield, Virgina

© COPYRIGHT 2011 BY THE UNITED STATES GOVERNMENT
NO COPYRIGHT CLAIMED UNDER TITLE 17 U.S.C.

2011

TENTH EDITION

Preface

Pub. 140, Sailing Directions (Planning Guide) North Atlantic Ocean and Adjacent Seas, Tenth Edition, 2011, is issued for use in conjunction with the following Sailing Directions (Enroute) Publications:

Pub. 131, Pub. 132, Pub. 141, Pub. 142, Pub. 143, Pub. 145, Pub. 146, Pub. 147, Pub. 148, Pub. 191, Pub. 192, Pub. 193, Pub. 194 and Pub. 195.

Digital Nautical Charts 1, 8. 9, 10, 14, 15, 16, 18, 20, 21, 22, and 28 provide electronic chart coverage for the area covered by this publication.

This publication has been corrected to 19 March 2011, including Notice to Mariners No. 12 of 2011. Subsequent Publication Data Updates (PDUs) have corrected this publication to 9 July 2011, including Notice to Mariners No. 28 of 2011.

Explanatory Remarks

Sailing Directions are published by the National Geospatial-Intelligence Agency (NGA) under the authority of Department of Defense Directive 5105.40, dated 12 December 1988, and pursuant to the authority contained in U. S. Code Title 10, Sections 2791 and 2792 and Title 44, Section 1336. Sailing Directions, covering the harbors, coasts, and waters of the world, provide information that cannot be shown graphically on nautical charts and is not readily available elsewhere.

Sailing Directions (Planning Guide) are intended to assist mariners in planning ocean passages and to eliminate duplication by consolidating useful information about all the countries adjacent to a particular ocean basin in one volume.

Planning Guide publications are compiled and structured in the alphabetical order of countries contained within the region covered by each publication.

Bearings.—Bearings are true, and are expressed in degrees from 000° (north) to 360°, measured clockwise. General bearings are expressed by the initial letters of the points of the compass (e.g. N, NNE, NE, etc.). Adjective and adverb endings have been discarded. Wherever precise bearings are intended, degrees are used.

Charts.—Reference to charts made throughout this publication refer to both the paper chart and the Digital Nautical Chart (DNC).

Corrective Information.—Users should refer corrections, additions, and comments to NGA's Maritime Operations Desk, as follows:

1. Toll free: 1-800-362-6289
2. Commercial: 571-557-5455
3. DSN: 547-5455
4. DNC web site: http://msi.nga.mil/NGAPortal/DNC.portal
5. Maritime Domain website: http://msi.nga.mil/NGAPortal/MSI.portal
6. E-mail: navsafety@nga.mil
7. Mailing address: Maritime Safety Office
   National Geospatial-Intelligence Agency
   Mail Stop N64-SH
   7500 Geoint Drive
   Springfield VA 22150-7500

New editions of Sailing Directions are corrected through the date of publication shown above. Important information to amend material in the publication is available as a Publication Data Update (PDU) from the NGA Maritime Domain web site.

NGA Maritime Domain Website
http://msi.nga.mil/NGAPortal/MSI.portal

Courses.—Courses are true, and are expressed in the same manner as bearings. The directives "steer" and "make good" a course mean, without exception, to proceed from a point of origin along a track having the identical meridional angle as the designated course. Vessels following the directives must allow for every influence tending to cause deviation from such track, and navigate so that the designated course is continuously being made good.

Currents.—Current directions are the true directions toward which currents set.

Distances.—Distances are expressed in nautical miles of 1 minute of latitude. Distances of less than 1 mile are expressed in meters, or tenths of miles.

Geographic Names.—Geographic names are generally those used by the nation having sovereignty. Names in parentheses following another name are alternate names that may appear on some charts. In general, alternate names are quoted only in the principal description of the place. Diacritical marks, such as accents, cedillas, and circumflexes, which are related to specific letters in certain foreign languages, are not used in the interest of typographical simplicity.

Geographic names or their spellings do not necessarily reflect recognition of the political status of an area by the United States Government.

Heights.—Heights are referred to the plane of reference used for that purpose on the charts and are expressed in meters.

Internet Links.—This publication provides Internet links to web sites concerned with maritime navigational safety, including but not limited to, Federal government sites, foreign Hydrographic Offices, and foreign public/private port facilities. NGA makes no claims, promises, or guarantees concerning the accuracy, completeness, or adequacy of the contents of these web sites and expressly disclaims any liability for errors and omissions in the contents of these web sites.

International Ship and Port Facility Security (ISPS) Code.—The ISPS Code is a comprehensive set of measures to enhance the security of ships and port facilities developed in response to the perceived threats to ships and port facilities in the wake of the 9/11 attacks in the United States. Information on the ISPS Code can be found at the International Maritime

Organization web site:

International Maritime Organization Home Page
http://www.imo.org

Lights and Fog Signals.—Lights and fog signals are not described, and light sectors are not usually defined. The Light Lists should be consulted for complete information.

National Ocean Claims.—Information on national ocean claims and maritime boudary disputes, which have been compiled from the best available sources, is provided solely in the interest of the navigational safety of shipping and in no way constitutes legal recognition by the United States. These non-recognized claims and requirements may include, but are not limited to:

1. A requirement by a state for advance permission or notification for innocent passage of warships in the territorial sea.
2. Straight baseline, internal waters, or historic waters claims.
3. The establishment of a security zone, where a state claims to control activity beyond its territorial sea for security reasons unrelated to that state's police powers in its territory, including its territorial sea.

Radio Navigational Aids.—Radio navigational aids and radio weather services are not described in detail. Publication No. 117 Radio Navigational Aids and NOAA Publication, Selected Worldwide Marine Weather Broadcasts, should be consulted.

Soundings.—Soundings are referred to the datum of the charts and are expressed in meters.

Special Warnings.—Special Warnings may be in force for the geographic area covered by this publication. Special Warnings are printed in the weekly Notice to Mariners upon promulgation and are reprinted annually in Notice to Mariners No. 1. A listing of Special Warnings currently in force is printed in each weekly Notice to Mariners, Section III, Broadcast Warnings, along with the notice number of promulgation. Special Warnings are also available on the Maritime Domain website.

Time Zone.—The Time Zone description(s), as well as information concerning the use of Daylight Savings Time, are included. The World Time Zone Chart is available on the Internet at the web site given below.

World Time Zone Chart
http://www.odci.gov/cia/publications/factbook/reference_maps/pdf/time_zones.pdf

Winds.—Wind directions are the true directions from which winds blow.

Reference List

The principal sources examined in the preparation of this publication were:

British Hydrographic Office Sailing Directions.
Canadian Sailing Directions.
French Sailing Directions.
Germany Sailing Directions.
Greece Sailing Directions.
Italy Sailing Directions.
Netherlands Sailing Directions.
Poland Sailing Directions.
Portugal Sailing Directions.
Russia Sailing Directions.
Spain Sailing Directions.
Fairplay Ports and Terminals
The Statesman's Yearbook
The World Factbook

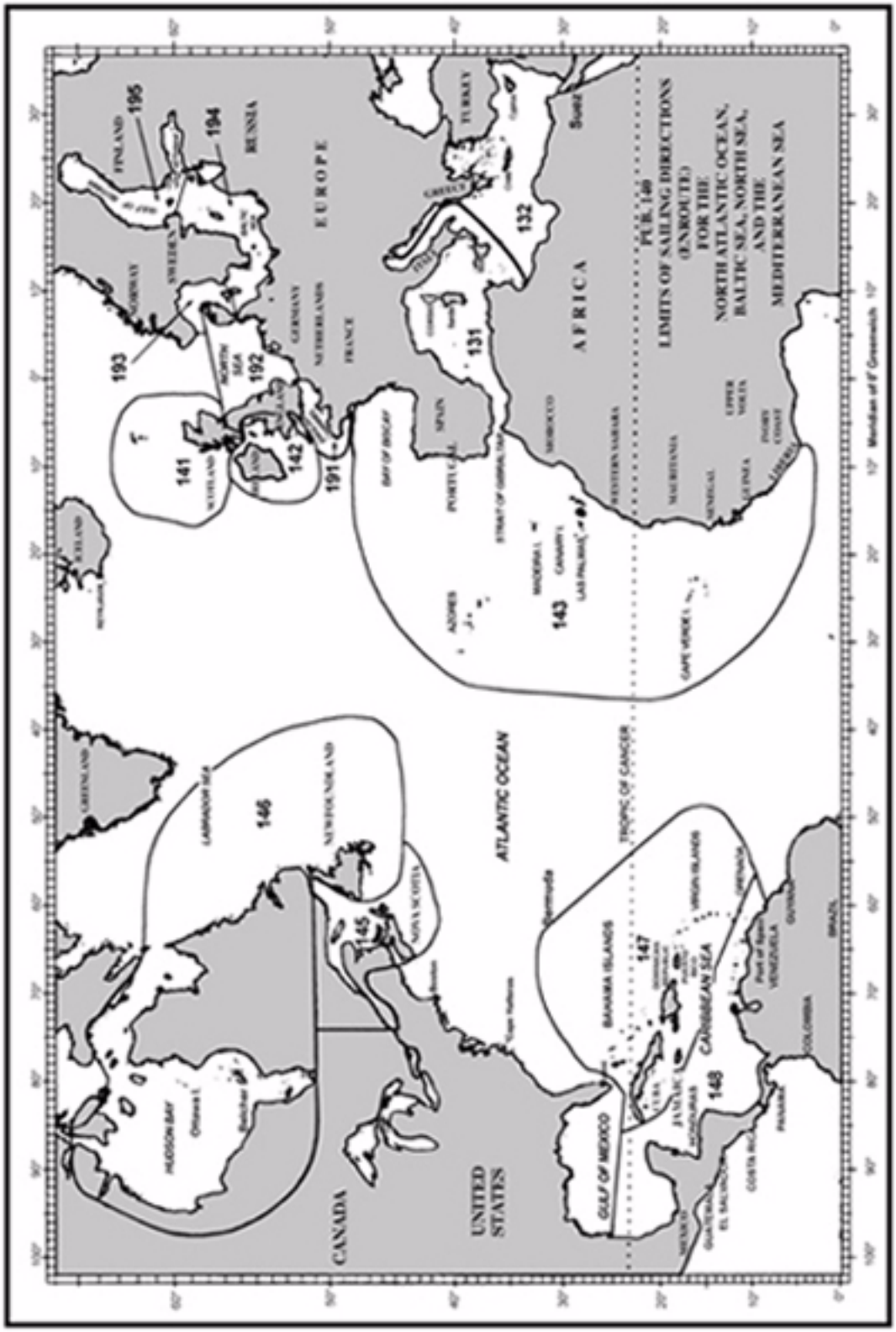
Reports from United States Naval and merchant vessels and various shipping companies.

Other U.S. Government publications, reports, and documents.

Charts, light lists, tide and current tables, and other documents in possession of the Agency.

Internet Web sites, as follows:

1. Department of State/U.S. Embassies.
   http://usembassy.state.gov
2. World Factbook.
   http://www.odci.gov/cia/publications/factbook


PUB. 140
LIMITS OF SAILING DIRECTIONS
(ENROUTE)
FOR THE
NORTH ATLANTIC OCEAN,
BALTIC SEA, NORTH SEA,
AND THE
MEDITERRANEAN SEA
EUROPE
AFRICA
ATLANTIC OCEAN
CANADA
UNITED STATES
CARIBBEAN SEA
GULF OF MEXICO
FINLAND
RUSSIA
GERMANY
NETHERLANDS
FRANCE
SPAIN
PORTUGAL
TURKEY
GREECE
MOROCCO
MAURITANIA
SENEGAL
GUINEA
IVORY COAST
LIBERIA
UPPER VOLTA
GAMBIA
GUINEA-BISSAU
CAPE VERDE
ICELAND
GREENLAND
LABRADOR SEA
NEWFOUNDLAND
NOVA SCOTIA
HUDSON BAY
BAY OF BISCAY
STRAIT OF GIBRALTAR
TROPIC OF CANCER
BAHAMA ISLANDS
JAMAICA
HONDURAS
VIRGIN ISLANDS
GRENADA
VENEZUELA
COLOMBIA
GUYANA
BRAZIL
PANAMA
COSTA RICA
EL SALVADOR
GUATEMALA
MEXICO
Bermuda
Sud
Worldwide w/ F Greenwich
131
132
141
142
143
145
146
147
148
191
192
193
194
195

Conversion Tables

Feet to Meters

Feet	0	1	2	3	4	5	6	7	8	9
0	0.00	0.30	0.61	0.91	1.22	1.52	1.83	2.13	2.44	2.74
10	3.05	3.35	3.66	3.96	4.27	4.57	4.88	5.18	5.49	5.79
20	6.10	6.40	6.71	7.01	7.32	7.62	7.92	8.23	8.53	8.84
30	9.14	9.45	9.75	10.06	10.36	10.67	10.97	11.28	11.58	11.89
40	12.19	12.50	12.80	13.11	13.41	13.72	14.02	14.33	14.63	14.93
50	15.24	15.54	15.85	16.15	16.46	16.76	17.07	17.37	17.68	17.98
60	18.29	18.59	18.90	19.20	19.51	19.81	20.12	20.42	20.73	21.03
70	21.34	21.64	21.95	22.25	22.55	22.86	23.16	23.47	23.77	24.08
80	24.38	24.69	24.99	25.30	25.60	25.91	26.21	26.52	26.82	27.13
90	27.43	27.74	28.04	28.35	28.65	28.96	29.26	29.57	29.87	30.17

Fathoms to Meters

Fathoms	0	1	2	3	4	5	6	7	8	9
0	0.00	1.83	3.66	5.49	7.32	9.14	10.97	12.80	14.63	16.46
10	18.29	20.12	21.95	23.77	25.60	27.43	29.26	31.09	32.92	34.75
20	36.58	38.40	40.23	42.06	43.89	45.72	47.55	49.38	51.21	53.03
30	54.86	56.69	58.52	60.35	62.18	64.01	65.84	67.67	69.49	71.32
40	73.15	74.98	76.81	78.64	80.47	82.30	84.12	85.95	87.78	89.61
50	91.44	93.27	95.10	96.93	98.75	100.58	102.41	104.24	106.07	107.90
60	109.73	111.56	113.39	115.21	117.04	118.87	120.70	122.53	124.36	126.19
70	128.02	129.85	131.67	133.50	135.33	137.16	138.99	140.82	142.65	144.47
80	146.30	148.13	149.96	151.79	153.62	155.45	157.28	159.11	160.93	162.76
90	164.59	166.42	168.25	170.08	171.91	173.74	175.56	177.39	179.22	181.05

Meters to Feet

Meters	0	1	2	3	4	5	6	7	8	9
0	0.00	3.28	6.56	9.84	13.12	16.40	19.68	22.97	26.25	29.53
10	32.81	36.09	39.37	42.65	45.93	49.21	52.49	55.77	59.06	62.34
20	65.62	68.90	72.18	75.46	78.74	82.02	85.30	88.58	91.86	95.14
30	98.42	101.71	104.99	108.27	111.55	114.83	118.11	121.39	124.67	127.95
40	131.23	134.51	137.80	141.08	144.36	147.64	150.92	154.20	157.48	160.76
50	164.04	167.32	170.60	173.88	177.16	180.45	183.73	187.01	190.29	193.57
60	196.85	200.13	203.41	206.69	209.97	213.25	216.54	219.82	223.10	226.38
70	229.66	232.94	236.22	239.50	242.78	246.06	249.34	252.62	255.90	259.19
80	262.47	265.75	269.03	272.31	275.59	278.87	282.15	285.43	288.71	291.99
90	295.28	298.56	301.84	305.12	308.40	311.68	314.96	318.24	321.52	324.80

Meters to Fathoms

Meters	0	1	2	3	4	5	6	7	8	9
0	0.00	0.55	1.09	1.64	2.19	2.73	3.28	3.83	4.37	4.92
10	5.47	6.01	6.56	7.11	7.66	8.20	8.75	9.30	9.84	10.39
20	10.94	11.48	12.03	12.58	13.12	13.67	14.22	14.76	15.31	15.86
30	16.40	16.95	17.50	18.04	18.59	19.14	19.68	20.23	20.78	21.33
40	21.87	22.42	22.97	23.51	24.06	24.61	25.15	25.70	26.25	26.79
50	27.34	27.89	28.43	28.98	29.53	30.07	30.62	31.17	31.71	32.26
60	32.81	33.36	33.90	34.45	35.00	35.54	36.09	36.64	37.18	37.73
70	38.28	38.82	39.37	39.92	40.46	41.01	41.56	42.10	42.65	43.20
80	43.74	44.29	44.84	45.38	45.93	46.48	47.03	47.57	48.12	48.67
90	49.21	49.76	50.31	50.85	51.40	51.95	52.49	53.04	53.59	54.13

Abbreviations

The following abbreviations may be used in the text:

Units

°C	degree(s) Centigrade	km	kilometer(s)
cm	centimeter(s)	m	meter(s)
cu.m.	cubic meter(s)	mb	millibars
dwt	deadweight tons	MHz	megahertz
FEU	forty-foot equivalent units	mm	millimeter(s)
grt	gross registered tons	nrt	net registered tons
kHz	kilohertz	TEU	twenty-foot equivalent units

Directions

N	north	S	south
NNE	northnortheast	SSW	southsouthwest
NE	northeast	SW	southwest
ENE	eastnortheast	WSW	westsouthwest
E	east	W	west
ESE	eastsoutheast	WNW	westnorthwest
SE	southeast	NW	northwest
SSE	southsoutheast	NNW	northnorthwest

Vessel types

LASH	Lighter Aboard Ship	ro-ro	Roll-on Roll-off
LNG	Liquified Natural Gas	ULCC	Ultra Large Crude Carrier
LPG	Liquified Petroleum Gas	VLCC	Very Large Crude Carrier
OBO	Ore/Bulk/Oil		

Time

ETA	estimated time of arrival	GMT	Greenwich Mean Time
ETD	estimated time of departure	UTC	Coordinated Universal Time

Water level

MSL	mean sea level	LWS	low water springs
HW	high water	MHWN	mean high water neaps
LW	low water	MHWS	mean high water springs
MHW	mean high water	MLWN	mean low water neaps
MLW	mean low water	MLWS	mean low water springs
HWN	high water neaps	HAT	highest astronomical tide
HWS	high water springs	LAT	lowest astronomical tide
LWN	low water neaps		

Communications

D/F	direction finder	MF	medium frequency
R/T	radiotelephone	HF	high frequency
GMDSS	Global Maritime Distress and Safety System	VHF	very high frequency
LF	low frequency	UHF	ultra high frequency

Navigation

LANBY	Large Automatic Navigation Buoy	SPM	Single Point Mooring
NAVSAT	Navigation Satellite	TSS	Traffic Separation Scheme
ODAS	Ocean Data Acquisition System	VTC	Vessel Traffic Center
SBM	Single Buoy Mooring	VTS	Vessel Traffic Service

Miscellaneous

COLREGS	Collision Regulations		
IALA	International Assoc of Lighthouse Authorities	No./Nos.	Number/Numbers
		PA	Position approximate
IHO	International Hydrographic Office	PD	Position doubtful
IMO	International Maritime Organization	Pub.	Publication

Contents

Page

Preface II
Chartlet—Sector Limits IV
Conversion Tables V
Abbreviations VI

COUNTRIES

ALBANIA 1
ALGERIA 5
ANGUILLA 9
ANTIGUA AND BARBUDA 11
ARUBA 15
BAHAMAS 19
BALTIC SEA 21
BARBADOS 41
BELGIUM 45
BELIZE 51
BERMUDA 55
BLACK SEA 59
BOSNIA-HERZEGOVINA 65
BRITISH VIRGIN ISLANDS 69
BULGARIA 71
CANADA 77
CAPE VERDE ISLANDS 117
CARIBBEAN SEA 119
CAYMAN ISLANDS 127
COLOMBIA 129
COSTA RICA 133
CROATIA 137
CUBA 143
CURACAO 149
CYPRUS 153
DENMARK 157
DOMINICA 175
DOMINICAN REPUBLIC 177
EGYPT 179
ESTONIA 183
FAROE ISLANDS 187
FINLAND 191
FRANCE 201
GAMBIA 225
GEORGIA 227
GERMANY 235
GIBRALTAR 251
GREECE 255
GRENADA 265
GUADELOUPE 269
GUATEMALA 271
GUINEA 275
GUINEA-BISSAU 277
HAITI 279
HONDURAS 283
IRELAND 287
ISRAEL 293
ITALY 299
JAMAICA 329
LATVIA 333
LEBANON 339
LIBERIA 343
LIBYA 345
LITHUANIA 351
MALTA 355
MARTINIQUE 359
MAURITANIA 365
MEDITERRANEAN SEA 367
MEXICO 383
MONACO 387
MONTSERRAT 389
MONTENEGRO 391
MOROCCO 395
NETHERLANDS 399
NICARAGUA 409
NORTH ATLANTIC OCEAN 413
NORTH SEA AND THE ENGLISH CHANNEL 447
NORWAY 463
PANAMA 485
POLAND 489
PORTUGAL 497
ROMANIA 511
RUSSIA 515
SAINT BARTHELEMY 541
SAINT MARTIN 543
SENEGAL 545
SIERRA LEONE 547
SINT MAARTEN 549
SLOVENIA 553
SPAIN 557

ST. KITTS AND NEVIS 571
ST. LUCIA 575
ST. PIERRE AND MIQUELON 579
ST. VINCENT AND THE GRENADINES 581
SWEDEN 585
SYRIA 601
TRINIDAD AND TOBAGO 605
TUNISIA 609
TURKEY 613
TURKS AND CAICOS ISLANDS 633
UKRAINE 637
UNITED KINGDOM 663
VENEZUELA. 689

ALBANIA

General	**1**
Buoyage System	**1**
Cautions	**1**
Currency	**2**
Government	**2**
Holidays	**2**
Industries	**2**
Languages	**2**
Mined Areas	**2**
Navigational Information	**2**
Pilotage	**2**
Pollution	**3**
Regulations	**3**
Ship Reporting System	**3**
Time Zone	**3**
U.S. Embassy	**3**

General

Albania is located in southeastern Europe between Greece, Serbia, and Montenegro. The country borders the Adriatic Sea and the Ionian Sea.

The climate is mild and temperate. The winters are cool, cloudy, and wet while the summers are hot and clear.

The terrain is mostly mountainous with hills and small plains along the cost.

Hydrographic information for the coast of Albania may be inadequate; charts and publications covering these waters may not be up-to-date. Prudent navigation is advisable.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Coastal Depths

Mouths of Albanian rivers and their deltas are subject to great change; the alluvial banks extending for some distance offshore from these rivers and their deltas are constantly changing and increasing in size, particularly during heavy rains and when the rivers are swollen. Considerable changes to the coastline have been reported between Lumi i Vjoses (40°40'N, 19°18'E.) and Pellgu i Drinit (41°44'N, 19°26'E.), 60 miles N. Mariners are warned to navigate with great caution, sound continuously when near the coast, and to give the coast a wide berth at night.

Explosives Dumping Areas

Explosives dumping areas have been reported (1999) in the Adriatic Sea off the coast of Albania. See **Italy—Firing Areas—Explosives Dumping Areas** for further information

Marine Exploitation

Vessels engaged in seismic surveys and other research projects may be encountered in the Adriatic Sea, normally inside the 200m depth curve.

Currency

The official unit of currency is the lek, consisting of 100 qindars.

Government

Flag of Albania

Albania is a republic. The country is divided into 12 counties.

Albania is governed by a President, who is elected by the People's Assembly to serve a a 5-year term. The unicameral People's Assembly is composed of 140 members serving a 4-year term; 100 members are directly-elected, while the remaining 40 members are elected by proportional representation.

The legal system is based on civil law.

The capital is Tirana.

Holidays

The following holidays are observed:

January 1	New Year's Day
Easter Sunday	Variable
Orthodox Easter Sunday	Variable
May 1	Labor Day
October 19	Mother Teresa Day
November 28	Independence Day
November 29	Liberation Day
December 25	Christmas Day

Islamic holidays, which are subject to the appearance of the moon, include Eid Al-Fitr (End of Ramadan), Eid Al-Adha (End of Pilgrimage), Hijrah (Islamic New Year), and the Prophet's Birthday.

Industries

The main industries are food processing, textiles and clothing, lumber, oil, cement, chemicals, mining, basic metals, and hydropower.

The main exports are textiles and footwear, asphalt, metals and metallic ores, crude oil, vegetables, fruit, and tobacco. The main export-trading partners are Italy and Greece.

The main imports are machinery and equipment, foodstuffs, chemicals, and textiles. The main import partners are Italy, Greece, Turkey, and Germany.

Languages

The languages of the country are Albanian (Tosk is the official dialect) and Greek.

Mined Areas

A large area, formerly declared dangerous due to mines, exists off the Albanian coast and lies within the area bounded by lines joining the following positions:

a. A position on the shore at 41°30'N.
b. 41°30'N, 19°00'E.
c. 40°30'N, 19°00'E.
d. 40°15'N, 19°10'E.
e. then E to a position on the shore at 40°15'N.

The area is now considered to be safe for surface navigation, but could still present a hazard for vessels anchoring, fishing, or engaged in submarine or sea bed activity.

It is reported that measures have been taken to clear the coastline exposed to mined waters.

Vessels should enter Gji i Vlores and Gji i Durresit during daylight only and should follow the recommended track shown on the charts.

Navigational Information

Enroute Volume

Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

Maritime Claims

The maritime territorial claims of Albania are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	12 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines. Requires advance permission or notification for innocent passage of warships in the territorial sea.

Pilotage

Pilotage is compulsory for all foreign vessels.

Pollution

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Vessels from Italy, Slovenia, Croatia, Serbia and Montenegro, and Greece are required to send their ETA 48 hours in advance. Vessels from other countries are required to send their ETA 5 days in advance.

Foreign vessels require authorization to enter the territorial waters of Albania. Approach to the open ports is permitted only through authorized routes. See Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean for further information.

Vessels are subject to port regulations, a copy of which should be obtained on arrival.

Regulations concerning the emigration of Albanian citizens to Italian territory have been issued and apply to vessels of all flags in Albanian territorial waters. All merchant ships entering or leaving Albanian territorial waters will be contacted by Italian warships or Italian coast guard vessels, which will carry out inspection procedures. For further information, see **Italy—Regulations—Albanian Immigration**.

Ship Reporting System

The Adriatic Ship Reporting System (ADRIREP), a mandatory system for certain vessels, is in effect for the Adriatic Sea N of latitude 40°25'N. For further information, see **Italy—Ship Reporting System**.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is maintained from the last Sunday in March until the last Sunday in October.

U.S. Embassy

The U.S. Embassy is situated at Rruga e Elbansanit No. 103, Tirana.

The mailing address is Department of State, 9510 Tirana Place, Dulles, VA (20189-9510).

U. S. Embassy Albania Home Page
http://tirana.usembassy.gov

ALGERIA

General	**5**
Buoyage System	**5**
Cautions	**5**
Currency	**6**
Firing Areas	**6**
Fishing Areas	**6**
Government	**6**
Holidays	**6**
Industries	**6**
Languages	**6**
Navigational Information	**6**
Pollution	**7**
Regulations	**7**
Search and Rescue	**7**
Time Zone	**7**
Traffic Separation Schemes	**7**
U.S. Embassy	**7**

General

Algeria is located in Northern Africa between Morocco and Tunisia. The country borders the Mediterranean Sea.

The climate is arid to semi-arid. Winters are wet and summers are hot and dry along the coast.

The sirocco wind produces a hot dust and sand-filled wind that is common in the summer.

The terrain is mostly high plateau and desert, with some mountains and a narrow discontinuous coastal plain.

The Sahara Desert occupies much of the S part of the country.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Special Warning 117 (Issued 5 March 2001)

1. Due to the potential for domestic unrest and anti-foreign violence, U.S. mariners are advised to exercise extreme caution when in Algerian waters. Although there has only been one attack against foreigners since 1997, the level of risk in Algeria remains high.

2. Attacks against maritime vessels in Algerian ports have taken place several years ago. The U.S. Embassy in Algiers specifically identifies ports, train stations (trains), and airline terminals as terrorist targets. Commercial shipping should remain on maximum alert when in Algerian waters and maintain adequate security precautions.

3. The Department of State recommends that U.S. citizens evaluate carefully the implications for their security and safety before deciding to travel to Algeria, and that Americans in Algeria whose circumstances do not afford them effective (armed) protection depart the country. Americans arriving in the country should not disembark and travel within the country without adequate, including armed, protection immediately upon arrival.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

Currency

The official unit of currency is the Algerian dinar, consisting of 100 centimes.

Firing Areas

Firing practice takes place in a sector with a radius of 0.5 mile, bounded by lines of position extending from Fort Mers-el-Kebir (35°44.3'N., 0°41.6'W.) on bearings of 350° and 010°.

Fishing Areas

Tunny Fishing

For general information on tunny fishing, see **Spain—Fishing Areas**.

Tunny Net Areas

Between March 15 and November 10, tunny nets may be set in the following locations S of Cap Falcon:

1. About 0.6 mile W of Pointe Canastel (April to October).
2. In position 35°49'N, 0°30'W (April to September).
3. About 200m SE of Cap de l'Aiguille (April to July).
4. About 1.3 miles E of Cap Lindless.

Between June 1 and December 31, tunny nets may be set in the following locations:

1. East of Rocher de l'Aiguill.
2. North of Cap Ferrat, in depths of up to 38m.
3. With Arzew Light (35°53'N., 0°17'W.) bearing 317° at a distance of 2.3 miles.
4. About 0.4 mile SE of Arzew Light.

The extremities of these tunny nets in the open sea are marked by red lights.

Government

Flag of Algeria

Algeria is a socialist republic. The country is divided into 48 provinces.

Algeria is governed by a directly-elected president who serves a 5-year term. The Prime Minister and the cabinet are appointed by the President. The bicameral Parliament consists of the 389-member National People's Assembly (directly-elected, based on proportional representation, serving 5-year terms) and the 144-member Council of the Nations (48 members appointed by the President and 96 members indirectly elected by the 48 provinces, serving 6-year terms).

The legal system is based on Islamic and French law.

The capital is Algiers.

Holidays

The following holidays are observed:

January 1	New Year's Day
May 1	Labor Day
June 19	Anniversary of the Start of the Revolution
July 5	Independence Day
Nov. 1	Revolution Day

Islamic holidays, which are subject to the appearance of the moon, include Eid Al-Fitr (End of Ramadan), Eid Al-Adha (End of Pilgrimage), Hijrah (Islamic New Year), Ashoora, and the Prophet's Birthday.

Industries

The main industries are petroleum, natural gas, light industries, mining, electrical production, petrochemicals, and food processing.

The main exports are petroleum, natural gas, and petroleum products. The main export-trading partners are the United States, Italy, Spain, France, Canada, and Brazil.

The main imports are capital goods, foodstuffs, and consumer goods. The main import-trading partners are France, Italy, Spain, China, Germnay, and the United States.

Languages

Arabic is the official language. French and Berber dialects are also spoken.

Navigational Information

Enroute Volume

Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Maritime Claims

The maritime territorial claims of Algeria are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	52 miles. **

* Claims straight baselines. Requires advance permission or notification for innocent passage of warships in the territorial sea.

** Reduced to 32 miles W of the longitude of Ras Tenes.

Pollution

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Algeria has announced a temporary suspension of the freedom of navigation within Algerian territorial waters extending up to 10 miles from the coast between 3°15'E and 4°10'E.

Vessels entering or leaving certain ports must do so within designated channels, as follows:

1. Port de Zemmouri—Channel running N-S centered on the port between 3°33.5'N and 3°34.6'N.
2. Port de Dellys—Channel running N-S centered on the port's green harbor light between 3°54.8'N and 3°55.8'N.
3. Pointe Tigzirt—Channel running N-S centered on the port between 4°07.8'N and 4°08.6'N.

Search and Rescue

The Algerian Coast Guard is responsible for coordinating search and rescue operations. MRCC Algiers can be contacted, as follows:

1. Telephone: 213-21-710178
2. Facsimile: 213-21-714108
3. E-mail: mrccalgiers@mdn.dz

A network of coast radio stations maintains a continuous listening watch on international distress frequencies.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time is not observed.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) off Algeria are, as follows:

1. Northwest Approach to Skikda. (Government of Algeria)
2. North Approach to Skikda. (Government of Algeria)
3. West Approach to Oran. (Government of Algeria)
4. Northeast Approach to Oran. (Government of Algeria)

U.S. Embassy

The U.S. Embassy is situated at 5 Chemin Cheikh BachirI Ibrahimi, El-Biar, Algiers.

The mailing address is B.P. Box 408, Alger-Gare, 16030, Algiers.

U. S. Embassy Algeria Home Page
http://algiers.usembassy.gov

ANGUILLA

General	**9**
Buoyage System	**9**
Cautions	**9**
Currency	**9**
Government	**9**
Holidays	**10**
Industries	**10**
Languages	**10**
Navigational Information	**10**
Regulations	**10**
Search and Rescue	**10**
Time Zone	**10**
U.S. Embassy	**10**

General

Anguilla is the northernmost of the Leeward Islands.The territory also includes the island of Sombrero and several offshore islets.

Anguilla is a flat, rocky island comprised of coral overlaying volcanic debris and fringed by some of the finest white sand beaches in the Caribbean. The SE side of the island is generally much lower in elevation than the NW side of the island.

The climate is tropical oceanic, with rain throughout the year, particularly between May and December. Tropical storms and hurricanes may occur between July and November. Generally, summers are hotter than winters, although there is little variation in the temperatures.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation in Anguilla may be missing or unreliable.

Cautions

Lobster pots, which are marked by small floats which are difficult to see, may be found anywhere on the banks N and E of Anguilla, as well as on the banks between Anguilla and Saint Martin to the S.

Currency

The official unit of currency is the Eastern Caribbean dollar.

Government

Anguilla is a self-governing dependent overseas territory of the United Kingdom, with Queen Elizabeth II as its chief of state.

Flag of Anguilla

Anguilla is governed by a Governor appointed by the Queen. The 11-member unicameral House of Assembly consists of two ex-officio members (the Deputy Governor and the Attorney-General), two appointed members, and seven directly-elected members who serve 5-year terms.

The legal system is based on English common law.

The capital is The Valley.

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Monday	Variable
May 5	Labor Day
May 30	Anguilla Day
Second Saturday in June	Queen's Birthday
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are tourism, boat building, and offshore financial services.

The main exports are lobster, fish, livestock, salt, concrete blocks, and rum. The main import-trading partners are the United Kingdom, the United States, and Saint Martin.

The main imports are fuels, foodstuffs, manufactured goods, chemicals, trucks, and textiles. The main import-trading partners are the United States and the United Kingdom.

Languages

English is the official language.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Anguilla are, as follows:

Territorial Sea	3 miles.
Fisheries or Economic Zone	200 miles.

Regulations

Marine Parks, designed to conserve the marine environment around Anguilla, have been established in the following locations:

1. Dog Island.
2. Prickly Pear Cays and Seal Island Reef.
3. Shoal Bay and Island Harbour.
4. Rendezvous Bay
5. Little Bay.
6. Sandy Island.

Various regulations, including no anchoring on the coral, apply in these areas. White mooring buoys may be used by vessels under 16.8m long who have a Marine Park Mooring Permit. Red mooring buoys are used by dive boats.

Further details may be obtained from the Department of Fisheries and Marine Resources, South Hill.

Search and Rescue

The Anguilla Marine Police Unit is responsible for coordinating search and rescue operations in association with MRCC Fort de France (Martinique).

MRCC Fort-de-France can be contacted, as follows:

1. Telephone: 596-596-709292
   596-596-731616
2. Facsimile: 596-596-632450
   596-596-735730
3. Telex: 298-912008 COMSA A
4. E-mail: antilles@mrccfr.au

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

Anguilla is a dependent territory of the United Kingdom. There is no diplomatic representation.

ANTIGUA AND BARBUDA

General	**11**
Buoyage System	**11**
Cautions	**11**
Currency	**11**
Government	**11**
Holidays	**12**
Industries	**12**
Languages	**12**
Navigational Information	**12**
Search and Rescue	**12**
Ship Reporting System	**12**
Time Zone	**12**
U.S. Embassy	**12**

General

Antigua and Barbuda lies in the central portion of the Leeward Islands.

The local weather is generally dry and sunny, with the best weather from November to May. The sea breezes moderate the heat and humidity.

Antigua is low-lying and of volcanic origin. The island is of modest elevation with a gently rolling aspect. The hills on the SW side of the island are very irregular and serve as landmarks. Reefs and shoals surround most of the island.

Barbuda is a flat, featureless coral island with a large lagoon on its W side. The island has a maximum elevation of only 40m.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation in Antigua and Barbuda may be missing or unreliable.

Cautions

Dangerous shoals lie up to 17 miles W of Barbuda, up to 14 miles W of Antigua, and in the channel between the two islands. Antigua should be approached with caution, as shoal patches, over which there may be less water than charted, may be encountered.

There are over 80 known shipwrecks in the waters surrounding Antigua and over 120 in the waters surrounding Barbuda.

Currency

The official unit of currency is the Eastern Caribbean dollar.

Government

Antigua and Barbuda is a parliamentary democracy. The country is divided into six parishes and two dependencies.

Elizabeth II, recognized as the Chief of State, appoints a Governor-General. The Prime Minister and the cabinet are appointed by the Governor-General. The bicameral Parliament is composed of a 17-member Senate (appointed by the Governor-General) and a 17-member House of Representatives (directly elected under a system of proportional representation to 5-year terms).

The legal system is based on English common law.

The capital is St. John's.

Flag of Antigua and Barbuda

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
First Monday in May	Labor Day
Whitmonday	Variable
Second Saturday in June	Queen's Birthday
First Monday in July	Caricom Day
First Monday and Tuesday of August	Carnival Days
October 7	Merchants Holiday
November 1	Independence Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries include tourism, construction, and light manufacturing (clothing, alcohol, and household appliances).

The main exports are petroleum products, light manufactured products, machinery and transport equipment, foodstuffs, and livestock. The main export trading partners are Spain, Germany, Italy, and Singapore.

The main imports are food, livestock, machinery and transport equipment, light manufactured goods, chemicals, and oil. The main import-trading partners are the United States, China, Germany, Singapore, and Spain.

Languages

English is the official language. Several local dialects are also spoken.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Antigua and Barbuda are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Claims archipelagic status. Requires advance permission or notification for innocent passage of warships in the territorial sea.

Search and Rescue

The Antigua and Barbuda Defense Force Coast Guard is responsible for coordinating search and rescue operations in association with MRCC Fort de France (Martinique).

MRCC Fort-de-France can be contacted, as follows:

1. Telephone: 596-596-709292
   596-596-731616
2. Facsimile: 596-596-632450
   596-596-735730
3. Telex: 298-912008 COMSA A
4. E-mail: antilles@mrccfr.au

The Antigua and Barbuda Defense Force Coast Guard can be contacted, as follows:

1. Telephone: 1-268-4620671
2. Facsimile: 1-268-4622842
3. E-mail: abdfcg@candw.ag

A lifeboat station is located in English Harbour (17°00'N., 61°46'W.).

Ship Reporting System

CARICOM (Caribbean Community) Advance Passenger Information System (APIS)

CARICOM APIS is a mandatory reporting system providing Advance Passenger Information (API) about passengers and crew to the Joint Regional Communications Center (JRCC) Barbados for vessels bound for or departing from a port in the CARICOM area. Further information can be found in **Caribbean Sea—Ship Reporting System**.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

The U. S. Ambassador to Barbados is accredited to Antigua and Barbuda. The embassy is situated in Wildey Business Park, Wildey, St. Michael, Bridgetown.

The mailing addresses are, as follows:

1. Barbados address—
   P.O. Box 302
   Bridgetown, Barbados
2. U. S. address—
   CMR 1014
   APO AA (34055)

U. S. Embassy Barbados Home Page
http://barbados.usembassy.gov

ARUBA

General	**15**
Buoyage System	**15**
Currency	**15**
Government	**15**
Holidays	**16**
Industries	**16**
Languages	**16**
Navigational Information	**16**
Pilotage	**16**
Regulations	**16**
Search and Rescue	**16**
Signals	**16**
Time Zone	**16**
U.S. Embassy	**17**

General

Aruba is an island located in the Caribbean Sea N of Venezuela.

The climate is tropical marine, with little seasonal temperature variation. A brief rainy season occurs from October to December.

The terrain is flat, with a few hills and scant vegetation.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Many small fishing vessels may be found anchored up to 3 miles off the coast of Aruba. It is very common for these vessels not to show any lights.

A tanker transfer area, best seen on the chart, is located WSW of Aruba. Tankers in this area should be given a wide berth as they are either anchored or, if underway, unable to maneuver.

The prevailing trade winds sometimes carry dense smoke from the oil refineries seaward. The resultant haze may obscure the island until within a distance of 6 miles.

The NE coast of Aruba is exposed to heavy breakers and should not be approached.

Currency

The official unit of currency is the Aruban florin.

Government

Aruba is an integral part of the Kingdom of the Netherlands. The island is fully autonomous concerning internal affairs. The Dutch government is responsible for defense and foreign affairs.

The Chief of State is Queen Beatrix of the Netherlands. Aruba is governed by a Governor-General, appointed by the Queen, for a 6-year term. The Prime Minister is elected by the Staten to a 4-year term. The unicameral Staten is composed of

Flag of Aruba

21 directly-elected members serving 4-year terms.

The legal system is based on Dutch civil law, with some English common law influence.

The capital is Oranjestad.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 25	G. F. Betico Croes Day
Carnival	Variable
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
March 18	Flag Day
April 30	Queen's Day
May 1	Labor Day
Ascension Day	Variable
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are tourism, transshipment facilities, oil refining, and oil storage.

The main exports are livestock and animal products, art and collectibles, machinery and electrical equipment, and transport equipment. The main export-trading partners are the Netherlands, Panama, Colombia, the United States, Venezuela, and the Netherlands Antilles.

The main imports are machinery and electrical equipment, crude oil for refining and re-export, chemicals, and foodstuffs. The main import-trading partners are the United States, the Netherlands, and the United Kingdom.

Languages

Dutch is the official language, although Papiamento, a Spanish-Portuguese-Dutch-English dialect, predominates. English is also widely understood.

Navigational Information

Enroute Volumes

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2.

Maritime Claims

The maritime territorial claims of Aruba are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	To median lines.

* Claims straight baselines. Requires advance permission or notification for innocent passage of warships in the territorial sea.

Pilotage

Pilotage is essential at all ports for anchoring and berthing alongside.

Regulations

Vessels carrying dangerous cargo must obtain special permission before entering any port. Cargo in transit must be stored in a sealed hold while in pot.

It is prohibited to dump oily wastes overboard within 50 miles of the coast.

Search and Rescue

See **Curacao—Search and Rescue**.

Signals

Visual storms signals are displayed by day, as follows:

Signal	Meaning
One red triangular flag	Small craft warning. Winds up to 34 knots
Two red triangular flags, vertically disposed	Gale warning. Winds of 34 to 47 knots.
One square red flag, with a centered black square	Whole gale warning. Winds of 48 to 63 knots.
Two square red flags, with a centered black square, vertically disposed	Hurricane warning. Winds over 63 knots.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

There is no U.S. embassy; the Consul General to Curacao is accredited to Aruba.

The U.S. Consulate is situated at J. B. Gorsiraweg #1, Willemstad.

The mailing address is P.O. Box 158, Willemstad, Curacao.

U. S. Consulate Curacao Home Page
http://curacao.usconsulate.gov

BAHAMAS

General	**19**
Buoyage System	**19**
Cautions	**19**
Currency	**19**
Government	**19**
Holidays	**20**
Industries	**20**
Languages	**20**
Meteorology	**20**
Navigational Information	**20**
Search and Rescue	**20**
Time Zone	**20**
U.S. Embassy	**20**

General

The Bahamas is an extensive chain of islands located in the Caribbean Sea SE of Florida.

The climate is tropical maritime and moderated by the warm waters of the Gulf Stream.

The terrain consists of flat coral formations with some low rounded hills.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Significant amounts of deep-sea sport fishing take place in and around the Bahamas.

A significant amount of pleasure craft activity occurs in and around the Bahamas, as well as in the Straits of Florida between the Bahamas and the coast of Florida.

High-speed ferries operate across the Straits of Florida between the Bahamas and the E coast of Florida.

Currency

The official unit of currency is the Bahamian dollar, consisting of 100 cents. United States currency is also in common use.

Government

Flag of the Bahamas

The Bahamas is an independent commonwealth of the United Kingdom. The country is divided into 21 districts.

Elizabeth II, recognized as the Chief of State, appoints a Governor-General. The cabinet is appointed by the Governor-General. The bicameral legislature is composed of a 16-member Senate (appointed by the Governor-General to 5-year

terms) and a 41-member House of Assembly (directly elected to 5-year terms).

The legal system is based on English common law.

The capital is Nassau, New Providence.

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
First Friday in June	Labor Day
Whitmonday	Variable
July 10	Independence Day
First Monday in August	Emancipation Day
October 12	Discovery Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are tourism, banking, cement, oil refining and transhipment, salt production, rum, aragonite, pharmaceuticals, and spiral-welded steel pipe.

The main exports are mineral products and salt, animal products, rum, chemicals, and fruits and vegetables. The main export-trading partners are the United States, Spain, Portugal, Germany, the United Kingdom, and Guatemala.

The main imports are machinery and transport equipment, manufactured goods, chemicals, mineral fuels, foodstuffs, and livestock. The main import partners are the United States, South Korea, Spain, Brazil, and Japan.

Languages

English is primarily spoken, with Creole being the language of the Haitian immigrants.

Meteorology

Marine weather forecasts are available in English from the Bahamas Meteorological Department (http://bahamasweather.org.bs).

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims archipelagic status.

Maritime Boundary Disputes

Unable to agree on a maritime boundary with the United States.

Search and Rescue

The Bahamas Air Sea Rescue Association (BASRA) is a voluntary organization working in cooperation with the U.S. Coast Guard and the Royal Bahamas Defense Forces.

The Bahamas Air Sea Rescue Association (BASRA) can be contacted, as follows:

1. Telephone: 1-242-3558864 (daylight hours only)
2. Facsimile: 1-242-3252737
3. E-mail: admin@basra.org
4. Web site http://www.basra.org

BASRA stations are located, as follows:

1. Abacos.
2. Freeport.
3. The Berry Islands.
4. Nassau.
5. Eleuthera.
6. Exumas.
7. Cat Island.
8. Crooked Island.
9. Long Island.

Time Zone

The Time Zone description is ROMEO (+5). Daylight Savings Time (QUEBEC (+4)) is maintained from the second Sunday in March until the first Sunday in November.

U.S. Embassy

The embassy is situated in the Mosmar Building, 42 Queen Street, Nassau.

The mailing addresses are, as follows:

1. Bahamas address—
   P.O. Box N-8197
   Nassau
2. U.S. address—
   3370 Nassau Place
   Washington, DC (20521-3370)

U. S. Embassy Bahamas Home Page
http://nassau.usembassy.gov

BALTIC SEA

General	**21**
Cautions	**21**
Climatology	**22**
Currents	**27**
Fishing Areas	**27**
Ice	**27**
Navigational Information	**28**
Pollution	**29**
Regulations	**30**
Routes	**30**
Ship Reporting System	**31**
Tides	**31**
Appendix I—Routes in and around the Baltic Sea	**33**
Appendix II—Gulf of Finland Reporting System	**37**

General

The Baltic Sea is an intracontinental sea connected to the North Sea by the narrow Danish Straits (the Belts region of the Kattegat). The influx of fresh water into the Baltic Sea exceeds evaporation and results in a permanent salinity stratification.

The Neva River, flowing into the Gulf of Finland, and the Vistula River, flowing into the Baltic Sea proper, are the two largest rivers in the region. The fresh water supply to the Baltic Sea (from precipitation, ice, and river runoff) generates a brackish outflow of surface water. More dense saline water enters the Baltic Sea along the bottom of the Skagerrak and over the sills of the Kattegat under the proper environmental conditions.

In general, the Baltic Sea is shallow, with depths in the southern Baltic Sea rarely over 100m, between 100 and 200m in the central Baltic Sea, and less than l00m in the Gulf of Bothnia.

An 18m deep channel through the Danish Straits connects the North Sea and the Baltic Sea. The Sound forms a flat and shallow area between Denmark and Sweden, with a sill depth of 8m between Copenhagen and Malmo. The Darss Sill, between Darsser Ort and Gedser, has a depth of 8m (24 ft.) and separates the Store Belt and the Arkona Basin. Depths greater than l00m in the southern Baltic Sea are found in the Bornholm Basin and in the Gdansk depression.

Gotland is flanked by Gotland Deep to the W and Landsort Deep to the E, with maximum depths of 246m and 459m, respectively. The southern Baltic shoals to the S to less than 20m.

The Gulf of Finland is shallower than 100m, as is most of the Gulf of Bothnia, except for a deep valley SW of Aland with depths greater than 200m. Several deep but narrow channels connect the Aland Sea with the Gulf of Bothnia. All basins in the Baltic Sea area are separated by one or more sills, with general depths of between 70 and l00m.

Cautions

Special Warning 120 (Issued 16 November 2001)

Information on Special Warning 120 can be found in **North Atlantic Ocean—Cautions**.

Wind Effects on Water Levels

In the Skagerrak, Kattegat, Baelterne, and The Sound, changes in water level are caused primarily by large-scale winds, atmospheric pressure variation over the North Sea and the Baltic Sea, and differences in water level between the two

seas. The extreme water rise in Oslofjord due to winds may be as much as 6m. West winds in the Skagerrak, or S winds in the Kattegat and in Oslofjord, increase the water level; E winds in the Skagerrak, or N winds in the Kattegat and in Oslo fjord have the opposite effect. The highest water levels are in the vicinity of the Baelterne and The Sound when gale winds exceeding 28 knots persist over the Baltic Sea for an extended period. Under these conditions, the fetch over the Baltic Sea is at a maximum and the rise of water in the southwestern Kattegat is considerable.

In the Baltic Sea, the Gulf of Finland, and the Gulf of Bothnia, the principal changes in water level are caused by meteorological conditions. The entire water mass of the Baltic Sea can be set in oscillation by variation in winds or atmospheric pressure distribution.

The natural period of oscillation of the Baltic Sea-Gulf of Finland system is about 27 hours. Maximum rises and falls of water level of about 1m meter above or below mean water level can occur at Gedser Rev. Water level fluctuations are somewhat lower to the W of this shoal. Changes in water level associated with these oscillations are slow and vary from about 0.1 to 0.25m in an hour.

Short-period variations in water level of plus or minus 0.5m within about an hour, a phenomenon known locally as "seebaren" (sea bears), are caused by wind shifts or sudden atmospheric pressure changes associated with fronts of line squalls. Also, water level fluctuations of plus or minus 0.5m may occur when the current flow into the Baelterne and The Sound has persisted for several days.

Kelp

In certain places in the W part of the Baltic Sea, kelp can occur in large quantities, particularly in the spring and fall. It grows abundantly on sandy bottoms in depths of up to 9m and may extend to within 1 to 2m of the surface. Accumulation of dead kelp in autumn and spring may be thick enough to interfere with echo-sounder readings.

Particularly Sensitive Sea Areas (PSSA)

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

The Baltic Sea area, consisting of Sweden, Denmark, Finland, Estonia, Lithuania, Latvia, Poland, and Germany (except for waters under Russian jurisdiction), has been declared by the IMO to be a PSSA.

Navigational Aids

Navigational aids in the S and E parts of the Gulf of Finland may at times be unreliable.

Climatology

General

The Naval Research Laboratory Monterey, a corporate research laboratory for the United States Navy and Marine Corps, publishes port studies and forecaster handbooks that may be of use to the mariner. These publications can be accessed at the Naval Reserach Laboratory web site.

Naval Research Laboratory Monterey Home Page

http://www.nrlmry.navy.mil/pubs.htm

The European Severe Weather Port Guide contains information on the following ports:

1. Germany—Kiel.
2. Lithuania—Klaipeda.
3. Poland—Gdynia.
4. Sweden—Gothenburg.

THE SKAGERRAK AND THE KATTEGAT

General.—Late fall and early winter brings the worst weather to the Skagerrak-Kattegat area. The procession of fronts and storms keeps winter skies under an almost continuous blanket of clouds with many days of light rain or drizzle. The shortness of the day adds to the bleakness and aids in keeping temperatures steady. Low temperatures with a small diurnal range bring high relative humidities over much of the area. Inland ports up fjords and rivers experience more radical changes in weather than do coastal ports. Temperatures vary more as do relative humidities, cloud cover and precipitation.

Weather patterns are depressingly redundant from October through January. Cloudy conditions (cloud cover greater than or equal to 6/8) can be expected on about 15 to 25 days per month. They are most common in the Sound and least frequent along the shores of the Skagerrak. However, fall and early winter is the rainy season along the Norwegian coast where 102 to 178mm of precipitation per month fall on 10 to l5 days. Outside of Norway, 25 to 76mm occur on 8 to 12 days under cloudy skies. Some of this precipitation falls as snow. Temperatures get below freezing from October through April or May.

Freezing temperatures are most common in continental situations along the German coasts, Sweden, northern Denmark, and Norway. In general, nighttime lows can be expected to fall to freezing or below on 15 to 26 days per month in mid winter. During this season relative humidities are high with practically no diurnal variation. The average spread is about 5 per cent at most. Morning maximums in January range from 85 to 92 per cent, while afternoon minimums range from about 80 to 90 per cent. Snow can occur from about October through May and is most probable in December, January and February. The probability of snow decreases S through The Sound and the Baelterne, but picks up slightly along the German coasts. The continental port of Oslo records snow on 61 days in an average year. This drops to 50 days along coastal Norway and to about 40 days near Goteborg. In the Baelterne, 20 snow days occur on the average and increases to near 30 days at Rostock.

January is usually a good snow month since temperatures are coldest. Daytime maximums are in the low single digits (°C) except at inland ports like Oslo where the average January maximum is -2.8°C. Nighttime lows range from -3.9° to -1.1°C along the coasts to the upper single digits below 0°C up fjords and rivers. Extreme low temperatures occur under clear skies when the Siberian High occasionally pushes over the area bringing a frigid easterly flow. Clear conditions (cloud cover less than or equal to 2/8) are observed on 1 to 7 days per month in January. When conditions are right temperatures can plummet to -17.8°C and below. Extremes range from -20.6°C at ex-

posed ports to -28.9°C at more continental locations.

By February changes in the weather patterns are already taking place and this is reflected in the average conditions. As days become a little longer and skies a little clearer, temperatures begin a slight upward trend that becomes more apparent in March when average temperatures increase 1° to 3°C. The number of cloudy days decrease. February marks the beginning of a relatively dry season that extends through May. Precipitation amounts average 25 to 63mm on about 5 to 12 days per month. Temperatures show their greatest rise in April and May. This results in a decrease and more of a variation in relative humidities. Morning ranges run from about 75 to 88 per cent, while afternoon humidities drop to the low 50 per cent to mid 70 per cent range.

As spring melts into summer cloudiness continues to decrease, temperatures rise and humidities fall. But rainfall amounts increase. Outside of Norway's autumn maximum, average rainfall amounts are largest in August. Midsummer amounts range from 51 to 102mm mostly in showers and thunderstorms on 10 to 14 days per month. Instability needed for shower activity is produced by frontal passages and surface heating. Heating alone is usually not enough along these coasts. By July, average maximums are around 21.1°C; slightly cooler at exposed ports and slightly warmer at more sheltered locations. Even at a continental port like Rostock, July temperatures get above 24.4°C on only about 7 days.

Thunderstorms are most often associated with frontal passages from May through September. Along Skagerrak shores, they occur on just 6 to 8 days each season; Oslo records an average of 11. They are slightly more frequent along Kattegat coasts, particularly near the entrance to the Sound; 6 to 10 days with thunderstorms can be expected in an average year. It is S of the Kattegat that thunderstorms are most likely. Along the shores of Kiel Bay and Mecklenburger Bucht they occur on 12 to 20 days annually and 2 to 5 days per month from May through September. Along the shores of the Lille Baelt (Little Belt), thunderstorms are recorded on 8 to 15 days annually; in Great Belt and the Sound this figure drops to 10. Thunderstorms and showers are often responsible for heavy rainfall amounts in a short period of time. Record 24-hour amounts most often occur in the summer and run 51 to 102mm. Even with this rain, clear conditions (cloud cover less than or equal to 2/8) are at a peak in May, June and July; about 5 to 10 days per month are clear.

Cloudy conditions (cloud cover greater than or equal to 6/8) are at a minimum from May through September: however they still occur on 6 to 14 days per month. September is the least cloudy month south of the Kattegat. The lack of cloudiness helps create a wide temperature spread as 21.1°C daytime readings fall into the low teens (°C) at night. This in turn is responsible for a wide spread in relative humidities. These humidities vary from the low 70 to upper 80 per cent range in the morning down to the 60 to 70 per cent range in the afternoon. Humidities can drop to extremely low values when, occasionally a hot dry flow off the continent engulfs the area. This is most likely in late summer and can send temperatures soaring into the upper 20s to low 30s (°C) or above. Extreme temperatures range from the mid 30s (°C) in continental locations down to the upper 20s (°C) over coastal Norway. Oslo's continental location is reflected in its extreme of 33.9°C.

Extratropical Cyclones.—A nearly continuous stream of lows and fronts move through or near the Skagerrak and Kattegat, producing a variety of day to day weather. These storms are strongest in autumn and early winter. Most pass to the N, but still influence the weather with their large circulations and fronts. The winter storms that move directly through the region bring strong, variable winds and rain or snow. Fronts move through on the average of once or twice a week, except occasionally when a large high pressure system intrudes. In winter and spring these fronts sometimes become stationary, causing prolonged periods of cloudy rainy weather. Stationary fronts in the Skagerrak often trigger storm development.

While early winter storms are usually the most potent, the greatest number of lows that pass directly over the region occur in spring and summer. If these lows stall they can produce several days of poor weather. This is less likely during these seasons with the weakening of the blocking Siberian High. Stalling is most likely to occur when a low pressure system occasionally drifts N from Poland. Lows and fronts in spring and summer are usually characterized by narrow bands of showers followed by rapid clearing. These showers are often heavy.

Winds.—Along the Norwegian coast from Kristiansand to Oslo, fall and early winter winds roughly follow the coastline. Northeast winds are common but not predominant. Winds from the W through N are also common. At Oslo, from November through February, N and NW winds prevail but are often secondary to calms both in the morning and afternoon. Calms are also frequent at Kristiansand. February winds become even more complex as the frequency of winds from the S quarter increase. Average wind speeds range from 2 to 4 knots at protected ports to up to 10 to 12 knots at more exposed locations. Winter winds along the Kattegat coasts and the E shore of the Skagerrak assume the more familiar SW through W flow. However, E and NE winds are quite common. At Stromstad and Goteborg calms are a frequent occurrence. In fact at Goteborg morning calms occur 20 to 30 per cent of the time from July through May and 15 to 20 per cent of the time in the afternoons from November through March. In general, wind speeds average 5 to 10 knots in winter. At Skagen, this average is about 13 knots.

South through W winter winds are also common in the Sound, the Belts, and the entrance to the Baltic. Along the shores of the Baelterne, fall and winter winds are spread mainly between the SE through NW at average speeds of 4 to 12 knots. Along Kiel Bay, winter winds blow at an average speed of 8 to 10 knots, often out of the S through W. On the coast of Germany, SE through W winds at an average 10 to 13 knots are common.

Beginning in February and continuing through spring, the already variable winds become more variable and average wind speeds begin to show a diurnal variation. As the days become longer and less cloudy, the land-sea breeze effect deflects existing winds and at times prevails. At Oslo, S and SW winds are more frequent, particularly during the afternoon. East winds are felt more often along the Norwegian coast. Average speeds range from 2 to 8 knots in the morning and from 4 to 10 knots in the afternoon. Along the E shores of the Skagerrak and the Kattegat, morning E winds become more common, as do afternoon winds from the SW through NW. Northeast and E winds are more frequent along the W shores of the Kattegat during spring. In general, SW and W winds are still the most common winds along the shores of the Kattegat and to the S, particularly

in the afternoon. In The Sound and the Baelterne, the tendency is toward an increase in morning winds off the land and afternoon winds off the water. At Kobenhavn in May, for example, NW through N morning winds diminish and S and SW winds increase in frequency by afternoon. On the coast of Germany, SE through S winds become less frequent during the day, while W and W winds are on the increase. Wind speed averages in general range from about 4 to 8 knots in the morning up to 5 to 12 knots during the afternoon.

Land and sea breezes are most effective from about May through September. They often prevail and at other times deflect existing flow. They can strengthen or weaken this existing flow but on the average wind speeds are stronger in the afternoon than they are in the morning. The sea breeze is the more influential of the two. For example, summer winds up Oslo fjord in the morning are a struggle of opposing forces with S winds, NE winds, and calms in the battle. By afternoon, there is little doubt as to the prevailing wind; at Oslo S and SW winds rule. The sea breeze effect from Kristiansand to Faeder is complicated by the fact that it is perpendicular to the prevailing wind. It is, therefore, most noticeable on quiet summer days. At these times an E breeze will develop shortly after sunrise and will gradually veer through the day, ending up from the SW by late afternoon. This progressively varying wind is known locally as "Solgangsver."

From Oslo S along the W coast of Sweden, the story is the same. In the morning SW and W winds are most frequent, followed closely by calms and E winds which are generated by the land breeze. By afternoon, SW and W winds dominate the wind picture as a result of the sea breeze, the prevailing wind, and the combination of both. The sea breeze is less effective along the Kattegat's W shore, since it opposes the normal prevailing flow. In the Baelterne and The Sound, SW and W morning winds either increase or decrease in frequency during the day, depending on the direction of the sea breeze. It usually coincides with the prevailing directions, however. In some cases, the sea breeze reroutes the prevailing wind to the S or SE. The average wind speeds increase by 2 to 4 knots during the day, with afternoon speeds averaging 8 to 12 knots.

Along the shores of Kiel Bay, the sea breeze seems to play a secondary role to the prevailing SW to NW flow. The pure sea breeze when conditions allow comes into Kiel Bay from the NE and more from the E or N at other locations. Summer winds on the German coast, leading to the Baltic Sea, show an increase in winds off the water during the day with a decrease in land breezes. For example, at Wustrow, W winds, which are the most common morning wind, nearly double in frequency by afternoon. Average wind speeds reach a peak of 8 to 10 knots in the afternoon.

Gales.—The relative infrequency of coastal gales makes them more dangerous when they do occur. Gales in this region occur on from 1 to 20 days annually while wind speeds between 28 and 34 knots are much more frequent. At Kobenhavn for example, winds of gale force occur on the average of just 2 days annually while winds equal to or greater than 28 knots occur on 26 days in an average year.

The most dangerous coastal gale in the Skagerrak occurs in southeastern Norway, where it is known as the "sno" or "elvegusts." This winter wind has been known to drop temperatures by 17°C. It is a cold mountain outflow that streams down valleys and fjords. It is a strong gusty wind that often occurs on clear days and builds to gale force within a few hours. Shelter is often found in tributary fjords when main fjord winds are strong. These winds are particularly strong in narrow channels or around projecting headlands. Gales along the Norwegian coasts are most likely to occur with the most frequent wind direction. Oksoy is one of the most exposed ports and gales blow on the average of 2 to 3 days per month from October through March. Oslo is a well-sheltered port where gales occur on the average of 1 day a year. When gales blow from the SW or W, the winds in Oslo fjord are usually 10 to 15 knots lighter than along the Skagerrak coast. South gales, however, expose Oslo fjord. Southeast gales are strongest along the S tip of Norway. Just off Skagen, on the northern tip of Denmark, winds equal to or greater than 28 knots blow on an average of 5 to 6 days per month from October through March.

Along the Kattegat coasts, the occasional NW winds of winter and early spring can be dangerous. In the violent squalls that sometimes accompany these winds, a vessel may find itself against a lee shore, owing to a sudden wind shift, at a time when heavy snow obscures all landmarks. The E winter wind can also be dangerous particularly in the E approaches to the Kattegat. In exceptionally heavy weather it can reach 50 knots and be accompanied by snow and intense cold. These winds are generated by a buildup in high pressure over Russia and Scandinavia, so are just as likely to be preceded by a rising as a falling barometer. Strongest winds along the German coast blow most frequently from a S through W direction; gales occur on an average of 1 to 4 days per month from October through May. In general, winds are strongest in the S part of the Baelterne leading to the Baltic Sea. At Marstal, for example, winds reach 41 knots or more on 1 to 3 days per month from September through March while Samso and Goteberg have 2 to 3 days with these winds each year. The open waters of the Kattegat are more exposed to strong winds than the coasts. Gale-force winds are infrequent from May through August, when they are occasionally generated by a thunderstorm.

Visibility.—Fog and poor visibilities are least frequent over the open waters of the Skagerrak and Kattegat. In the confined waterways of The Sound, Baelterne, and the numerous fjords, fog provides a hazard to already hazardous navigation. The fog that produces these visibilities occurs most often from autumn to spring with a maximum period in winter. It is a land fog that develops under clear skies and light wind, and then drifts out over the water. Because of the lack of sunlight in these seasons it does not dissipate rapidly. Inland, it occurs as cold air from the highlands drains down into the fjords under quiet conditions. Winter fog may also form when sea ice cools a warm damp SE flow or when a light cold wind blows over relatively warm water. Good visibilities are most frequent when strong N winds bring an Arctic flow over Europe.

Along the coast of Norway, visibilities drop below 0.6 mile on 2 to 5 days per month from October through April. At Oslo, these visibilities occur on 3 to 12 days per month from September through April, with the maximum occurring in December and January. In general, most fjords have a fog frequency similar to Oslo's. At Skagen, fog occurs on 2 to 6 days per month in every month but August. Along the shores of The Sound, fog is prevalent from September through April, when it occurs on about 4 to 12 days per month, reaching a peak from December through March. Although there is little diurnal variation, fog is most likely during the morning hours. Through the Baelterne,

fog occurs on about 3 to 10 days per month from September through April. Along the N coasts of Germany fog is also reported on 3 to 10 days per month, with a peak in late fall and early winter. Summertime brings good visibilities to almost the entire region. Radiation fog can form in the morning hours if clear quiet conditions have prevailed during the night. However, this fog is quickly dissipated by the rising sun. Most susceptible to summer morning fogs are Skagen, Oksoy, and Samso.

BALTIC SEA

General.—Autumn through early winter are the worst times along Baltic Sea shores. Rainy, foggy days, cool temperatures, and clouds abound. Spring and early summer are the best times; skies are blue, visibilities are good, temperatures are mild, and rain is infrequent.

Shorter days and cloudy skies bring an ominous look to the Baltic in autumn. Those cloudy days (cloud cover greater than or equal to 6/8), which numbered less than a dozen in September, become more and more frequent until by December their number has grown to 18 to 22. Clear days (cloud cover less than or equal to 2/8) occur just once or twice in December. Under these cloudy skies, rain and snow become frequent. While amounts average just 25 to 76mm, they occur over a period of 8 to 14 days per month. At Riga, for example, precipitation falls on 12 to 14 days per month from August through November. Beginning in October, this could occur as snow. Early and late season snows usually melt upon reaching the ground. The real snow season is from December through March. Below freezing nighttime temperatures are common by October. The following month, average nighttime lows are around the freezing mark, with average daily maximums in the mid single digits (°C). This range of temperatures shortens the wide summer range of relative humidities while the decreasing temperatures help raise humidities. By November, early morning humidity readings are in the 84 to 92 per cent range with afternoon humidities dropping into the low to mid 80 per cent range. When humidities are high, nighttime skies are clear, and conditions are calm, there is an excellent chance of fog. The rapidly cooling land produces a radiation fog which often drifts out over coastal waters. Fog may also form when a mild flow of warm moist air moves over cooler waters. At Kalmar and Stockholm, this occurs with south and west winds during fall and winter. Snow and rain add to the poor visibilities, which are at their worst from October through March. Riga averages 6 to 11 days per month during that period.

January and February are the coldest months along the Baltic Sea coasts. Extreme low temperatures can occur during this period if a large high moves off the continent and brings a frigid E flow over the Baltic Sea. Recorded extremes range from -14.4°C at Sandvig down to -31.1°C at Kalingrad. Usually minimum temperatures fall below freezing on 20 to 26 days per month; their average ranges from -6.7° to -1.1°C. Daytime maximums range from -1.7°C at Riga, to 2.8°C at Sandvig. An average temperature spread of 4° to 5°C results in a 2 to 4 per cent diurnal variation of relative humidities in December and January. Early morning maximum relative humidities average in the upper 80 to low 90 per cent range; afternoon minimums range from the mid to upper 80 per cent range. Frequent days of light rain or snow continue through the winter. Average measurable amounts of 25 to 51mm fall on 8 to 10 days per winter month. Snow occurs on about 7 to 14 days per month from December through March and on more than 2 days per month from November through April. Precipitation often falls under cloudy conditions which occur 15 to 22 days per month from November through February. Clear skies are seen on just 1 to 3 days per month during this period. Fog is still common and occurs on 2 to 10 days per month at most locations.

In early spring, fogs often occur when warm, moist air moves over cooler water or melting ice. These fogs may be patchy. By late spring, fog becomes more infrequent and skies in general become clearer. The skies are clearest from May through September along the Baltic Sea coasts. At Visby, for example, in an average June, there are 5 cloudy days and 9 clear days. Along with this improvement is the decline in rainy days. Minimum rainfall amounts of less than 50mm usually occur in February or march. Rain falls on only about 6 to 8 days per spring month and snow is rare by May, as are freezing temperatures. Average nighttime minimums are up to the upper single digits (°C) by May. Daytime highs climb from around 4.4°C in March to the mid to upper teens (°C) by May. This influences relative humidities which average from the low 70 to mid 80 per cent range during the morning and down to the mid 50 to mid 70 per cent by afternoon.

Summer days are warmest, on the average, in July and August, when under partly cloudy skies temperatures climb to around 21.1°C and relative humidities fall into the 60 per cent range. Sometimes if it warms up enough. an afternoon shower or thunderstorm may develop on the coast. Showers occur on 8 to 12 days per month and become thunderstorms on 2 to 4 of these days. Showers can also be triggered by fronts moving through the Baltic Sea. They bring amounts totalling 635mm per month on the average. At times, these showers can be heavy and maximum 24-hour amounts range from 51 to 102mm along Baltic shores. Temperature extremes occur when hot dry air flows off the continent. Record highs range from the upper 20s to the mid 30s (°C). Summer nights are pleasant as temperatures drop into the low teens (°C) while humid ties climb to the 75 to 90 per cent range. Early morning fog is a possibility under clear nighttime skies at the more continental ports. This is usually a shallow land fog which dissipates soon after sunrise.

Extratropical Cyclones.—The day-to-day weather along the Baltic Sea shores is produced mainly by the low pressure systems that move through or near the area. These storms are largest and most intense in late autumn and early winter. Most come from the Atlantic Ocean; the most intense are those that move E across Denmark and then NE across southern Sweden into Finland. The secondary Skagerrak lows can also become intense in the Baltic Sea. Winter storms blocked or forced NE by the mountains of Scandinavia are often large enough to bring a S to SW flow over the Baltic Sea. The occasional storms that move into the area from the Barents Sea bring bad weather to the entire Baltic Sea. Spring and summer lows are less intense but can trigger heavy showers and thunderstorms along the Baltic Seacoasts. Most of these come from the W Some stall E of Stockholm and cause extended periods of clouds and rain. Occasionally, shallow summer lows drift N from Poland and bring periods of heavy rains.

Winds.—A general S through W flow is prevalent along Baltic Sea shores from September through January or February. At some ports, like Riga and Klaipeda, topography is responsible from a high frequency of SE winds. These winds are

mainly the result of large storm systems moving to the north. Variability is introduced when storms move through the Baltic Sea. Fronts passing through often bring a following NW flow, while large highs from off the continent bring E winds. Day-to-day winds are variable but there is little regular variation in direction or speed. Average wind speeds range from 6 to 10 knots.

Even more variable are the winds of spring. At many locations this change is noticeable by February. In March, there is an increase in the frequency of N through E winds. Morning winds, at some locations, are variable in direction. The land-sea breeze begins to take hold in March. In calm weather it dominates, but more often it acts to deflect and either strengthen or weaken existing flow. Ports with a W exposure to the Baltic Sea, like Klaipeda, are subject to an afternoon increase in SW through NW winds and a decrease in N through E winds. Along the southern Baltic Sea coast at a port like Swinoujscie, the frequency of N and NW winds becomes more prevalent during the day while S and SW winds fall off.

Wind speeds in spring and summer also show a significant diurnal variation. Average speeds range from 4 to 8 knots in the morning and 10 to 12 knots during the afternoon.

Gales.—Along the Baltic Sea coasts, an encounter with strong winds is most likely from October through March. At exposed ports, gales occur on up to 5 days per month from November through February, while at a protected port like Stockholm gales occur on less than 5 days in an average year. Winter gales most often ride SW winds. In spring, gales from the NE may be encountered when a low moves across Poland, from the Adriatic Sea, and pushes up against a large high over Scandinavia. In general, gales can be expected on 2 days per month or less from May through July. Summer gales are often from the NW Thunderstorms and squalls may produce brief gusts of gale force. Ports most susceptible to summer gales include Klaipeda, Riga, and Kalmar.

GULF OF BOTHNIA AND GULF OF FINLAND

General.—The climate of the Gulfs of Bothnia and Finland, particularly the eastern Gulf of Finland and northern Gulf of Bothnia, is more continental than that of the other regions. This means a greater temperature range and more snow. The region is sheltered somewhat by the mountains of Scandinavia, which results in scanty precipitation amounts.

Late autumn and winter weather is the worst and along with the ice practically prohibits navigation of these waters. The first snow usually occurs in October and the last in early May. From November through March snow falls on 10 to 20 days per month except near the entrance to the Gulf of Finland, where 5 to 10 snow days per month can be expected. From December through March, snow depths can reach 50 to 75cm along the northern Gulf of Bothnia coasts and the E shores of the Gulf of Finland. Maximum daily temperatures in these areas usually remain below freezing from November through April and mid-winter minimums fall to about -11 to -16°C on the average. Shores along the entrance to the Gulf of Finland and the Gulf of Bothnia are moderated somewhat by the warmer Baltic waters. Extreme temperatures range from -23 °C at these entrances to -40°C in the eastern and northern reaches of the Gulfs. The low temperatures bring high relative humidities with little diurnal variation. Skies are cloudy from late summer through early spring. December is the grayest month; cloudy conditions (cloud cover greater than or equal to 6/8) can be expected on up to 26 days at Tallinn and Leningrad. Clear conditions (cloud cover less than or equal to 2/8) are infrequent at any time of the year. Snow and fog are responsible for poor winter visibilities. Heavy snow, even in high winds, can reduce visibility to a few yards. Blizzard conditions can occur in this region. Winter fog is often the type which forms when cold air blows off the land or ice, over relatively warmer waters. This is called sea smoke and is most frequent in autumn. Poor visibilities are most likely along the Gulf of Finland shores. From September through April, visibilities fall below 0.6 mile on 4 to 8 days per month on these shores and on 2 to 5 days per month along Gulf of Bothnia coasts. Best visibilities are encountered along the Swedish coast.

Spring is a season of moderating temperatures, clearing skies, and the fewest days with precipitation. Summer brings pleasant temperatures, showers and partly cloudy skies. Spring and summer are the least cloudy seasons along the shores of the Gulfs of Bothnia and Finland. Clear conditions occur on up to 4 to 8 days per month, while cloudy conditions are observed on as few as 6 to 12 days per month. The best conditions occur during May, June, and July, when shallow lows bring narrow bands of clouds and showers. Showers and thunderstorms are responsible for much of the spring and summer rain. Totals are usually greatest in August with averages of 51 to 76mm. These showers can reduce visibilities briefly, but in general, visibilities at ports improve during the spring and are best in June and July. This is not true over open water and at entrances to ports where mild winds blowing over cooler waters cause considerable fog in summer. The fog at ports usually forms in the early morning and is quickly burnt off by the increasing temperatures. Temperatures on summer afternoons rise above 21°C from about May through September but mostly in July, when they get up over 21°C on 10 to 20 days.

Temperature rises begin in March and continue through July. Biggest rises occur from March through June when average daily maximums increase from the low single digits below 0°C and low single digits (°C) to the upper teens (°C) and average daily minimums increase from single digits below 0°C to upper single digits (°C). During this same period, relative humidities drop off and their diurnal variation becomes greater. By June, maximums in the 70 per cent range and minimums into the 60 per cent range are common. July is usually the warmest month; average daily maximums range from 18.3° to 23.9°C while minimums run in the low teens (°C). Extremes are most likely in June, July or August when temperatures from the upper 20s to mid 30s (°C) have been recorded. Lows in midsummer have dipped below freezing at only a very few ports. Freezing temperatures usually occur last in May and start again in September. Days with snow, therefore, do not occur from June through August. Rain, however, occurs on about 6 to 12 days per month during this period and thunderstorms can be expected on 1 to 4 days per month from May through September.

Extratropical Cyclones.—The Gulf of Bothnia and the Gulf of Finland are shielded from many storms by the mountains of Scandinavia. Most storms move into the area from the S through W. Large winter storms to the W and N of Norway are effective weather producers in the gulfs. They also can trigger Skagerrak lows, which may move through the area bringing strong rapidly-shifting winds. Lows that move directly over the gulfs are often more frequent in spring and summer. They

are, however, weak shallow systems with narrow bands of clouds and showers.

Winds.—Along the shores of the Gulf of Finland and the Gulf of Bothnia, the winter wind regime becomes established in November and breaks down in March. Wind directions on both shores of the Gulf of Finland and on the E shore of the Gulf of Bothnia vary mainly from SE to SW at a average of 7 to 14 knots. There is little diurnal variation in either direction or speed on these short days. Along the E coast of Sweden topography interferes with this prevailing flow and at many ports it becomes secondary to N winds caused by cold air flowing down the mountains. Wind speeds are also less and run 5 to 8 knots on the average. An extreme example of sheltering occurs at Harnosand, Sweden where from November through February calms occur about one-half of the time. Come February, there is a noticeable increase in NE winds along all coasts and more variability in general. At Helsinki, N and NE winds are the two most common directions in February. As days grow longer the sea breeze alters the prevailing flow; along all coasts there is a noticeable increase in onshore components from morning to afternoon. The sea breeze influence is also reflected in the wind speeds, which increase from 7 to 10 knots in the morning to 10 to 12 knots during the afternoon.

The land-sea breeze effect reaches a peak in summer. Morning winds tend to be variable, particularly when the land breeze comes from a different direction than the normal flow. At Hanko, Finland for example, normal flow is from the S through SW while land breezes, which occur when normal flow is slack, are from a N direction. The result is that in July, at Hanko, morning directions that occur 10 to 14 per cent of the time include N, E, SE, S, SW, NW, and calm. Sea breezes can strengthen or sometimes can reverse existing winds. Therefore the variable light winds of morning give way to a preponderance of off-the-water breezes during the afternoon. North components are common along the S shore of the Gulf of Finland, while S components are common along the N shore of the Gulf of Finland. In the Gulf of Bothnia, W components are prevalent in the afternoon along the E shores, while E components are found on W shores. Morning wind speeds that average 7 to 9 knots increase to a 10 to 13-knot range in the afternoon. September remains very much like summer, with sea breezes still evident and morning winds still variable. There is an afternoon increase in wind speed but it is just slightly less than it was in mid-summer. This wind speed increase is even less noticeable in October, while more and more the prevailing winds tend to remain the same all day.

Gales.—Gales are infrequent along the shores of the two gulfs. The most exposed coast lies between Tallinn and Vyborg. Winds reach 30 knots or more on from about 20 to 40 days annually. These winds are most likely from fall through spring and can occur on up to 5 days per month in winter. When a large winter Siberian high pushes W, cold strong E winds can blow without let-up for several days. The coasts of Finland and Sweden are sheltered from strong winds. At Helsinki, gales just don't occur and Haparanda hasn't recorded a wind of 41 knots or more in 16 years of observations. In general, gales along these coasts occur on less than 10 days a year. Umea is one of the more exposed locations; winds of 41 knots or more occur on 9 days annually.

Currents

Mean flow in the Baltic is very weak. Circulation is generally cyclonic (counterclockwise) and is driven by density differences due to the Coriolis effect. Mean current velocities in the surface layer are a few centimeters per second (less than 0.1 knot) and are less than 1 cm/sec (less than 0.02 knot) at the bottom. In areas where the channel constricts or the depth de creases over a sill, current velocities increase to 1 to 2 knots.

Mean flow in the Baltic is slightly more persistent along the E coast than along the W coast due to the freshwater influx and the Coriolis effect. Storms over the Baltic Sea are frequent and may be persistent, but mean winds are light and they do not affect the general circulation.

In the Gulf of Bothnia and the Gulf of Finland circulation is cyclonic, with an average speed of 1 cm/sec (0.02 knot). There is one large counterclockwise gyre in the Bothnian Bay and another in the Bothnian Sea. In the Gulf of Bothnia, Gulf of Finland, and parts of the northern Baltic Sea, the surface current is proportional to the wind speed and may increase to 1.5 knots. Strong E winds may cause the surface currents throughout the Gulf of Finland to set W. Strong W winds may cause the surface currents throughout the Gulf of Finland to set W.

Mean currents in the Aland Sea are S at the surface and N near the bottom; flow reversals in the surface layer due to the wind may last for several months.

Fishing Areas

Drift nets are used to catch salmon, herring, and mackerel. The nets, which may be up to 2 miles long, may be laid wither in a straight line or on the perimeter of a circle; their effective depth, which is regulated by floats, is between 6m and 8m. The nets are normally marked by light, radar reflectors, and buoys displaying flags. The fishing seasons are, as follows:

1. Salmon.—September to June.
2. Herring.—Early spring and from June to November, although it is of little importance in Kattegat.
3. Mackerel.—Beginning of May to the end of June. Carried out N of 56°50'N.

Trawling takes place year round in depths of 25m to 350m.

Seine net fishing occurs year round along the entire W coast of Sweden, in Skagerrak, and the North Sea, usually in depths of 25 to 300m.

In areas of bottom net fishing it should be expected that, especially during winter, broken and drifting net posts dangerous to small craft may be encountered.

Ice

The ice season begins in general in later October and ends in early March in the Baltic Sea. The surface water temperature in the southern Baltic Sea is 10° to 11°C when ice begins to form in the northern Baltic Sea. The 10°C difference between N and S surfaces waters decreases throughout the winter. In March, increasing solar radiation warms the surface waters and the ice begins to break up. The entire Baltic Sea freezes over during a severe winter, except for a small area in the extreme S. Large sections of the Baltic Sea remain ice-free during a mild winter, with a temperature of 4°C in the southern Baltic Sea.

The ice season may start 2 weeks early or late and end 2 weeks early or late, depending upon how much heat has been stored in Baltic Sea waters during the previous summer. During summer, the thermocline is steep and near the surface. Heat is lost from surface water in the fall as strong winds mix the water column to a depth of 60m. Freezing begins in late November during an average year.

By early January, ice covers all of the Bothnian Bay, but in the central Bothnian Sea the temperature is 1°C and the water remains open until late February. By early February, the Gulf of Finland is ice-covered. The Bothnian Sea remains open until late February as the temperature in the S waters continue to drop to 2°C. By March, the surface waters begin to warm again, ending the ice season.

Navigational Information

Electronic Navigational Communications

For information on the International Maritime Satellite Organization (INMARSAT), the Global Maritime Distress and Safety System (GMDSS(), the Global Positioning System (GPS), and SafetyNET, see **North Atlantic Ocean—Navigational Information**.

International Ship and Port Facility (ISPS) Code

The ISPS Code applies to ships on international voyages and port facilities directly interfacing with these ships. All vessels should fully comply with the provisions of Chapter XI-Part 2 of the SOLAS Convention and Part A of the ISPS Code. Vessels shall demonstrate that appropriate maritime security measures are in place according to ISPS Code regulations. For further information, see **North Atlantic Ocean—Navigational Information**.

Enroute Volumes

Pub. 193, Sailing Directions (Enroute) Skagerrak and Kattegat.

Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

Baltic Sea—Ice Information

Entity	Contact information		Remarks
Baltic Sea Icebreaking Web (BIMWeb)	Telephone	358-9-685-7659	An online service with information on winter navigation. This service includes a daily ice chart and ice report covering the entire Baltic Sea area, the positions of icebreakers, traffic restrictions in force, and other useful information concerning winter navigation. Information on the web is available free of charge; information can be delivered by mail, facsimile, or e-mail for a fee.
	Facsimile	358-9-685-7638	
		358-9-685-7639	
	Web site	http://www.baltice.org	
Baltic Sea Portal of the Institute of Marine Research	Web site	http://www.itameriportaali.fi/en/tietoa/jaa/en_gb/jaa	Further useful information on Baltic Sea ice
German Bundesmtes fur Seschifffahrt und Hydrographie (BSH)	Telephone	49-3-814563780	A daily ice report issued from Monday through Friday.ncludes 4 to 5 day ice forecasts, the operational area of icebreakers, and restrictions to navigation for assistance. At least once a week an an ice chart covering the N and E areas of the Baltic Sea is produced. An ice chart covering the W part of the Baltic Sea and the North Sea coast is produced at least three times per week.
		49-3-814563782	
		49-3-814563787	
	Facsimile	49-3-814563949	
	E-mail	ice@bsh.de	
	Web site	http://www.bsh.de/en/Marine_data/Observations/Ice/Index.jsp	

Baltic Sea—Pollution Reporting Contacts

Country	Organization	Contact	Remarks
Denmark	Admiral Danish Fleet	JRCC Arhus or Lyngby Radio	For further information, see **Denmark—Pollution**

Baltic Sea—Pollution Reporting Contacts			
Country	**Organization**	**Contact**	**Remarks**
Estonia	Estonia Border Guard	JRCC Tallinn or Tallinn Radio	For further information, see **Estonia—Pollution**
Finland	Finnish Maritime Administration	MRCC Turku	
Germany	Maritimes Lagezentrum		For further information, see **Germany—Pollution**
Latvia	Latvian Coast Guard	MRCC Riga	For further information, see **Latvia—Pollution**
Lithuania	Lithuanian Maritime Safety Administration	MRCC Klaipeda	
Poland	MRCC Gdynia and MRSC Swinoujscie	MRCC Gdynia or Witowo Radio	
Russia	MRCC Kaliningrad and MRCC Sankt Petersburg	MRCC Kaliningrad, MRCC Sankt Petersburg, or Kaliningrad Radio	
Sweden	MRCC Gothenburg	MRCC Gothenburg or Stockholm Radio	For further information, see **Sweden—Pollution**

Pollution

Single-hull Tanker Phase-out Schedule

In accordance with Regulation 13G of Annex I of the MARPOL Convention, single-hull tankers should be phased out or converted to a double-hull configuration according to a schedule based on their year of delivery. These requirements are designed to reduce the risk of oil spills from tankers involved in low-energy collisions or groundings. For further information, see **North Atlantic Ocean—Pollution—Single Hull Tanker Phase-out Schedule**.

Ballast Water Management

International guidelines have been adopted by the IMO to prevent the introduction of unwanted aquatic organisms and pathogens from ships' ballast water and sediment discharge into marine ecosystems. The guidelines include the retention of ballast water on board, ballast exchange at sea, ballast management aimed at preventing or minimizing the uptake of contaminated water or sediment, and the discharge of ballast ashore. Particular attention is drawn to the hazards associated with ballast exchange at sea. For further information, see **North Atlantic Ocean—Pollution—Ballast Water Management**.

MARPOL Special Areas

MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

The sea area of the Baltic Sea proper, including the Gulf of Bothnia, the Gulf of Finland and the entrance to the Baltic Sea, is a MARPOL Special Area. It is bounded by the parallel of the Skaw in the Skagerrak at 57°44.8'N

For further information, see **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Pollution Reports

The Baltic Sea is under intense surveillance for pollution and violations of traffic rules. Shore-based radar, helicopters, aircraft, and vessels of the coast guard and/or maritime police are used for surveillance. The use of electronic remote-sensing equipment by aircraft enable almost any kind of oil pollution to be detected regardless of visibility, even at night. Detection is possible even when detergents have been added to the discharged oil. Surveillance helicopters and vessels are equipped with sampling devices.

Any person found guilty of polluting the Baltic Sea can be punished. Masters are strongly recommended to make use of the reception facilities available in ports for oil or chemical slops, waste, residues, garbage, and any other pollutants on board ships.

Reporting requirements as implemented by national legislation of European Union and EEA member states will apply to all vessels of 300 gross tons and over with the exception of:

1. Fishing vessels.
2. Traditional vessels.
3. Recreational craft less than 45m long.
4. Ships with respect to bunker fuel of less than 5,000 tons.

The organizations, as listed in the accompanying tabled titled **Baltic Sea—Pollution Reporting Contacts**, will coordinate the necessary measures for assistance and rescue, when incidents occur and cargo (especially dangerous or polluting cargo) is damaged, or when the sea is, or may be, polluted.

Sulphur Emission Control Areas

Sulphur Emission Control Areas (SECA) are areas where special controls are in effect to reduce sulphur oxide (SO_x) emissions from ships. SECAs are located, as follows:

1. The Baltic Sea.
2. The North Sea, including the English Channel.

Currently SO_x emissions from ships transiting a SECA are limited to 1.5 per cent. This will decrease to 1.0 per cent on 1 March 2010, with a further reduction to 0.10 per cent on 1 January 2015.

Regulations

Schengen Agreement

The aim of the Schengen Agreement is to create free movement for persons within the European Union (EU) and to intensify the fight against cross-border crime. In practice, the Schengen Agreement means that personal checks on journeys between the member states will cease, while the external frontier controls will be intensified, i.e. towards countries that are not signatories to the Schengen Agreement. For further information, see **North Atlantic Ocean—Regulations—Schengen Agreement.**

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The participating EU countries in the Baltic Sea are, as follows:

1. Denmark.
2. Estonia.
3. Finland.
4. Germany.
5. Latvia.
6. Lithuania.
7. Poland.
8. Sweden.

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR)

The NIR of the PMoU has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the Paris MoU region.

For further information, see **North Atlantic Ocean—Regulations—Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR).**

European Union (EU) Advanced Manifest Rule

All cargo vessels sailing from a non-EU port to an EU port must submit an Entry Summary Declaration (ENS) to the first port of call in the EU 24 hours prior to the cargo being loaded. for further information, see **North Atlantic Ocean—European Union (EU) Advanced Manifest Rule.**

IMO Recommendations for Transiting the Entrances of the Baltic Sea

The following recommendations have been made by the IMO regarding vessel transits through the entrances to the Baltic Sea:

1. **The Sound.—**Loaded oil tankers with a draft of 7m or more, all loaded chemical tankers and gas carriers, irrespective of size, and vessels carrying shipments of irradiated nuclear fuel, plutonium, or high level radioactive wastes (INF cargoes) should use the pilotage service established by the governments of Denmark and Sweden when navigating in a designated part of The Sound described below.

   The designated area lies SE of a line extending from Svinbaden Light (56°09'N., 12°33'E.) to Hornbaek, 4 miles SW, and N of a line extending from Skanor (55°25'N., 12°50'E.) to Aflandshage, the southernmost point of Amager Island, lying 12 miles NW.

   Vessels should be aware that anchoring may be necessary owing to the weather and sea conditions, in relation to the size and draft of ship and the sea level. Vessels should also take into account information from the pilot or from the radio navigation information services in the area.

2. **Route T.—**Vessels with a draft of 11m or more, and vessels carrying shipments of irradiated nuclear fuel, plutonium, or high level radioactive wastes (INF cargoes), regardless of their size and draft, are to use the pilotage services locally established by the coastal states.

   Vessels should be aware that anchoring may be necessary owing to the weather and sea conditions, in relation to the size and draft of ship and the sea level. Vessels should also take into account information from the pilot or from the radio navigation information services in the area.

3. **Route T (Depth reductions).—**Charted depths may be up to 2m less due to unknown obstructions, sand migration, and tidal or meteorological effects. Vessels should not enter the area unless they have a draft which provides sufficient underkeel clearance, taking into account the draft increasing factors, including squat and the effect of a course alteration.

   In certain area of the Storebaelt (Great Belt), Hatter Rev, Vengeancegrund, and in the narrow passage E of Langeland, vessels are to exhibit the signal for a vessel constrained by its draft as prescribed in Rule 28 of the 72 COLREGS.

Shipowners and masters should consider the full potential of new and improved navigation equipment in SOLAS chapter V, including Electronic Chart Display and Information System (ECDIS) when navigating in these narrow waters of The Sound and along Route T.

Particularly Sensitive Sea Areas (PSSA)

The Baltic Sea area of Sweden, Denmark, Finland, Estonia, Lithuania, Latvia, Poland, and Germany (except for waters under Russian jurisdiction) has been declared by the IMO to be a PSSA.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

Routes

The route information in this section considers routes to and from selected ports in the Baltic Sea.

In general, these routes are as direct as safe navigation permits. However, in some instances, a divergence is made to avoid dangers to navigation, to take advantage of favorable currents, or to minimize the effects of adverse currents. It should not be inferred that recommendations in this chapter necessarily represent adopted or established sea lanes. Routes between ports consist of a series of rhumb lines unless stated otherwise. When a route may be followed in either direction the reverse route is not described.

Detailed information on these routes can be found in the Ap-

pendix I—Routes in and around the Baltic Sea.

Ship Reporting System

BELTREP

BELTREP, a mandatory ship reporting system, operates in the N and central parts of Store Baelt and is operated by Great Belt VTS. For further information, see Sector 2 in Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

SOUNDREP

SOUNDREP, a voluntary ship reporting system, has been established between Denmark and Sweden in the central and southern parts of The Sound in order to improve safety and protect the marine environment. This reporting system, which is operated by Sound VTS, includes a Reporting Area and an inner Operational Area. For further information, see Sector 1 in Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part.)

SafeSeaNet (SSN)

SeaSafeNet (SSN) is the mandatory reporting system of the Norwegian Coastal Administration (NCA). The system is based on the requirement contained in EU Directive 2002/59/EC and implemented by Norwegian legislation. For further information, see **Norway—Ship Reporting System**.

GDANREP

GDANREP is a mandatory reporting system co-located with the Gulf of Gdansk Vessel Traffic Service. The system covers the territorial and internal waters of Poland in the Gulf of Gdansk S of 54°45'N, between the Reporting Lion and the Polish coast. For further information, see Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

GOFREP

The Gulf of Finland Reporting System (GOFREP) is a mandatory ship reporting system. It covers the international waters in the Gulf of Finland E of the Western Reporting Line and Russian territorial waters W of longitude 26°30.0'E. In addition, Estonia and Finland have implemented mandatory ship reporting systems to their national water areas outside VTS areas. These reporting systems provide the same services and make the same requirements of shipping as the system operating in international waters; further information on these systems can be found in Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

The mandatory ship reporting system in the international waters of the Gulf of Finland, including the national mandatory ship reporting systems of Estonia and Finland, are collectively referred to as GOFREP; the area of coverage is referred to as the GOFREP area. Further information on GOFREP can be found in Appendix II.

Tides

Tides are mixed (two high and two low waters each day, with marked inequality between heights of successive high and successive low waters), or diurnal (one high and one low water each day) in the Baltic region.

Appendix I—Routes in and around the Baltic Sea

Routes in and around the Baltic Sea are, as follows:

1. Routes from Oslo to ports in the North Sea.
2. Skagerrak and Kattegat.
3. Routes in the Baltic Sea.

1. Routes from Oslo to ports in the North Sea.

Oslo to Bergen.—From a position about 1.75 miles SE of Lille Faerder Light proceed in a SW direction as safe navigation permits off the coast of Norway. Mariners are cautioned that there is a Traffic Separation Scheme off Feinstein.

Oslo to Stavanger.—Follow the **Oslo to Bergen** route to the position about 3.5 miles SW of Kvassheim Light, then steer NNW to a position about 5 miles W of Feinstein (58°49'N., 5°31'E.), and then steer N to a position about 2 miles NW of Kvitingsoy (59°04'N., 5°24'E.). From the latter position steer as direct as safe navigation permits, via Kvitingsoyfjord and Byfjord, to destination.

Oslo to Pentland Firth.—Follow the **Oslo to Bergen** route to a position about 4 miles S of Lindesnes and then steer WNW to a position about 3 miles E of Duncansby Head (58°39'N., 3°01 'W.). From the latter position steer NNW and W to the junction position in Pentland Firth, about 2.25 miles NNE of Dunnet Head (58°40'N., 3°22'W.).

Caution.—The passage of Pentland Firth should not be attempted before consulting Pub. 141, Sailing Directions (Enroute) Scotland, regarding directions, currents, and dangers.

Oslo to Aberdeen.—Follow the **Oslo to Bergen** route to a position about 4 miles S of Ryvingen, then steer WSW to a position about 1 mile NNE of Girdle Ness (57°08'N., 2°03'W.). Then proceed as direct as safe navigation permits to destination.

Oslo to Newcastle.—Follow the **Oslo to Bergen** route to a position about 6.5 miles SSE of Oksoy and then SW to a position about 1.5 miles E of the breakwater. Then proceed as direct as safe navigation permits to destination.

Oslo to Hull.—Proceed S to a position about 2 miles SE of Faerder Light and then steer SW to Humber Lightship (53°37'N., 0022'E.). Then steer as direct as safe navigation permits to destination.

Oslo to London.—Proceed S to the position about 2 miles SE of Faerder Light, then steer SSW to a position about 10 miles NW of Hanstholm (57°07'N., 8°36'E). Continue SSW to a position about 6 miles ESE of Shipwash Lightship (52°02'N., 1°42E.), then steer SW, passing about 0.75 mile SE of Sunk Lightship, to enter the Thames Estuary. Then steer various course to destination.

Oslo to Strait of Dover.—Follow the **Oslo to London** route to a position about 10 miles NW of Hanstholm. Then steer SW to a position about 2.5 miles NW of Sandettie Lightship. This course is across Brown Ridge; care must be taken to give a sufficient berth to the 9.1m shoal there. Then steer SW, passing about 3 miles E of South Goodwin Lightship, to the junction position point in Strait of Dover in position 5I°06'N, 1°30'E

Oslo to Antwerp.—Follow the **Oslo to London** route to a position about 10 miles NW of Hanstholm. Then steer SSW to a position about 2 miles W of Texel Lightship (53°00'N., 4°24'E.). Continue SSW of Goerre Light (51°56'N., 3°40'E.), then steer SW through Schouen Deep until the course intersects the Oost Gat approach range. Then follow the marked channel to destination.

Caution.—There is a least depth of 7.9m on this route, found in Oost Gat. Deep-draft vessels, therefore, proceed SW outside the dangers fronting the Schelde River and enter the via Wielingen Channel.

Oslo to Rotterdam.—Follow the **Oslo to Antwerp** route to a position about 2 miles W of Texel Lightship, then steer SSW to a position 3 miles WNW of Hoek van Holland. From the latter position steer as direct as safe navigation permits, following the marked channel, to destination.

Oslo to Amsterdam.—Follow the **Oslo to Antwerp** route to the position about 2 miles W of Texel Lightship, then steer SSE to a position about 4 miles W of the breakwater at IJmuiden. Then steer as direct as safe navigation permits to destination.

Oslo to Bremerhaven.—Proceed S to a position about 2 miles SE of Faerder Light. and then steer SSW to a position about 10 miles NW of Hanstholm. Continue SSW to position 55°24'N, 6°57'E; then steer SSE to Weser Lightship. Then follow the marked channel to destination.

Oslo to Hamburg.—Follow the **Oslo to Bremerhaven** route to the position about 10 miles NW of Hanstholm. Then steer SSW to a position W of Horns Rev (about 29 miles W of Blaavands Huk), and then SSE to a position about 9 miles W of Vyl Lightship. Continue SSE, taking care to avoid the dangers E of Helgoland, to Elbe I Lightship. From the lightship steer as direct as safe navigation permits and follow the marked channel to destination.

Oslo to Skagen.—Proceed S to a position about 2 miles SE of Faerder Light and continue S to the junction point off Skagen, which is about 2 miles N of Skagens Rev Lightship.

2. Skagerrak and Kattegat.

Vessels entering the Kattegat from the Skagerrak and continuing into the Baltic Sea have the choice of several routes, each being dependent on the draft of the vessel and the existing weather and ice conditions.

There are two main channels leading through the Kattegat. The eastern channel, the deeper of the two and the one most commonly used, lies between the central shoals in the Kattegat and the Swedish coast. This channel has ample depths to accommodate the largest vessels and its fairway is marked adequately with navigational aids. The W channel, which lies between the Danish coast and Laeso, is the more intricate to navigate. This channel has least depths of about 4 to 5 fathoms and is rather narrow in places.

Three passages connect the Kattegat with the Baltic Sea, as follow:

1. The Sound, the shortest and most favorable route, is restricted to a depth of 7.9m in Drogden Channel.
2. Store Baelt, the central passage and the one used when a vessel's draft makes it impractical to negotiate The Sound, has a least depth of 12.8m in the fairway; however, a depth of over 18.3m can be carried in this passage by means of following a more circuitous navigational course.
3. Lille Baelt, the westernmost passage, lies between the Danish coast and the island of Fyn and is used mostly by local traffic

Distance advantages.—When bound from the Skagerrak for The Sound there is little difference in distance between the W channel and the E channel. When bound for Store Baelt from the Skagerrak there is a distance advantage of about 20 miles in using the W channel in preference to the E channel.

Vessels proceeding to ports on the E coast of Sweden and having a draft suitable for transit of Drogden Channel will save a distance of about 130 miles by navigating by way of the E channel through The Sound in preference to Store Baelt. The same vessels bound for ports in the E part of the Baltic Sea will save a distance varying from 85 to 130 miles by proceeding through the same passages. Vessels bound for the W part of the Baltic Sea will find it more advantageous to proceed via Store Baelt.

Mariners should be aware that the Danish government has established a 17m transit route (Route T) between Skagen and the area NE of Gedser.

3. Routes in the Baltic Sea.

From a position S of Falsterbo (55°24'N., 12°47'E) or a position WNW of Kap Arkona (54°41'N., 13°27'E.), vessels bound for Gdansk may pass S of Bornholm, being careful to avoid Adler Grund. Then steer for a position off the entrance of the Gulf of Danzig. Vessels bound for Swinoujscie, in the S part of the Baltic Sea, may steer a direct course from a position NE of Kap Arkona but cation must be exercised to avoid such dangers as the shoals on Oder Bank and Stolpe Bank.

Swinoujscie to Gdansk.—When clear of the harbor at Swinoujscie, proceed as prudently as safe navigation will allow to position 55°44'N, 15°35'E and then to position 54°54'N, 18°24'E. From this latter position shape a course, with due caution, to position 54°37'N, 18°57'E and then to the pilot station for either Gdansk or Gdynia.

Swinoujscie to Klaipeda.—Proceed as recommended in the **Swinoujscie to Gdansk** route to position 54°54'N, 18°24'E, then direct to position 55°44'N, 20°58'E. From this latter position follow the detailed directions as shown in the Sailing Directions for about 6 miles to the harbor.

Swinoujscie to Riga.—When clear of the harbor at Swinoujscie, proceed as prudently as safe navigation will allow to position 54°44'N, 15°35'E; then shape a course as direct as possible to position 47°52'N, 21°36'E. From this position follow the buoyed channel SE to position 57°40'N, 21°56'E and then to position 57°51'N, 22°39'E in Irbeni Vain. Caution is advised on the SE leg when it passes close E of Mikhaylovsk, the northernmost of several shoals, with several 4.6m patches. Then steer direct to position 57°06'N, 23°57'E, where a pilot embarks for Riga.

Vessels bound for Liepaja and/or parts N may pass N of Bornholm and then shape courses, or direct as prudent navigation will permit, to most destinations on that side of the Baltic Sea. Vessels bound for ports in the W part of the Baltic Sea steer to a position E of Olands Sodra Udde (56°12'N., 16°24'E.), and then as direct as safe navigation permits.

Gdynia to Liepaja.—When clear of the harbor at Gdynia, follow the buoyed channel to position 54°37'N, 18°57'E and then as directly as prudent navigation permits to position 56°28'N, 20°44'E. Then proceed ENE to position 56°30'N, 20°52'E; from this position, follow the channel to the harbor.

Gdynia to Riga.—Follow the directions shown above for the **Gdynia to Liepaja** route to position 56°28'N, 20°44'E. Then as safely as prudent navigation permits, steer to position 57°52'N, 21°36'E. From this position follow the recommendations in the **Swinoujscie to Riga** route.

Stockholm to Riga.—When clear of the harbor and after negotiating the various channels of Stockholm, proceed to position 59°10'N, 19°14'E. Then as direct as prudent navigation permits, shape course to position 57°52'N, 21°36'E. From this latter position follow the directions previously given for the **Swinoujscie to Riga** route.

To Gulf of Finland ports.—From the positions S of Falsterbo (55°24'N., 12°47'E) or WNW of Kap Arkona (54°41'N., 13°27'E.), steer to a position about 10 to 12 miles SE of the S tip of Gotland, then to a position about 20 miles N of the W arm of Hiiumaa, in the entrance of the Gulf of Finland.

Vessels bound for St. Petersburg steer from the entrance of the Gulf of Finland so as to pass N of Naisaar (Nargen) (59°34'N., 24°31'E.) and Rodsher (59°58'N., 26°40'E.) and then S of the S extremity of Ostrov Gogland. Various courses as direct as prudent navigation will allow can be steered to St. Petersburg.

Ports in Finland on the N side of the Gulf of Finland can be approached as directly as prudent navigation will allow from the entrance. Caution is advised while navigating either shore and the fairways of the Gulf of Finland as they are encumbered with many shoal areas and shallow depths.

To Gulf of Bothnia ports.—Vessels traversing Gulf of Bothnia head generally NW through Alands Hav and then N through Sodra Kvarken. This route may be followed as safe navigation permits passing W of the Marketskallen and Sodra Kvarken buoys until NE of Grundkallen. From this position direct courses may be shaped for the approaches to most ports in the S part of the Gulf of Bothnia.

Vessels bound for ports in the N part of the Gulf of Bothnia can shape a course from a position NE of Grundkallen to a position SE of Sydostten (63°20'N., 20°22'E.). Then, favoring that side of the approach, proceed through Norra Kvarken, proceeding either NE via Ostra Kvarken or NNE via Vastra Kvarken. The former route may be preferred by vessels bound for the Finnish side. Then as directly as prudent navigation will permit, proceed to the approaches of the many ports in the area.

Caution.—Mariners should exercise caution when navigating in the vicinity of Ostra Kvarken and Vastra Kvarken, particularly during foggy weather, as the current is uncertain and sometimes precedes the wind.

Appendix II—Gulf of Finland Reporting System

The Gulf of Finland Reporting System (GOFREP) is a mandatory ship reporting system. It covers the international waters in the Gulf of Finland E of the Western Reporting Line (described below) and Russian territorial waters W of longitude 26°30.0'E.

In addition, Estonia and Finland have implemented mandatory ship reporting systems to their national water areas outside VTS areas. These reporting systems provide the same services and make the same requirements of shipping as the system operating in international waters; further information on these systems can be found in Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

The mandatory ship reporting system in the international waters of the Gulf of Finland, including the national mandatory ship reporting systems of Estonia and Finland, are collectively referred to as GOFREP; the area of coverage is referred to as the GOFREP Area.

Shore-based facilities at Tallinn Traffic, Helsinki Traffic, and Sankt Petersburg Traffic monitor vessel movements and provide advice and information about navigational hazards and weather conditions. Shipping is monitored by radar and AIS. The language used for all communications shall be English, using the IMO Standard Marine Communications Phrases, when necessary.

The following vessel categories are required to participate in GOFREP:

1. Vessels 300 gross tons and over.
2. All vessels under 300 gross tons in the following circumstances:
   a. When not under command or at anchor in the TSS.
   b. When restricted in their ability to maneuver.
   c. With defective navigational aids.

The GOFREP Area is divided into three areas of monitoring responsibility with a borderline. The borderline is referred to as the **Central Reporting Line** and consists of two parts, as follows:

1. Western part—A line drawn through the midpoints of the separation zones of the Traffic Separation Schemes off Kopu, Hankoniemi, Porkkala, and Kalbadagrund to position 59°59'09"N, 26°30'00"E.
2. Eastern part—A line drawn from position 59°57.0'N, 26°30.0'E to position 60°05.0'N, 26°30.0'E and further on through the borderline of the Russian territorial sea and the outer limit of the Finland EEZ until reaching position 60°08.9'N, 26°49.0'E. From this position, the Central Reporting Line continues through the limits of the Finland EEZ and the Russia EEZ continuing to position 60°10.3'N, 26°57.5'E, then to position 60°10.3'N, 27°10.9'E, and ending at position 60°12.0'N, 27°17.6'E.

The **Western Reporting Line** is a line joining the following positions:

a. Bengtskar Light (59°43.4'N., 22°30.1'E.).
b. 59°33.3'N, 22°30.0'E.
c. 59°10.0'N, 21°30.0'E.
d. Kopu Poolsaar.

The **Vainameri Reporting Line** is a line joining the following positions:

a. 59°06.0'N, 22°35.0'E.
b. 59°14.0'N, 22°31.0'E.

GOFREP monitoring areas of responsibility are, as follows:

1. Helsinki Traffic—The area N of the Central Reporting Line. Vessels entering this area contact Helsinki Traffic.
2. Tallinn Traffic—The area S of the Central Reporting Line and W of longitude 26°30.0'E. Vessels entering this area contact Tallinn Traffic.
3. Sankt Petersburg Traffic—The area S of the Central Reporting Line and E of longitude 26°30.0'E. Vessels entering this area contact Sankt Petersburg Traffic.

The Traffic Centers provide information concerning exceptional weather conditions, ice, and navigational hazards on request or when needed, as follows:

1. Tallinn Traffic—VHF channels 61 and 81.
2. Helsinki Traffic—VHF channels 60 and 80.
3. Sankt Petersburg Traffic—VHF channels 74 and 10.

The information broadcasts are preceded by an announcement on VHF channel 16.

Vessels shall continuously monitor the main VHF channel of the Traffic Center within the area they are navigating.

Information on contacting the three traffic centers is given in the accompanying table titled **GOFREP—Contact Information**.

Vessels are urged to update their AIS information prior to entering the Gulf of Finland since they may fulfill their Full Report reporting requirements through the use of AIS.

Report types.—There are two types of reports to be given in GOFREP, as follows:

1. **Full Report.—**Vessels shall submit a Full Report, as follows:
   a. When entering the GOFREP Area from W or when crossing the Vainameri Reporting Line.
   b. Upon departure from a port or, at the latest, before entering the GOFREP Area.
   c. Upon departure from a port if it will not enter the reporting area.
   d. Before departing from Russian port areas.

GOFREP—Contact Information

Traffic Center	Call Sign	Facsimile	Frequency	E-mail
Tallinn Traffic	Tallinn Traffic	372-6205766	VHF channel 61	gofrep@vta.ee
Helsinki Traffic	Helsinki Traffic	358-204-485394	VHF channel 60	gofrep@fma.fi
Sankt Petersburg Traffic	Sankt Petersburg Traffic	7-8-812-3807020	VHF channel 74	gofrep@rsbm.ru

A Full Report, on departure from a port, is given to the Traffic Center of the country whose port the vessel is departing in the Gulf of Finland area.

Full Reports are made by AIS. If the vessel does not have AIS or if it is not possible to transmit the Full Report by AIS, vessels shall provide a Full Report to the relevant Traffic Center by facsimile or e-mail at least 1 hour prior to entering the area or by VHF when crossing the Western Reporting Line or the Vainameri Reporting Line.

2. **Short Report.—**Vessels shall submit a Short Report, as follows:

a. Upon entering the GOFREP area from the Estonian or Finnish VTS areas in the Gulf of Finland.

b. Upon crossing the Western Reporting Line or the Vainameri Reporting Line inbound to the Gulf of Finland.

c. Upon crossing the Central Reporting Line.

d. Whenever there is a change in the vessel's navigational status, excluding the change of status when berthing or unberthing.

A Short Report is given on VHF to the Traffic Center of the country to which monitoring area the vessel is proceeding.

The formats for GOFREP Full Reports and Short Reports are given in the accompanying table titled **GOFREP—Message Requirements**.

Other requirements.—Vessels not under command or restricted in their ability to maneuver in the Gulf of Finland shall report their navigational status to the relevant Traffic Center at the earliest possible moment.

In addition to the reporting requirement in the Full Report of Designator I (port of destination), a vessel shall report all possible stops or abnormal choice of route (for example: if a vessel anchors for bunkering near a port other than the port of destination).

All vessels towing in the GOFREP Area shall report the total length of the tow.

GOFREP procedures in winter traffic.—The Traffic Separation Schemes in the Gulf of Finland, or any part of these schemes, may be withdrawn temporarily during difficult ice conditions. Even when the Gulf of Finland is fully or partially covered with ice, the requirements concerning vessels set out in the operating instructions for GOFREP remain in force unless otherwise indicated.

Vessels travelling in a convoy led by an icebreaker or receiving direct assistance from an icebreaker are not required to submit a Short Report when they cross the GOFREP Reporting Lines. The icebreakers report the names of the vessels which they are assisting, the position of the vessels in the convoy, and the relevant VHF operating channel.

A vessel entering the GOFREP Area in a convoy led by an icebreaker must submit a Short Report to the nearest Traffic Center when it leaves the convoy and if it subsequently becomes trapped in the ice.

During the winter, vessels must submit a Full Report in line with the provisions of the general requirements for GOFREP reporting. When they leave a port in the Gulf of Finland, however, they must submit a Full Report before they can join a convey. It is recommended that a Full Report be submitted in advance as an e-mail message.

Vessels making for Russian ports will be provided, on request, with up-to-date information about the reporting points, as well as with contact details and meeting coordinates for the icebreakers by all the Traffic Centers included in the GOFREP system. If the ice conditions are difficult, Helsinki Traffic and Tallinn Traffic will broadcast information about the reporting points and the contact details for icebreakers at specific times on their reserve channels. These broadcasts are preceded by an announcement on VHF channel 16.

GOFREP—Message Requirements

Designator	Information Required	Full Report	Short Report
ALFA	Vessel name, call sign, and IMO number or MMSI.	X	X
CHARLIE	Geographical position (two six-digit groups).	X[1]	X[1]
DELTA	Bearing and distances in nautical miles from a clearly-identified landmark.		
ECHO	True course (three-digit group).	X	X
FOXTROT	Speed in knots (to one decimal place).	R[1]	R[1]
HOTEL	Time (UTC) and point of entry into the Reporting Area.	R[1]	
INDIA	Destination and ETA.	X	
OSCAR	Vessel's draft (in meters to one decimal place).	X	
PAPA	Hazardous cargo on board (main classes and total quantity in metric tons up to two decimal places). The amount of Class 1 and Class 7 cargo, if any, shall be reported separately.	X[2]	
QUEBEC	Brief details of any defects or restrictions on maneuverability.	R[2]	R[2]
ROMEO	Description of any pollution or dangerous cargo lost overboard.	R[2]	R[2]
TANGO	Contact information of agent in the Gulf of Finland.	X	
UNIFORM	Vessel type and length.	X	

GOFREP—Message Requirements			
Designator	**Information Required**	**Full Report**	**Short Report**
WHISKEY	Number of persons on board.	X	
XRAY	Characteristics and estimated quantity of bunker fuel (for ships carrying more than 5,000 tons of bunkers,) and navigational status.	X	
KEY			
X	Required information.		
X[1]	Required information. Either the CHARLIE or DELTA format may be used.		
X[2]	Required information. In addition, information on cargo other than dangerous cargo is collected from all vessels entering or leaving ports of the European Union countries in the Gulf of Finland. Vessels are not required to report the information on cargo other than dangerous cargo. Information is requested from vessels only if it cannot be obtained by other means.		
R[1]	May be required to be reported by Traffic Centers.		
R[2]	To be reported if circumstances affecting normal navigation in accordance with SOLAS and MARPOL conditions occur, as relevant. This report shall be made without delay.		

BARBADOS

General	**41**
Buoyage System	**41**
Cautions	**41**
Currency	**41**
Government	**41**
Holidays	**42**
Industries	**42**
Languages	**42**
Navigational Information	**42**
Search and Rescue	**42**
Ship Reporting System	**42**
Signals	**42**
Time Zone	**43**
U.S. Embassy	**43**

General

Barbados is an island nation located in the Caribbean Sea NE of Venezuela.

The climate is tropical, with a rainy season from June to October. There is little temperature variation over the year and it is seldom excessively hot. The hurricane season extends from May through September.

The terrain is relatively flat, rising gently to a central highland.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Extensive local fishing takes place around the island. Most local fishing boats range in length from 6 to 9m.

It has been reported that when approaching Barbados from E the lights from the houses on the inland hill can be seen long before the navigational lights on Ragged Point or South Point.

Currency

The official unit of currency is the Barbados dollar, consisting of 100 cents.

Government

Flag of Barbados

Barbados is a parliamentary democracy. The country is divided into 11 parishes and one city.

Elizabeth II, recognized as the Chief of State, appoints a Governor-General. The Prime Minister and the cabinet are appointed by the Governor-General. The bicameral Parliament is composed of a 21-member Senate (appointed by the Governor-General) and a 30-member House of Assembly (directly elected to 5-year terms).

The legal system is based on English common law.

The capital is Bridgetown.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 21	Earl Barrow Day
April 28	Heroes Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
Whitmonday	Variable
August 1	Emancipation Day
First Monday in August	Kadooment Day
November 30	Independence Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are tourism, sugar, light manufacturing, and component assembly for export.

The main exports are sugar, molasses, rum, other foods and beverages, chemicals, and electrical components. The main export-trading partners are the United States, Trinidad and Tobago, the United Kingdom, Saint Lucia, Jamaica, and Grenada.

The main imports are consumer goods, machinery, foodstuffs, construction materials, chemicals, fuels, and electrical components. The main import-trading partners are New Zealand, the United States, Trinidad and Tobago, the United Kingdom, and China.

Languages

English is the official language.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Barbados are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	200 miles.

* Requires advance permission or notification for innocent passage of warships in the territorial sea.

Maritime Boundary Disputes

Seeking arbitration on the claims that the N limits of Venezuela and Trinidad and Tobago's maritime boundaries extend into the territorial waters of Barbados.

Joins other Caribbean states (Dominica, Saint Kitts and Nevis, Saint Lucia, and Saint Vincint and the Grenadines) to counter Venezuela's claim that Isla Aves (15°42'N., 63°38'W.) sustains human habitation, which would permit Venezuela to extend its Exclusive Economic Zone over a large portion of the Caribbean Sea.

Search and Rescue

The Barbados Coast Guard is responsible for coordinating search and rescue operations through the Maritime Rescue Coordination Subcenter (MRSC) Barbados Coast Guard and can be contacted, as follows:

1. Telephone: 1-246-4297152
2. Facsimile: 1-246-4297153
3. E-mail: bcg@bdf.gov.bb

The Barbados Coast Guard, Barbados External Communications, and Barbados Coast Radio Station (8PO) maintain a continuous listening watch for distress traffic on 2182 kHz and VHF channel 16.

Ship Reporting System

CARICOM (Caribbean Community) Advance Passenger Information System (APIS)

CARICOM APIS is a mandatory reporting system providing Advance Passenger Information (API) about passengers and crew to the Joint Regional Communications Center (JRCC) Barbados for vessels bound for or departing from a port in the CARICOM area. Further information can be found in **Caribbean Sea—Ship Reporting System**.

Signals

Visual storms signals are displayed, as follows:

Day signal	Night signal	Meaning
Two square red flags, with a centered black square, vertically disposed	Two red lights, vertically disposed	Hurricane force winds expected within 24 hours.
Square green flag, with a diagonal white stripe	One green light	Island is out of danger

These storm signals are displayed at the following locations:

1. Police Station C (13°09'N., 59°29'W.).
2. Crane Hotel (13°06'N., 59°27'W.).
3. South Point Light (13°03'N., 59°32'W.).
4. Highgate Signal Station (13°05'N., 59°35'W.).
5. Bathsheba (13°13'N., 59°31'W.).
6. Police Station F (Bissex Hill) (13°13'N., 59°33'W.).
7. Police Station E (Speightstown) (13°15'N., 59°38'W.).
8. Mount Steadfast (13°12'N., 59°38'W.).
9. Police Station D (13°11'N., 59°36'W.).
10. Deep Water Harbor Signal Station (13°06'N., 59°38'W.).

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

The embassy is situated in Wildey Business Park, Wildey, St. Michael, Bridgetown.

The mailing addresses are, as follows:

1. Barbados address—
   P.O. Box 302
   Bridgetown 11000

2. U. S. address—
   CMR 1014
   APO AA (34055)

U. S. Embassy Barbados Home Page
http://barbados.usembassy.gov

BELGIUM

General	**45**
Buoyage System	**45**
Currency	**45**
Firing Areas	**45**
Fishing Areas	**46**
Government	**46**
Holidays	**46**
Industries	**46**
Languages	**46**
Mined Areas	**46**
Navigational Information	**47**
Pilotage	**47**
Pollution	**48**
Regulations	**48**
Search and Rescue	**49**
Ship Reporting System	**49**
Signals	**49**
Time Zone	**49**
Traffic Separation Schemes	**49**
U.S. Embassy	**49**
Vessel Traffic Service	**49**

General

Belgium is located in western Europe, bordering the North Sea between France and the Netherlands.

The climate is temperate, with mild winters and cool summers that are rainy, humid and cloudy.

The terrain is flat coastal plains in the NW, with central rolling hills, and the rugged mountains of the Ardennes Forrest in the SE.

The Schelde and the Maas are large rivers which have their sources in France. In Belgium, these rivers are called the Escaut and Meuse, respectively.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Firing Areas

Firing practice takes place in the coastal sectors of the following areas:

1. Area 1—Within a radius of 2.5 miles centered on Nieuwpoort Light (51°09.3'N., 2°43.9'E.) bordered by a bearing of 114° from Nieuwpoort Light and a bearing of 191° from the water tower at Westende (51°10'08.4"N., 2°46'37.2"E.).
2. Area 2—Within a radius of 7.5 miles centered on position 51°08'37.2"N, 2°46'09.0"E bordered by a bearing of 114° from Nieuwpoort Light and a bearing of 191° from the tower at Westende (51°10'08.4"N., 2°46'37.2"E.).
3. Area 3—Within a radius of 12 miles centered on position 51°08'37.2"N, 2°46'09.0"E bordered by a bearing of 114° from Nieuwpoort Light and a bearing of 191° from the tower at Westende (51°10'08.4"N., 2°46'37.2"E.).

During firing practice, the following signals are shown from a mast in position 51°09'17.4"N, 2°44'09.0"E (350m WSW of

Nieuwpoort water tower):

1. A square red flag with a red ball above it indicates Area 1 in use.
2. A square red flag with two balls above it indicates Area 2 in use.
3. A square red flag with three balls above it indicates Area 3 in use.

Upon completion of the exercise, the signals are lowered. During the exercise, the firing batteries (call sign: Sierra November) can be contacted on VHF channel 67.

A maritime exercise area, which is active year-round, is bounded by lines joining the following positions:

a. 51°26'45"N, 2°21'00"E.
b. 51°26'45"N, 2°48'00"E.
c. 51°36'00"N, 2°48'00"E.
d. 51°40'00"N, 2°42'00"E.
e. 51°40'00"N, 2°34'00"E.

Fishing Areas

Pair trawling for herring and sprat is carried out off the coast; the vessels are normally 80 to 120m apart. The principal fishing ports are Oostende and Zeebrugge.

Government

Flag of Belgium

Belgium is a parliamentary democracy under a constitutional monarchy. The country is divided into three regions.

King Albert II is the Chief of State. The Prime Minister is named by the King and approved by the Parliament. The bicameral Parliament is composed of the 71-member Senate, of which 40 members are directly elected and 31 members are indirectly elected, serving 4-year terms, and the 150-member Chamber of Deputies, directly elected under a proportional representation system, serving 4-year terms.

The legal system is based on civil law influenced by English constitutional theory.

The capital is Brussels.

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
July 11	Flemish Community Holiday
July 21	Independence Day
August 15	Assumption Day
September 27	French Community Holiday
November 1	All Saints' Day
November 11	Armistice Day
December 25	Christmas Day
December 25	Boxing Day

Industries

The main industries are engineering and metal products, motor vehicle assembly, transportation equipment, scientifc instruments, processed food and beverages, chemicals, basic metals, textiles, glass, and petroleum.

The main exports are machinery and equipment, chemicals, diamonds, metal and metal products, and foodstuffs. The main export-trading partners are Germany, France, the Netherlands, the United Kingdom, the United States, and Italy.

The main imports are machinery and equipment, chemicals, diamonds, pharmaceuticals, foodstuffs, transportation equipment, and oil products. The main import-trading partners are the Netherlands, Germany, France, the United Kingdom, Ireland, and the United States.

Languages

Dutch, French, and German are the official languages. Dutch is the predominant language in the Flemish north; French is the predominant language is the Walloon south.

Mined Areas

Mines are occasionally detonated of the Belgian coast in a circular area, with a radius of 4 miles, centered on position 51°29'04.2"N, 2°49'55.2"E. Shipping will be notified on VHF channel 16 and are strongly requested to avoid the danger area from 2 hours before until just after the detonation.

Permanent practice areas for mine countermeasures training have been established, as follows:

1. **Area QZR 040**—An area bounded by lines joining the following positions:
   a. 51°15'07.2"N, 2°27'36.6"E.
   b. 51°17'12.6"N, 2°29'13.8"E.
   c. 51°18'30.6"N, 2°31'49.8"E.
   d. 51°19'51.6"N, 2°34'28.8"E.

e. 51°20'39.6"N, 2°38'58.8"E.
f. 51°20'08.4"N, 2°39'13.2"E.
g. 51°19'20.4"N, 2°34'43.2"E.
h. 51°18'07.8"N, 2°32'25.8"E.
i. 51°16'47.4"N, 2°29'46.2"E.
j. 51°14'53.4"N, 2°28'23.4"E.

2. **Area Outer Ratel**—An area bounded by lines joining the following positions:
a. 51°16.2'N, 2°30.4'E.
b. 51°17.0'N, 2°29.5'E.
c. 51°18.3'N, 2°32.1'E.
d. 51°17.5'N, 2°33.1'E.

For mine exercise areas situated off the coast, se**e Netherlands.—Mined Areas**.

Navigational Information

Enroute Volume

Pub. 192, Sailing Directions (Enroute) North Sea.

Maritime Claims

The maritime territorial claims of Belgium are, as follows:

Territorial Sea	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles to defined coordinates.
Continental Shelf *	Continental Shelf (no specified limits).

* Extends to a median line equidistant from the baseline of its neighbors.

Pilotage

Pilotage is compulsory for all ocean-going vessels except, as follows:

1. Barges.
2. Estuary trade.
3. Fluvial maritime trade.
4. Vessels up to 80m long.
5. Vessels at anchor, unless otherwise decided by the authorities.
6. Vessels equipped to carry sand, gravel, or dredged material and carrying such materials.
7. Vessels owned or managed by Dutch, Belgian, or Flemish authorities.
8. Vessels owned or managed by Flemish or Dutch pilotage authorities.

Pilotage is compulsory for the following ocean-going vessels, regardless of length:

1. Vessels carrying oil, gas, or chemicals (fully loaded, partially loaded, or empty but not yet gas-free).
2. A vessel part of a pushing-ahead combination, unless exempted by the authroities.
3. A vessel being towed, unless exempted by the authorities.

Inbound vessels should send a pilotage request to the appropriate pilot station at least 6 hours in advance. Outbound vessels or vessels shifting berths should send a pilotage request at least 3 hours in advance. The pilot station should be notified of any changes to the pilot boarding time of more than 1 hour.

For information concerning Deep Sea Pilotage in the North Sea, the English Channel, and Skagerrak, see **United Kingdom—Pilotage**.

Belgium—Pilotage Request Information

Inbound	Outbound	Shifting berth	Item
X	X	X	Vessel name.
X	X	X	Call sign.
X	X	X	Flag.
X	X	X	IMO number.
X			Destination port.
	X	X	Current mooring berth.
X			Mooring berth.
X			Desired mooring side.
		X	Destination mooring berth with statement of mooring side.
	X		Destination and pilot boarding point or other port in the region, with a statement of mooring berth and mooring side.
X			Date/local time (8 digits—date (2 digits), month (2 digits), hours (2 digits), and minutes (2 digits)) of pilot boarding and pilot boarding position.
	X	X	Date and local time (8 digits—date (2 digits), month (2 digits), hours (2 digits), and minutes (2 digits)) of pilot order and ETD.
X	X		Ship not obliged to use a pilot—state desired course.

Belgium—Pilotage Request Information			
Inbound	Outbound	Shifting berth	Item
X	X	X	Agent's name.
X	X	X	Length overall.
X	X	X	Beam.
X	X	X	Current maximum draft (in decimeters).
X	X		Helicopter pilotage required in the event of suspended pilotage service? YES/NO.
X	X		Helicopter pilotage required in good weather? YES/NO.
X	X	X	Any remarks regarding restricted maneuverability, damage to the vessel, delay, etc.

A pilotage agreement based on an international treaty between Belgium and the Netherlands applies to the estuary of Westerschelde. Both countries have authority to pilot vessels from sea to Antwerpen and Ghent and conversely.

Pollution

In the event of pollution, masters of vessels in the Belgium and Netherlands pilotage areas are requested to send a report containing the following information:

1. Vessel name.
2. Vessel type.
3. Nationality.
4. Position.
5. Date and time (in UTC).
6. Wind force and direction.
7. High water.
8. Tidal current (speed and direction).
9. Any other relevant information.

Reports should be made as quickly as possible to Oostande Coast Guard (VHF channel 9). As an alternative, reports can be relayed via Vlissingen (VHF channel 14) or Zandvliet (VHF channel 12 or 14).

Oostande Coast Guard (Oostande MRCC) can be contacted, as follows:

1. Telephone: 32-59-701000
   32-59-701100
2. Facsimile: 32-59-703605
3. E-mail: mrcc@mrcc.be

Regulations

International Ship and Port Facility (ISPS) Code

The ISPS Code applies to ships on international voyages and port facilities directly interfacing with these ships. Information required by the ISPS Code should be sent, as follows:

1. E-mail: ispsbelgium.reg9@minfin.fed.be
2. Facsimile: 2-579-68-83

The following information should be sent 24 hours prior to arrival at a Belgian port:

1. Ship's name.
2. IMO number.
3. Flag.
4. INMARSAT/GSM number.
5. Port facility of destination.
6. ETA.
7. Port ID number.
8. UN Locator number.
9. Assigned port facility number.
10. Availability of ISSC or Interim ISSC (state Yes or No).
11. Date of expiration of ISSC or Interim ISSC (in format of YYYY/MM/DD).
12. Issuing authority of ISSC or Interim ISSC.
13. Security level ship is currently operating at (Level 1, Level 2, or Level 3 with reason(s), if known).
14. Last ten ports of call and Security Level at which the ship operated.
15. For the last ten ports of call have any special security measures been taken during ship/port interface (state Yes or No)?
16. Within the period of the last ten calls at port facilities, has the ship conducted ship-to-ship activities and were the appropriate ship security procedures maintained (state Yes or No)?
17. Is there any other security-related information (state Yes or No)?

If the transit time from the previous port is less than 24 hours, the required information should be sent when leaving the previous port.

Pre-arrival Quarantine Reporting

A message should be sent 4 hours prior to arrival only in the event of a positive answer to a health question in the Maritime Declaration of Health. Contact information is, as follows:

1. SANIPORT Antwerpen
   a. Telephone: 32-475-440054 (24 hours)
      32-2-5247855
   b. Facsimile: 32-3-5247856
   c. E-mail: saniport.antwerpen@health.fgov.be
2. SANIPORT Gent, Oostende, and Zeebrugge
   a. Telephone: 32-475-440055
      32-2-5249974
   b. Facsimile: 32-9-2256231
   c. E-mail: sanip.gigent@health.fgov.be

Particularly Sensitive Sea Areas (PSSA)

The waters off the W coast of the United Kingdom, Ireland, Belgium, France, Spain, and Portugal, from the Sheltand Islands in the N to Cabo San Vicente in the S, including the English Channel, were granted (2004) the status of PSSA by the International Maritime Organization.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

The Western Europe Tanker Reporting System (WETREP) was instituted to help protect the environment of the PSSA.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The report should be sent by the vessel's agent to the port authorities.

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Search and Rescue

Lifeboats and rescue equipment are maintained at Oostende (51°09'N., 2°43'E.), Nieuwpoort (51°14'N., 2°55'E.), and Zeebrugge (51°20'N., 3°12'E.).

A watch during inclement weather is also kept at De Panne (51°05'N., 2°36'E.), Middelkerke (51°11'N., 2°49'E.), and Blankenberge (51°19'N., 3°08'E.).

The Belgian Coastguard Service, "Coastguard Oostende," is responsible for coordinating search and rescue operations. MRCC Oostende and Oostende Radio (OST) both maintain a continuous listening watch for distress traffic on 2182 kHz, 2187.5 kHz, VHF channel 16, and VHF channel 70.

MRCC Oostende can be contacted, as follows:

1. Telephone: 32-59-701000
   32-59-701100
   32-59-255490 (emergency)
2. Facsimile: 32-59-703605
3. E-mail: mrcc@mrcc.be

Port Control Oostende also maintains a listening watch for message traffic regarding search and rescue on VHF channel 9.

Ship Reporting System

Western Europe Tanker Reporting System (WETREP)

The Western Europe Tanker Reporting System (WETREP), a mandatory reporting system, is in effect. The Reporting Area covers the waters off Belgium; the W coast and English Channel coasts of France; Ireland; Portugal; the N and W coasts of Spain; and the English Channel and W coasts of the United Kingdom, including the Shetland Isles.

Further information on WETREP can be found in **North Atlantic Ocean—Ship Reporting System**.

Signals

Pilotage Signals

Vessels requesting pilotage for Belgian ports may do so by displaying Flag G by day, sending Morse P by flashing light at night, and by sounding the letter H in reduced visibility, 3 seconds after sounding the prescribed international signal in fog. Similar methods may be employed to request port pilotage by signalling G6 for the port of Zeebrugge, G7 for Nieuwpoort, and G8 for Oostende.

Storm Signals

The following storm signals are displayed at Oostende, Nieuwpoort, Blankenberge, and Zeebrugge for winds of force 4 or higher:

1. By day—Two black cones, points together.
2. By night—A violet flashing light.

Vessels Under Pilotage

The Dutch Pilotage Service, the Flemish Pilotage Service, and the Joint Nautical Service have introduced signals to be used on vessels under pilotage. For further information, see **Netherlands—Signals**.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is observed from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Belgium are, as follows:

1. At North Hinder. (IMO adopted)
2. In the approaches to the Hook of Holland. (IMO adopted)
3. At West Hinder. (IMO adopted)

U.S. Embassy

The U. S. Embassy is situated at Regentlaan 27 Boulevard du Regent, Brussels.

The mailing addresses are, as follows:

1. Belgium address—
   Regentlaan 27 Boulevard du Regent
   B-1000, Brussels
2. U. S. address—
   PSC 82, Box 002
   APO AE (09710)

U. S. Embassy Belgium Home Page
http://belgium.usembassy.gov

Vessel Traffic Service

Scheldemond Vessel Traffic Service (51°27'N., 3°25'E.), consisting of eight Traffic Areas, is in operation in the Westerschelde along the Belgium/Netherlands border. For further information, see Pub. 192, Sailing Directions (Enroute) North Sea.

BELIZE

General	**51**
Buoyage System	**51**
Currency	**51**
Fishing Areas	**51**
Government	**51**
Holidays	**52**
Industries	**52**
Languages	**52**
Navigational Information	**52**
Search and Rescue	**52**
Signals	**52**
Time Zone	**53**
U.S. Embassy	**53**

General

Belize is located in Central America between Guatemala and Mexico. The country borders the Caribbean Sea.

The climate is tropical, very hot, and humid, with a rainy season from May to February.

The terrain is flat, with a swampy coastal plain. The interior consists of rich grasslands and low mountains rising in the S.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Belize dollar, consisting of 100 cents.

Fishing Areas

The coastal areas on the Caribbean Sea coast are extensively fished by local vessels working out of small harbors and rivers.

Government

Flag of Belize

Belize is a parliamentary democracy. The country is divided into six districts.

Elizabeth II, recognized as the Chief of State, appoints a Governor-General. The Prime Minister and the cabinet are appointed by the Governor-General. The bicameral National Assembly is composed of a 12-member Senate (appointed by the Governor-General to 5-year terms) and a 31-member House of Representatives (directly elected to 5-year terms).

The legal system is based on English common law.

The capital is Belmopan.

Holidays

The following holidays are observed:

January 1	New Year's Day
March 9	Baron Bliss Day
Carnival	Variable (week before Lent)
Good Friday	Variable
Holy Saturday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
May 24	Commonwealth Day/ Emancipation Day
September 10	St. George's Caye Day
September 21	Independence Day
October 12	Pan American Day
November 19	Garifuna Settlement Day
December 1	Bank Holiday
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are garment production, food processing, tourism, construction, and oil.

The main exports are sugar, bananas, citrus, clothing, fish products, molasses, and wood. The main export-trading partners are the United States and the United Kingdom.

The main imports are machinery and transport equipment, manufactured goods, fuels, chemicals, pharmaceuticlas, food, beverages, and tobacco. The main import-trading partners are the United States, Mexico, Cuba, and Guatemala.

Languages

English is the official language. Spanish, Mayan, and Garifuna (Carib) are also spoken.

Navigational Information

Enroute Volume

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2.

Maritime Claims

The maritime territorial claims of Belize are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	200 miles.

* Claims straight baselines. The territorial sea is only 3 miles from the mouth of the Sarstoon River to Ranguana Cay.

Maritime Boundary Disputes

Sapodilla Cays (16°07'N., 88°16'W.) is claimed by Honduras. This area is being run as a joint ecological park by bpth countries.

Regulations

A Notice of Arrival (NOA) should be sent to the Belize Port Authority not later than 48 hours prior to arrival by the following methods:

1. By facsimile (501-223-0710) to the National Maritime Communications Center, Belize City.
2. By e-mail (bzportauth@btl.net) to the Belize Port Authority, Belize City.

If dangerous cargo is carried on board, a manifest of the dangerous cargo should be attached to the NOA.

Upon entering the terrotorial waters of Belize vessels must contact the National Maritime Communications Center on VHF channel 12 or 16 for final arrangements for pilot boarding.

Search and Rescue

The Maritime Wing of the Belize Defense Force is responsible for the coordination of search and rescue operations. A continuous listening watch for distress traffic is maintained on 2182 kHz and VHF channel 16.

Belize is part of the Corporacion Centroamericana de Servicios de Navegacion Aerea (COCESNA), the Central American aeronautical search and rescue network. Rescue Subcenter (RSC) Belize works with RCC Centro America and can be contacted, as follows:

1. Telephone: 501-225-2014
2. Facsimile: 501-225-2533

Further information on COCESNA can be found in **Honduras—Search and Rescue**.

Signals

The following storm signals are displayed on the coast of Belize:

1. A square red flag means either:
   a. A tropical depression has developed or moved into the area S of 21°00"N and W of 80°00"W.
   b. A tropical storm or hurricane has developed or moved into the area S of 21°00"N and between 80°00"W and 83°00"W.
2. A square red flag, with a black center, means a storm or hurricane has developed or moved into the area S of 20°00"N and between 83°00"W and 85°00"W.
3. Two square red flags with black centers, vertically disposed, means that a tropical storm or hurricane has developed or moved into the quadrant S of 20°00"N and W of 85°00"W.

4. A square green flag means that a tropical depression, tropical storm, or hurricane has passed and no longer poses a threat to Belize or its coastal waters.

Time Zone

The Time Zone description is SIERRA (+6). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at Floral Park Road, Belmopan, Cayo District.

The mailing address is P.O. Box 497, Belmopan City, Cayo District, Belize.

U. S. Embassy Belize Home Page
http://belize.usembassy.gov

BERMUDA

General	**55**
Areas to be Avoided	**55**
Buoyage System	**55**
Cautions	**55**
Currency	**55**
Government	**55**
Holidays	**56**
Industries	**56**
Languages	**56**
Meteorology	**56**
Navigational Information	**56**
Pilotage	**56**
Regulations	**56**
Search and Rescue	**56**
Time Zone	**56**
U.S. Embassy	**57**

General

Bermuda is a group of islands located in the North Atlantic Ocean, E of North Carolina. The islands are low-lying coral formations.

The climate is subtropical, mild, and humid. Winter gales and strong winds are common.

The terrain consists of low hills separated by fertile depressions.

Areas to be Avoided

An IMO-adopted Area to be Avoided has been established in the waters surrounding Bermuda and may best be seen on the chart. Because of the great danger of stranding on the extensive reefs to the W, N, and NE of the islands and, for reasons of environmental protection, all vessels carrying cargoes of oil or hazardous materials and all other vessels of more than 1,000 grt, whether or not bound for Bermuda ports, should remain outside of the area.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Bermudian dollar, consisting of 100 cents. Canadian and U.S. currency is also in use and is generally accepted.

Government

Bermuda is a dependent territory of the United Kingdom. It is divided into nine parishes and two municipalities.

Elizabeth II, recognized as the Chief of State, appoints a Governor. The Premier and the cabinet are appointed by the Governor. The bicameral Parliament is composed of a 11-member Senate (appointed by the Governor) and a 36-member House of Assembly (directly elected to 5-year terms).

The legal system is based on English law.

The capital is Hamilton.

Flag of Bermuda

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
May 24	Bermuda Day
Third Monday in June	National Heroes' Day
August 3	Emancipation Day
Thursday before first Monday in August	Cup Match Day
Friday after Cup Match Day	Somers Day
First Monday in September	Labor Day
November 11	Remembrance Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are international business, tourism, and light manufacturing.

The main export is the re-export of pharmaceuticals. The main export-trading partners are France, Spain, and United Kingdom, and Sweden.

The main imports are clothing, fuels, machinery and transport equipment, construction materials, chemicals, food, and livestock. The main import-trading partners are South Korea, the United States, Germany, Italy, and Spain.

Languages

English is the official language.

Meteorology

Marine weather forecasts are available in English from the Bermuda Weather Service (http://weather.bm).

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Bermuda are, as follows:

Territorial Sea	12 miles.
Fisheries or Economic Zone	200 miles.

Pilotage

Pilotage is compulsory for all vessels, except naval vessels and yachts. Pilotage is available during daylight hours only. Pilots board 1.75 miles ENE of St. David's Head. However, the following vessels are boarded 3 miles E of St. David's Head:

1. Vessels with a draft greater than 10m.
2. Vessels carrying hazardous cargo.
3. Vessels not carrying the appropriate approach charts.
4. Vessels with limited maneuverability.

Regulations

A Vessel Traffic Management System (VTMS) is in operation; it is voluntary for vessels passing within 30 miles of Bermuda and mandatory for vessels sailing for ports in Bermuda or for vessels intending to navigate within the charted Area to be Avoided.

For further information on the VTMS and the Area to be Avoided, see paragraph 1.1 of Pub. 147, Sailing Directions (Enroute) Caribbean Sea, Volume I.

Radar assistance is available, primarily for vessels having inadequately-scaled charts of the area. The working channel for Bermuda Pilots is VHF channel 12.

Departure reports are mandatory 15 minutes prior to departure from any berth or anchorage and should be forwarded to Bermuda Pilots.

Quarantine regulations are strictly enforced. All vessels requesting free pratique must anchor in Saint George's Harbor and hoist International Flag Q.

Naval vessels and commercial vessels calling regularly which have received prior permission, and vessels which have been granted pratique by radio, will be visited upon berthing.

Search and Rescue

Bermuda Harbor Radio (ZBM) maintains a continuous listening watch for distress traffic on 2182 kHz, 2187.5 kHz, 4125 kHz, VHF channel 16, and VHF channel 70. It is also the location of Rescue Coordination Center (RCC) Bermuda.

RCC Bermuda can be contacted, as follows:

1. Telephone: 1-441-2971010
2. Facsimile: 1-441-2971530
3. E-mail: operations@rccbermuda.bm
   dutyofficer@marops.bm
4. Web site: http://www.rccbermuda.bm
   http://www.marops.bm

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Sav-

ings Time (PAPA (+3)) is maintained from the second Sunday in March until the first Sunday in November.

U.S. Embassy

There is a Consulate General situated at Crown Hill, 16 Middle Road, Devonshire, Hamilton.

The mailing addresses are, as follows:

1. Bermuda address—
   P.O. Box HM325
   Hamilton HMBX
2. U. S. address—
   American Consulate General Hamilton
   Department of State
   5300 Hamilton Place
   Washington DC (20521-5300)

U. S. Consulate Bermuda Home Page
http://hamilton.usconsulate.gov

BLACK SEA

General	**59**
Cautions	**59**
Climatology	**60**
Currents	**62**
Fishing Areas	**63**
Ice	**63**
Navigational Information	**63**
Pollution	**63**
Regulations	**64**
Ship Reporting System	**64**
Tides	**64**

General

The Black Sea is an inland sea lying between southeastern Europe and Asia Minor. The S part of the Black Sea is connected to the E end of the Mediterranean Sea by Istanbul Bogazi (The Bosporus), Marmara Denizi (Sea of Marmara), and Canakkale Bogazi (The Dardanelles). Kerch Strait, on the NE side of the Black Sea, leads N to the Sea of Azov.

The Black Sea is divided into two sub-basins by a ridge extending S from the Crimean Peninsula. The NW part of the basin is characterized by a relatively wide shelf, generally about 100 miles wide, with shallow depths and gentle gradients. The S and E parts of the basin, off Turkey and Georgia, respectively, have a shelf that rarely exceeds 10 miles in width, with steeper gradients and numerous submarine canyons and channel extensions. The deepest part of the Black Sea, with a maximum depth of about 2,200m, lies S of the Crimean Peninsula.

Cautions

Special Warning 120 (Issued 16 November 2001)

Information on Special Warning 120 can be found in **North Atlantic Ocean—Cautions**.

Dangerous Waves

Several ports on the E shore of the Black Sea are liable to development of unpleasant and sometimes dangerous wave conditions inside the harbor. This phenomena, which is known as the Tyagun, may occur when waves of some critical period or direction enter the harbour and set up resonant wave movement of the waters inside the harbour. When these conditions occur, it may be necessary for vessels to move from an alongside berth to a buoy or put to sea.

The waves which cause the Tyagun may be generated locally

by strong winds or by swell waves raised by a distant storm. In the latter case, a Tyagun can develop in a port when local wind conditions are calm or light and variable.

The Tyagun is reported to affect ports on the Caucasian coast between Tuapse and Batumi.

Climatology

General

The climate of the area varies from fine hot sunny summers of the Mediterranean type to the very cold winters which are substantially colder than conditions in the Mediterranean Sea.

Most disturbed weather occurs in winter and is usually associated with depressions moving E across the area. There may be some rain at all times of the year, turning to snow in winter; amounts are generally small in the N and W of the region and summer in Marmara Denizi (Sea of Marmara) is usually dry.

Along the N coast of Turkey, high ground near the coast induces appreciable annual rainfall; the wettest conditions are found in the SE around Batumi and Poti, where rainfalls are substantial, especially from September to November.

Fog at sea may occasionally be encountered in winter and spring but is rare in summer. In coastal areas, fog and poor visibility are again most frequent in winter and spring and are particularly common in the far N, with incidence decreasing markedly farther S.

The Naval Research Laboratory Monterey, a corporate research laboratory for the United States Navy and Marine Corps, publishes port studies and forecaster handbooks that may be of use to the mariner. These publications can be accessed at the Naval Reserach Laboratory web site.

Naval Research Laboratory Monterey Home Page

http://www.nrlmry.navy.mil/pubs.htm

The European Severe Weather Port Guide contains information on the following ports:

1. Bulgaria—Varna.
2. Romania—Constanta.
3. Turkey—Istanbul and Marmaris.

Winds

In general, winds are strongest in winter and in the N of the region.

In winter, winds over the open sea throughout the region vary substantially from day to day due to the frequent transiting of depressions, but in the W part of the Black Sea, winds from between NE and NW predominate. Winds from E are a common winter feature in the SE of the area, but NW winds are also frequent and occasionally strong.

In summer, the winds are generally lighter and more variable in direction but in the SE, winds from a W point are most frequent; strong winds are unusual and winds rarely exceed force 6.

In coastal waters within about 20 miles of the coast, winds blowing over the open seas may be considerably modified due to land and sea breeze effects and topographical influences.

Land and sea breezes are well marked in the summer throughout the region and are also frequent in spring and autumn. The sea breeze usually sets in about mid-morning as an onshore breeze; it freshens until mid-afternoon, when it may reach force 3 to 4, and fades soon after dusk. The land breeze is usually weaker and blows offshore from late evening until shortly after sunrise. In windy conditions, the effect of the land or sea breeze may be to modify the prevailing wind by reinforcing it, opposing it or causing a change in its direction.

Local topography, such as the position of mountain barriers and the direction of valleys, may have an important effect on the wind. The Rionskiy Valley, which extends E from near Poti, has very high ground on either side; in winter the winds frequently blow through the valley from the E, sometimes very strongly due to funneling, and in the summer they blow from the W. The effects are apparent at a considerable distance offshore.

At Novorossiysk, a violent wind known as the bora is a well-known feature caused by the NE airstream being deflected around the N flank of Bolshoy Kavkaz (Caucusus Mountains) and channelled through a gap in the hills.

Along the N coast of Turkey, katabatic SE winds blow in coastal waters when cool air drains at night from high ground to the S. These winds occur especially in winter.

In Marmara Denizi (Sea of Marmara), which includes Istanbul Bogazi (The Bosporus) and Canakkale Bogazi (The Dardanelles), the NE winds are predominant throughout the year, and especially in summer, when they are a part of the seasonal N airstream which blows in the Aegean Sea. These winds are widely known as meltem (Turkish) or etesians (Greek). When not blowing from the NE, winds in this area are most often from the SW.

Temperature

There is a very large seasonal temperature change from summer to winter in this region. The climate varies from virtually tropical conditions in most parts in summer to almost arctic conditions in the N in winter.

Summer maximum temperatures are reached in July and August, when average temperatures vary little throughout the region and mean daily temperatures range between maxima of 25 to 30°C and minima of 17 to 19°C. Extreme high temperatures recorded in the coastal areas are generally around 38 to 41°C, but over the open sea, where the sea surface temperature has a significant modifying influence, extreme maximum temperatures are more moderate and generally around 27 to 32°C.

Winter minimum temperatures occur in January or February, with the lowest values on the N and NW coasts; here mean daily temperatures remain close to or below freezing point, with daily minima of -5 to -10°C. Extreme minima of between -25 to -30°C have been recorded; in the N coast of Sea of Azov, which is the coldest locality of all, an extreme minimum reading of -33°C has been recorded.

Temperatures rise progressively farther, S but even in the Black Sea, daily maxima of 5 to 10°C and minima of 1 to 2°C are normal.

The S and SE coasts of Kryms'kyy Pivostriv are noted for relatively mild winters; the mean daily minimum temperature remains marginally above 0°C.

The highest average winter temperatures are over the open sea, where average values of 7 to 8° C are usual.

Frost may occur in all parts around the Black Sea in winter. In the N the first frost usually occurs in October and the last in April. From December to March frosts are frequent; at many

stations on the N coast and especially in Sea of Azov frost can be expected on almost every day in January. Frosts are much less frequent around the S part of Kryms'kyy Pivostriv than elsewhere in the N.

In the S part of the Black Sea, frosts usually occur from December to March, but there may be occasional instances of frost in November and April. Frost is much less frequent than in the N and even in mid-winter it is rare for the temperature to remain below the freezing point all day.

On the Wand E coasts, occurrences of frost range between those given above for the N and S coasts, according to latitude. On average, the W coast experiences more frost than the E coast.

Spring and autumn are periods of rapid temperature adjustment. The largest changes are in April/May and in October/November and are effected in a series of irregular and fluctuating rises and falls.

Precipitation

In coastal areas, there is a very large difference between the precipitation received by the N and W coasts, where the amounts are small at all seasons, and that in the SE, where rainfall is substantial, especially in the autumn.

In the N and W, summer is slightly wetter than winter, but the difference is small; annual amounts are generally no more than 300 to 500mm. There is rain, usually in the form of showers, on around 4 to 6 days per month in summer; in winter rain and snow is more often of frontal origin and can be expected on around 10 days per month on the N coast and slightly less frequently on the W coast.

On the E coast, precipitation amounts are greater than elsewhere and increase markedly from N to S. In the NE, rainfalls are largest in winter, with around 10 rain days per month and the least in summer, when rain falls on some 5 days each month. The total annual rainfall is between 400 and 700mm.

Farther SE, the amount of rain increases progressively, probably due to the frequent moist onshore winds and frontal depressions which affect the area, coupled with the orographic effects of the mountains which rise close inland. The Bat'umi locality is the wettest area of all, with annual rainfalls of around 2,500mm; monthly amounts vary from around 80mm in spring to about 300mm in autumn, which is the wettest time of the year. The number of days each month on which rain can be expected varies only slightly throughout the year, from about 15 days in the wet season to 9 or 10 days in the spring.

On the S coast of the Black Sea there is a pronounced seasonal variation, with the largest rainfalls in winter (around 100 to 150mm per month) and the least in summer, with monthly amounts of around 50mm. Rain is often associated with frontal depressions and especially the N or NW winds, which usually blow after the depression has passed; the orographic effect of the high ground along the coast is an important factor. Annual falls vary somewhat according to the degree of exposure to the N winds and the proximity of high ground; most parts receive between 1,000 and 1,500mm annually, but there is a drier region from about Samsun to Sinop, where annual falls of 500 to 750mm are more usual. In winter, rain falls on some 12 to 15 days per month, in summer 4 to 8 days per month.

Marmara Denizi (Sea of Marmara) has most rain in winter when frontal depressions move through the area en route from the Mediterranean Sea to the Black Sea. Rainfalls of 100 to 120mm per month are normal, with rain on about 10 to 15 days per month. Summer is a dry season, when less than 40mm falls in the NE of the area and barely 10mm per month in Canakkale Bogazi (The Dardanelles). Rain can be expected on fewer than 4 days per month.

Over the open sea, the frequency of observations recording precipitation is similar to those in coastal waters. Rain occurs most often in winter, while at other seasons it is infrequent. It is likely that over much of the sea area rain falls with an average frequency of less than 1 day in 5.

Rainfall amounts are not recorded at sea but it is apparent that orographic influences are important in inducing the comparatively large falls in the SE and S coastal areas. It is thus likely that amounts of rain falling at sea in these parts will decrease with distance from the shore.

For most of the year rain is the usual form of precipitation but, during winter and early spring, snow may fall in all parts of the region. In some N localities, snow frequency may equal or exceed rain frequency in January and February.

Over the open sea snow has been recorded in all months from October to April but it is unusual in any month other than January and February. Some 10 per cent of observations record snow in winter in the N and E areas of the Black Sea.

In coastal areas all parts can expect some snow from December to March. It is rare in most parts before November and after April, although in the N of the region snow is sometimes experienced in October and May. It falls most frequently in the N, especially in the Sea of Azov, where in January and February, the frequency may reach 7 to 10 days per month and snow is as common as rain at that season. An especially dangerous situation arises when snow and strong winds combine to give blizzard conditions with almost zero visibility.

The likelihood of snow decreases farther S, but even in the central part of the W coast of the Black Sea and in Canakkale Bogazi (The Dardanelles) where snow frequency is least, snow may fall on some 3 to 4 days per month in January and February.

Thunderstorms are infrequent at sea and rare in winter. In summer it seems likely that most storms are either associated with cold fronts crossing the area or otherwise develop inland and subsequently drift offshore.

In coastal areas, thunderstorms are most frequent on the NE coast of the Sea of Azov and also on the E coast of the Black Sea where the mountains are nearest the coast; these areas can expect thunderstorms on around 3 to 6 days per month in summer. While the summer months are generally the season for maximum thunderstorm activity, the SW part of the Black Sea and Marmara Denizi (Sea of Marmara) experience most thunderstorms in autumn.

Humidity

Winter high humidities are recorded on the N and W coasts of the Black Sea and in the Sea of Azov; cold ground and cold sea cause high values of around 90 per cent, but humidities are usually lower by afternoon and average about 80 per cent.

The S coasts of Kryms'kyy Pivostriv and Marmara Denizi (Sea of Marmara) are rather less humid, with average winter early morning values of around 82 per cent and falling to 71 per cent in the afternoon.

On the E and S coasts of the Black Sea, the air is drier, with early morning humidity around 75 per cent, which is probably

due to offshore winds at night where high ground rises close inland. Afternoon values are only slightly less at about 70 per cent.

Summer distribution of relative humidity is almost the reverse of the winter pattern. Lowest humidities are found on the coast N including Sea of Azov and in the NE as far S as Novorossiysk; early morning values are about 70 to 75 per cent while afternoons are generally hot and dry with humidities of 50 to 60 per cent or even lower. On the W coast similar values are normal in the N, but farther S and in Marmara Denizi (Sea of Marmara), humidities are about 5 per cent higher.

On the S and SE coasts, more humid conditions are usual with values slightly higher than those recorded in winter. In the early morning humidity is around 80 to 85 per cent; this falls to about 75 per cent in the afternoon.

Spring and autumn produce little variations in morning values of relative humidity throughout the region (typically around 80 per cent), although in the afternoon humidities become drier in the N (55 to 65 per cent) than in the S (65 to 75 per cent).

Cloud Cover

Cloud amounts are greater in winter throughout the region. At sea, average amounts are 5 to 6 oktas, with the W part of the Black Sea being rather more cloudy than the E part. Winds from a S point give increasing amounts of cloud from S to N; as the air flows over progressively cooler seas, small amounts of stratocumulus in the S increase farther N to give overcast skies of stratocumulus or stratus which extend to the N coasts. With winds from a N point, skies are usually well broken on the N coasts, but as air passes over warmer seas farther S, increasing instability gives development of cumulus and stratocumulus and greater likelihood of showers. There is little diurnal variation in cloud amounts at sea.

In coastal waters the winter months are cloudy in all regions with amounts averaging 6 to 7 oktas. Onshore winds produce the cloudiest conditions particularly where high ground rises steeply from the coast line. Conversely, offshore winds are often accompanied by little or no low cloud, especially when the coast lies on the leeward side of high ground. Although there is little variation in cloud amounts according to the time of day, the trend is for greater cloud amounts in the morning with possibly some decrease in the afternoon and evening.

Summer is generally fine with around 2 to 3 oktas of well broken cumulus at sea and in most coastal areas. An exception is the SE coastal area between Sokhumi and Giresun where the summer months are more cloudy than elsewhere with cloud amounts around 4 to 5 oktas. Farther W along the N coast of Turkey cloud amounts decrease and Marmara Denizi enjoys summer skies with very little cloud (2 oktas or less).

Although cloud amounts are small, cloudiest conditions occur around midday and in the afternoon. Development of large cumulus and cumulonimbus cloud with associated showers is not uncommon inland and these clouds can sometimes drift ashore to affect coastal waters.

Visibility

Fog is most likely to be encountered in coastal waters rather than over the open sea; greatest incidence is in winter and spring. Off the coast of Romania some 10 per cent of observations record fog in winter; in the SW part of the Black Sea and off the S coast, the frequency is about 4 to 6 per cent. In other sea areas fog is rare at all seasons.

Poor visibility (less than 2 miles) is very common in the winter in the NW part of the region off the coast of Romania; it is frequent in the SE and SW areas of the Black Sea in spring. Poor visibility is unusual in summer and autumn.

Highest fog frequencies are on the N coast and in Sea of Azov, where moist S airstreams are chilled by the cold plains and coastal waters in winter, giving widespread and persistent fog. Fog is common from October to March with the highest evidence in December when fog may occur in around 5 to 9 days per month; early morning is usually the worst time of day.

Odessa and Rostov-Na-Donu are particularly prone to fog; snow falls are partly responsible for visibility falling below fog limits.

The S shores of Krymskyy Pivostriv are markedly less foggy than other N parts; fog incidence is usually no more than 2 to 4 days per month on average from December to May.

Fog is infrequent in summer. Arctic sea smoke or steam fog may occur in the NW and in Sea of Azov in autumn and winter when very cold E and NE winds blow offshore over a relatively warm sea. The sea surface appears to be steaming and the resulting fog can be dense though usually shallow.

On the W coast of the Black Sea, fog is most frequent from October to March. Average occurrence is 3 to 5 days per month in most parts but this increases markedly farther N to as much as 8 to 10 days per month in the far NW.

At Bralia on the River Danube, fog frequency is highest in December but all months from October to March have frequencies between 3 and 7 days per month.

Fog is unusual in July and August.

The high ground bordering the E and S coasts gives considerable protection from the moist airstreams likely to produce fog. Frequency is generally highest in April and May (3 to 5 days per month on average). Radiation fog is the most common type and is most likely to develop at night and in the early morning especially in the valleys, estuaries and over low lying ground. It usually disperses after sunrise. Snow and heavy rain can seriously impair visibility and in the Bat'umi locality fog is frequent during the wet season in September and October (3 to 5 days per month). Otherwise the incidence of fog is generally low on these coasts from July to December.

Fog is infrequent in Marmara Denizi (Sea of Marmara); the highest incidence is in winter, when it occurs generally on 1 to 2 days per month and locally on the S shores of the central part of Marmara Denizi (Sea of Marmara) on around 4 days per month in November.

Fog is most likely in the early morning, dispersing in the forenoon.

Fog is rare in the summer.

Currents

Black Sea

Currents in the Black Sea, which in general are weak and inconsistent, consist of a main circulation setting counterclockwise along its shores, with several branches connecting its various parts. Countercurrents, setting in a direction contrary to that of the main current, occur between the main current and the shore in many places. These countercurrents are very irregular. There is also an almost constant flow of water from the

Black Sea through Marinara Denizi (Sea of Marmara) to the Mediterranean Sea.

Currents in the Black Sea caused by either the outflow of the rivers, the bulk of which enters the NW part of the sea, and the influence of the wind. Variations in the amount of discharge from the rivers, and variations of the wind distribution, due to the passage of depressions and other causes, may effect the normal currents to a very large extent, and, in some areas, may even reverse their direction.

The strength and consistence of this counterclockwise circulation is greatest after the melting of the snows in late spring and early summer, when the discharge from the rivers is greatest. In late summer and autumn, when the volume of water discharged by the rivers is relatively small, the circulation is generally weaker and more subject to changes due to the influences of the wind. The largest variations in the current are found in the NW part of the sea; here, especially during the spring, the outflow of the River Danube is often felt well offshore, causing a considerable E, or even NE, set.

Local current systems are found off the mouths of rivers. As a rule river water flows out of the mouth in a direction at right angles to the trend of the coastline, then gradually turns to the right and may even turn so much towards the shore as to produce an eddy returning towards the mouth.

Canakkale Bogazi (The Dardenelles)

Canakkale Bogazi (The Dardanelles) is about 40 nautical miles long, with a maximum width of 4 nautical miles and a minimum width of 0.8 mile. The average channel depth is 92m.

Surface flow through the Turkish Straits carries low-salinity Black Sea water through Istanbul Bogazi (The Bosporus) into Marmara Denizi (Sea of Marmara), through Canakkale Bogazi (The Dardanelles), and into the Aegean Sea. A bottom current flows from the Aegean Sea through the Turkish Straits and into the Black Sea carrying denser Mediterranean water N The depth of the interface between the oppositely-flowing currents averages about 20m. There is very little mixing of the two water types through the straits.

The surface current flows through Canakkale Bogazi (The Dardanelles) in a narrow stream which is delimited by projections of the coast. Standing vortices and eddies form in coastal bays and on either side of the stream channel. Current speeds are lowest at the N entrance to the strait and increase S under normal wind conditions. During SW winds the surface current becomes weaker and broader in the strait; NE winds cause the current to strengthen and narrow in the main channel. As the surface current slows under opposing winds, the stream broadens, and the vortices weaken and may disappear. When the stream intensifies under NE winds, the vortices and eddies increase in strength and extent. Opposing strong S winds may cause the surface currents to flow in the opposite direction, but only for a couple of days at most.

Current speeds at the entrance to the Aegean Sea average between 1.5 and 2.5 knots. During the spring and early summer the current may be as high as 5 knots off Nara Burnu because of maximum river discharge and strong N winds at that time. At the entrance to Marmara Denizi (Sea of Marmara), the surface current is rarely higher than 0.5 knots. Strong NE winds may cause the current to increase to 1.5 knots. During late autumn and early winter surface currents are weakest due to S winds.

Fishing Areas

The predominant fish stocks and fishing areas are located, as follows:

1. Sturgeon and mackeral—In the NW part of the Black Sea.
2. Herring—Kerch Strait and off the mouths of the River Danube and Rika Dnipro.
3. Anchovies—Along the coast of Krymskyy Pivostriv.
4. Flounder—Throughout most of the Black Sea.

Ice

Ice is formed during the prolonged periods of frost which occur in the winter in the N parts of the Black Sea and Sea of Azov. The severity of the winter, and therefore the extent and thickness of the ice cover, varies in different years but even in the most severe winter, only a comparatively small part of the whole area of the Black Sea is affected by ice.

Navigation is usually affected in only three following regions:

1. The River Danube.
2. The NW part of the Black Sea.
3. The Sea of Azov, including Kerch Strait.

Ice begins to appear from the middle of December to the beginning of January. February is the month of greatest ice cover in all the above regions. The ice begins to dissipate at the end of February, with the area being completely free of ice by the end of March.

Navigational Information

Electronic Navigational Communications

For information on the International Maritime Satellite Organization (INMARSAT), the Global Maritime Distress and Safety System (GMDSS(), the Global Positioning System (GPS), and SafetyNET, see **North Atlantic Ocean—Navigational Information**.

International Ship and Port Facility (ISPS) Code

The ISPS Code applies to ships on international voyages and port facilities directly interfacing with these ships. All vessels should fully comply with the provisions of Chapter XI-Part 2 of the SOLAS Convention and Part A of the ISPS Code. Vessels shall demonstrate that appropriate maritime security measures are in place according to ISPS Code regulations. For further information, see **North Atlantic Ocean—Navigational Information**.

Enroute Volume

BA NP 24, Black Sea and Sea of Azov Pilot (British Admiralty publication)

Pollution

Single-hull Tanker Phase-out Schedule

In accordance with Regulation 13G of Annex I of the MARPOL Convention, single-hull tankers should be phased out or converted to a double-hull configuration according to a schedule based on their year of delivery. These requirements are designed to reduce the risk of oil spills from tankers involved in

low-energy collisions or groundings. For further information, see **North Atlantic Ocean—Pollution—Single Hull Tanker Phase-out Schedule**.

Ballast Water Management

International guidelines have been adopted by the IMO to prevent the introduction of unwanted aquatic organisms and pathogens from ships' ballast water and sediment discharge into marine ecosystems. The guidelines include the retention of ballast water onboard, ballast exchange at sea, ballast management aimed at preventing or minimizing the uptake of contaminated water or sediment, and the discharge of ballast ashore. Particular attention is drawn to the hazards associated with ballast exchange at sea. For further information, see **North Atlantic Ocean—Pollution—Ballast Water Management**.

MARPOL Special Areas

MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

The sea area of the Black Sea proper is a MARPOL Special Area. The boundary between the Mediterranean Sea and the Black Sea is the parallel of 41°00'N.

For further information, see **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Schengen Agreement

The aim of the Schengen Agreement is to create free movement for persons within the European Union (EU) and to intensify the fight against cross-border crime. In practice, the Schengen Agreement means that personal checks on journeys between the member states will cease, while the external frontier controls will be intensified, i.e. towards countries that are not signatories to the Schengen Agreement. For further information, see **North Atlantic Ocean—Regulations—Schengen Agreement**.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The participating EU countries in the Black Sea are, as follows:

1. Bulgaria.
2. Romania.

Further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR)

The NIR of the PMoU has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the Paris MoU region.

For further information, see **North Atlantic Ocean—Regulations—Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR).**

Ship Reporting System

Georgian Ship Reporting System (GEOREP)

The Georgian Ship Reporting System (GEOREP) is operated by MRCC Georgia. Participation is compulsory; vessels of any nationality, tonnage, or type should participate when within the GEOREP area. For further information, see **Georgia—Ship Reporting System**.

Turkish Strait Vessel Traffic Service and Reporting System (TUBRAP)

The Turkish Straits Vessel Traffic Service (TSVTS) and Reporting System (TUBRAP) has been establish in Istanbul Bogazi (The Bosporus) and Canakkale Bogazi (The Dardanelles). For further information, see **Turkey—Ship Reporting System**.

Tides

Tidal influence has virtually no effect on water levels in the Black Sea. The average spring range in the W part of the Black Sea is less than 0.1m.

The annual range in Mean Sea Level due to meteorological pressure effects is about 0.05m; exceptional rises of 0.15m and a falls of 0.18m have been recorded. Superimposed on this are variations resulting from changes in the amount of water entering or leaving the Black Sea ranging from 0.5 to 1.5 m.

Winds exercise a considerable effect on the water level. In general, onshore winds tend to raise, and offshore winds to lower, the water level. The range of level thus caused depends largely upon local conditions, being much more marked in bays and inlets than in more open places, and may be as much as 0.3m.

Seiches, which occur with little or no warning, can raise or lower the sea level by about 1.0m over wide areas. The seiches may be the result of seismic disturbances some distance away or the consequence of changes in atmospheric pressure.

BOSNIA-HERZEGOVINA

General	65
Buoyage System	65
Cautions	65
Currency	65
Government	65
Holidays	66
Industries	66
Languages	66
Navigational Information	66
Pollution	66
Regulations	66
Ship Reporting System	66
Time Zone	66
U.S. Embassy	66

General

Bosnia-Herzegovina is located on the E side of the Adriatic Sea. The country's coastline is only about 11 miles long.

The climate is generally considered continental, with steady rainfall throughout the year, although in areas nearer the coast it is more Mediterranean in character.

The coast is generally high and picturesque, with steep cliffs in places. Inland are high mountain ranges, fertile plains, and dense forests.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Vessels engaged in seismic surveys and other research projects may be encountered in the Adriatic Sea, normally inside the 200m depth curve.

Currency

The official unit of currency is the konvertibilna marka, consisting of 100 pfening.

Government

Bosnia-Herzegovina is a federal democratic republic. The country is divided into the Bosnian/Croat Federation, the Bosnian/Serb Republika Srpska, and the internationally-supervised Brcko District.

Bosnia-Herzegovina is governed by a directly-elected rotating three-member Presidency (one Croat, one Bosnian, and one Serb) serving a 4-year term. The bicameral Parliamentary As-

Flag of Bosnia-Herzegovina

sembly consists of a directly-elected 42-member National House of Representatives (28 seats alloted to the Bosnian/Croat Federation and 14 seats alloted to the Bosnian/Serb Republika Srpska), serving 4-year terms, and the appointed 15-member House of Peoples (5 Croats, 5 Bosnians, and 5 Serbs), elected by the legislatures of the Bosnian/Croat Federation and the Bosnian/Serb Republika Srpska, serving 4-year terms.

The legal system is based on civil law.

The capital is Sarajevo.

Holidays

The following holidays are observed:

January 2	New Year's Day
January 6	Orthodox Christmas Eve *
January 7	Orthodox Christmas Day *
January 9	Republic Day *
January 15	Orthodox New Year's Day *
January 19	Orthodox Epiphany *
March 1	Independence Day **
Good Friday	Variable *
Easter Sunday	Variable **
May 1-2	Labor Day
June 28	St. Vitas Day *
August 15	Assumption Day **
November 1	All Saints' Day **
November 25	Statehood Day
December 25	Kurban Bajram **

* Banja Luka only.

** Sarajevo and Mostar only.

Industries

The main industries include steel production, mining (coal, iron, lead, zinc, manganese, and bauxite), textiles, furniture, tobacco products, domestic appliances, oil refining, and motor vehicle assembly.

The main exports are metals, clothing, and wood products. The main export-trading partners are Croatia, Italy, Slovenia, Germany, Austria, and Hungary.

The main imports are machinery and equipment, chemicals, fuels, and foodstuffs. The main import-trading partners are Croatia, Germany, Slovenia, Italy, Austria, and Hungary.

Languages

Serbo-Croatian is the official language.

Navigational Information

Enroute Volume

Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

Maritime Claims

The territorial sea of Bosnia-Herzegovina is defined by median lines with Croatia.

Maritime Boundary Disputes

Discussions continue with Croatia over several small disputed sections of the boundary related to maritime access that hinder final ratification of the 1999 border agreement.

Pollution

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Any overboard discharge of harmful waste material into the waters of Bosnia-Herzegovina should be reported to the nearest harbormaster's office.

Ship Reporting System

The Adriatic Ship Reporting System (ADRIREP), a mandatory system for certain vessels, is in effect for the Adriatic Sea N of latitude 40°25'N. For further information, see **Italy—Ship Reporting System**.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is observed from the last Sunday in March until the last Sunday in October.

U.S. Embassy

The U.S. Embassy is situated at 1 Robert C. Fraser Street,

7100 Sarejevo. The mailing address is the same.

U. S. Embassy Bosnia-Herzegovina Home Page
http://sarajevo.usembassy.gov

BRITISH VIRGIN ISLANDS

General	**69**
Buoyage System	**69**
Cautions	**69**
Currency	**69**
Government	**69**
Holidays	**70**
Industries	**70**
Languages	**70**
Meteorology	**70**
Navigational Information	**70**
Search and Rescue	**70**
Time Zone	**70**
U.S. Embassy	**70**

General

The British Virgin Islands, located NE of the U.S. Virgin Islands, consists of 16 inhabited and more than 20 uninhabited islands.

The islands, all of which are of volcanic origin except for Anegada, are steep and hilly. Anegada, the northeasternmost island of the chain, is a low coral island.

The climate is subtropical and humid. Temperatures are moderated by the trade winds. Hurricanes and tropical storms can occur from July through October.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Rollers.—Rollers or ground swell in the area of the islands, frequently occur from October to May and sometimes continue for 3 or 4 days. The rollers appear to loosen sand, thus discoloring the water N of the islands as far as the edge of Virgin Bank. In some places near the W end of Anegada, where the bottom is composed of fine sand, the formation of the banks is frequently changed.

In general, they set in after a prevalence of E and SE winds. They also follow winds from the NE, especially when these winds are strong. The wave height may exceed 2m have been observed to break over depths of 16m off the N coast of Tortola.

Currency

The official unit of currency is the U.S. dollar, consisting of 100 cents.

Government

The British Virgin Islands are internally self-governing overseas territory of the United Kingdom.

Elizabeth II, recognized as the Chief of State, appoints a Governor. The Premier and the Executive Council are appointed by the Governor. The 13 members of the unicameral Legislative Council are directly elected to 4-year terms.

The legal system is based on English common law.

The capital is Road Town.

Flag of the British Virgin Islands

Holidays

The following holidays are observed:

January 1	New Year's Day
March 10	Commonwealth Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
Whitmonday	Variable
Second Saturday in June	Queen's Birthday
July 1	Territories Day
August 1-3	Bank Holidays
October 21	St. Ursala's Day
November 14	Prince of Wales' Birthday
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are tourism, light industry, construction, rum, concrete blocks, and offshore financial activities.

The main exports are rum, fresh fish, fruits, livestock, gravel, and sand. The main export-trading partner is the United States.

The main imports are building materials, automobiles, foodstuffs, and machinery. The main import-trading partner is the United States.

Languages

English is the official language. Spanish and Creole are also spoken.

Meteorology

Marine weather forecasts are available in English from the Caribbean Weather Center (http://www.caribwx.com/marine.html).

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of the British Virgin Islands are, as follows:

Territorial Sea	12 miles.
Fisheries or Economic Zone	200 miles.

Search and Rescue

A National Emergency Committee is responsible for coordinating national distress and mass casualty operations. Virgin Islands Search and Rescue (VISAR), a volunteer organization, works closely with the U.S. Coast Guard. VISAR is not manned 24 hours, but rescue coordinators and lifeboat crews are on call 24 hours. VISAR can be contacted, as follows:

1. Telephone: 1-284-4990911
2. Facsimile: 1-284-4946613
3. E-mail: admin@visar.org

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

The British Virgin Islands are a dependent territory of the United Kingdom. There is no diplomatic representation.

BULGARIA

General	**71**
Buoyage System	**71**
Currency	**71**
Government	**71**
Holidays	**72**
Industries	**72**
Languages	**72**
Navigational Information	**72**
Pollution	**72**
Regulations	**73**
Restricted Areas	**73**
Search and Rescue	**76**
Time Zone	**76**
Traffic Separation Schemes	**76**
U.S. Embassy	**76**

General

Bulgaria is located in southeastern Europe on the Black Sea, between Romania on the N and Greece and Turkey on the S.

The S part of the country has a Mediterranean climate, with mild moist winters and hot dry summers. Further N conditions become more Continental, with a larger range of temperatures and greater amounts of rainfall in the summer and early fall.

The terrain is mostly mountainous, with lowlands in the N and SE.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the lev, consisting of 100 stotinki.

Government

Bulgaria is a parliamentary democracy. The country is divided into 28 provinces.

Bulgaria is governed by a directly-elected President serving a 5-year term. The Prime Minister is nominated by the President and elected by the National Assembly. The unicameral National Assembly consists of 240 directly-elected members, serving 4-year terms.

The legal system is civil law and criminal law based on Roman law.

The capital is Sofia.

Flag of Bulgaria

Holidays

The following holidays are observed:

January 1	New Year's Day (St. Basil's Day
March 3	National Day (Liberation from the Ottomans)
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
May 6	St. George's Day (Bulgarian Army Day)
May 24	Sts. Cyril and Methodius Day
September 6	Unification Day
September 22	Independence Day
December 24	Christmas Eve
December 25	Christmas Day
December 26	Second Day of Christmas

Industries

The main industries are electricity, gas, and water; food, beverages, and tobacco; machinery and equipment; base metals; chemical products; coke; refined petroleum; and nuclear fuel.

The main exports are clothing, footwear, iron and steel, machinery and equipment, and fuels. The main export-trading partners are Italy, Turkey, Germany, Greece, and Belgium.

The main imports are machinery and equipment, metals and ares, chemicals and plastics, fuels, minerals, and raw materials. The main import-trading partners are Russia, Germany, Italy, Turkey, China, and Greece.

Languages

Bulgarian is the official language.

Navigational Information

Enroute Volume

BA NP 24, Black Sea and Sea of Azov Pilot (British Admiralty publication)

Maritime Claims

The maritime territorial claims of Bulgaria are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone **	200 miles.
Continental Shelf **	Depth of 200m or the Limit of Exploitation.

* Foreign submarines must navigate on the surface. The innocent passage of warships is limited to designated sea lanes.

** Limits to be established by agreement between states with adjacent or opposite coasts on the Black Sea on the basis of international law.

Pilotage

Burgas (42°29'N., 27°29'E.)

Pilotage is compulsory from the pilot boarding position in the anchorage for all vessels over 100 gross tons and is available 24 hours.

Vessels should request pilot services through their agent, as follows:

1. Inner Roads pilotage—send request 2 hours in advance.
2. Outer Roads pilotage—send request 6 hours in advance.

Pilot boarding positions are centered in the following Traffic Separation Scheme roundabouts:

a. 42°39.8'N, 27°57.0'E.
b. 42°30.0'N, 27°43.0'E.

The pilots can be contacted, as follows:

1. VHF: VHF channel 14
2. Facsimile: 359-56-840404
3. E-mail: pilot@bginfo.net
4. Web site: http://www.bourgas-pilot.com

Varna (43°11'N., 27°55'E.)

Pilotage is compulsory in the inner roads for all vessels over 100 gross tons and is available 24 hours.

The pilot boarding position is centered in the Traffic Separation Scheme roundabout in position 43°11.2'N, 28°20.0'E.

Balchik (43°24'N., 28°10'E.)

Pilotage is compulsory and is provided by Varna. The pilot boards in Balchik Roads.

Pollution

All vessels navigating in the Bulgaria SAR region, regard-

less of tonnage, must report the following to MRCC Varna:

1. Any incident (collision, grounding, fire, or outflow) which has the potential to cause pollution of the sea by hydrocarbons, other noxious substances, barrels, containers, or other packages.
2. The dumping of any substances into the sea.
3. Any areas of pollution on the surface of the sea.

The report should begin with the word POLREP and contain the following information:

1. Date and time of observation reported (GMT or local time), vessel name, IMO number, and call sign.
2. Position of reporting vessel.
3. Type of incident (collision, grounding, fire, or outflow).
4. Information on pollution
   a. Position (latitude and longitude).
   b. Pollution charactaristics.
      - Type of oil (heavy, crude, or light).
      - Appearance (liquid, floating solids, oily appearance, semi-liquid sludge, tarry lumps, changes in water color, or visible vapor).
      - Other harmful substances (if possible, specify UN or IMO number).
      - Distinguishing marks on barrels or containers.
      - Length and width of slick (in nautical miles).
5. Meteorological conditions and sea state
   - Wind direction and speed (degrees and m/sec).
   - Current direction and speed (degrees and knots).
   - Visibility.
6. Expected development of the pollution (arrival on the coastline), giving estimated time, if possible.
7. Source and cause of pollution (from vessel or other installation). If the origin is a vessel, indicate if it appears to be deliberate or an accident. In the latter case, give a brief description. If possible, give the name, type, size, and nationality of home port of the polluting vessel. If the vessel is on passage, give its course and speed.
8. If the polluting vessel cannot be identified and the pollution appears to be recent, then report the identity of vessels in the vicinity.
9. Action taken or planned, including proof of reported details by taking photographs and obtaining samples.
10. Name of other states and/or organizations informed.
11. Any other information judged of value.

The Maritime Rescue Coordination Center (MRCC) Varna can be contacted, as follows:

1. Telephone: 359-52-603268
   359-888-952113 (mobile)
2. Facsimile: 359-52-603265
3. Telex: 67-77486 MRCCVN BG
4. E-mail: mrcc_vn@marad.bg
   mrcc.varna@gmail.com

MARPOL Special Area

The Black Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The report should be sent, as follows:

Traffic Burgas	
Mail	Knyaz Aleksandar Batenberg Boulevard, 1
Telephone	359-56-844311
	359-56-876890
Facsimile	359-56-844310
Traffic Varna	
Telephone	359-52-603113
	359-52-692475
Facsimile	359-52-602317

Inquiries can be directed, as follows:

Information Center Burgas	
Telephone	359-56-876890
E-mail	infozentar_bs@bgports.bg
Information Center Varna	
Telephone	359-52-603113
E-mail	infozentar_vn@bgports.bg

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Restricted Areas

Bulgarian Regulated Areas, where navigation, fishing, and anchoring are prohibited, are listed below. The times during which these areas are either prohibited or dangerous for navigation, fishing, or anchoring are announced by radio navigational warnings 3 to 5 days before the start of the prohibition or dangerous operation.

Areas Prohibited for Navigation

East of Nos Shabla

Area 11 (former Area 15)—A circular area, with a radius of 0.5 mile, centered on position 43°33.5'N, 28°43.2'E.

Area 12 (former Area 16)—A circular area, with a radius of 0.5 mile, centered on position 43°32.4'N, 28°41.5'E.

Varnenski Zaliv

Area 13—Area bounded by lines joining the following positions:

a. 43°12.38'N, 27°57.30'E.
b. 43°12.12'N, 27°57.40'E.
c. 43°12.12'N, 27°57.65'E.
d. 43°12.38'N, 27°57.54'E.

Varna

Area No. 14—Area bounded by South Mole and lines joining the following positions:

a. 43°11.52'N, 27°55.02'E. (South Mole)
b. 43°11.44'N, 27°55.02'E.
c. 43°11.44'N, 27°55.08'E.
d. 43°11.52'N, 27°55.08'E. (South Mole)

East of Nos Shabla

Area No. 15—A circular area, with a radius of 0.5 mile, centered on approximate position 43°34'N, 28°43'E .

Area No. 16—A circular area, with a radius of 0.5 mile, centered on approximate position 43°32'N, 28°41'E

Varnensko Ezero

Area No. 15—Area bounded by lines joining the following positions:

a. 43°11.55'N, 27°50.60'E.
b. 43°11.38'N, 27°50.60'E.
c. 43°11.38'N, 27°50.82'E.
d. 43°11.55'N, 27°50.82'E.

South of Nos Galata

Area No. 16—Area bounded by the shoreline and lines joining the following positions:

a. 43°03.9'N, 27°54.8'E. (shore)
b. 43°03.9'N, 27°55.1'E.
c. 43°06.4'N, 27°55.8'E.
d. 43°06.4'N, 27°55.4'E. (shore)

East of Cherni Nos

Area No. 061—A circular area, with a radius of 0.5 mile, centered on position 42°53.9'N, 28°03.3'E.

West of Nos Atiya

Area No. 18—A circular area, with a radius of 0.2 mile, centered on position 42°27.6'N, 27°34.4'E.

Areas Declared Periodically Dangerous for Navigation

Southeast of Balchik

Area No. 111 (former Area 11)—Area bounded by lines joining the following positions:

a. 43°21.4'N, 28°10.0'E.
b. 43°15.0'N, 28°07.0'E.
c. 43°19.0'N, 28°21.5'E.
d. 43°21.4'N, 28°21.5'E.

East of Maslin Nos

Area No. 112—Area bounded by lines joining the following positions:

a. 42°25.8'N, 27°45.0'E.
b. 42°15.0'N, 27°52.5'E.
c. 42°15.0'N, 28°07.8'E.
d. 42°25.8'N, 28°01.0'E.

Areas Declared Temporarily Dangerous for Navigation

Nos Emine to Nos Kaliakra

Area No. 41—Area bounded by lines joining the following positions:

a. 42°59.0'N, 28°11.5'E.
b. 42°35.0'N, 28°11.5'E.
c. 42°59.5'N, 29°01.0'E.
d. 43°16.0'N, 28°46.0'E.

East of Nos Kaliakra

Area No. 42 —Area of unknown boundaries in the vicinity of position 43°15'N, 29°05'E.

Area No. 43 —Area bounded by lines joining the following positions:

a. 42°39.0'N, 28°28.0'E.
b. 42°18.5'N, 28°28.0'E.
c. 42°18.5'N, 29°22.0'E.
d. 42°39.0'N, 29°22.0'E.

Southeast of Burgaskiy Zaliv

Area No. 44 —Area of unknown boundaries in the vicinity of position 42°15'N, 28°10'E.

Area No. 45 —Area of unknown boundaries in the vicinity of position 42°22'N, 28°30'E.

Areas Prohibited for Anchoring, Fishing, Underwater and Dredging Operations, Trawling, and Underwater Explosions

Between Nos Shabla and Nos Kaliakra

Area No. 58 —Area bounded by lines joining the following positions:

a. 43°34.4'N, 28°43.4'E.
b. 43°33.4'N, 28°44.5'E.
c. 43°31.4'N, 28°41.5'E.
d. 43°32.4'N, 28°40.3'E.

Area No. 32—Area of unknown boundaries in the vicinity of position 43°28'N, 28°42'E.

Varnenski Zaliv

Area No. 311—Area bounded by the shoreline and lines joining the following positions:

a. 43°11.3'N, 26°55.3'E. (shore)
b. 43°11.3'N, 26°56.7'E.
c. 43°12.7'N, 26°56.7'E. (shore)

Between Nos Shabla and Nos Kaliakra

Area No. 312 (former Area 32)—Area bounded by the shoreline and lines joining the following positions:

a. 43°21.0'N, 28°28.0'E. (shore)
b. 43°19.9'N, 28°30.0'E.
c. 43°22.7'N, 28°48.0'E.
d. 43°30.0'N, 28°50.0'E.
e. 43°34.0'N, 28°50.0'E.

f. 43°34.0'N, 28°35.5'E. (shore)

West of Nos Kaliakra

Area No. 313—Area bounded by the shoreline and lines joining the following positions:

a. 43°23.2'N, 28°25.6'E. (shore)
b. 43°22.7'N, 28°25.6'E.
c. 43°22.7'N, 28°26.9'E.
d. 43°23.0'N, 28°26.9'E. (shore)

South of Balchik

Area No. 314—A circular area, with a radius of 0.3 mile, centered on position 43°21.1'N, 28°10.4'E.

Eastsoutheast of Nos Galata

Area No. 320—A circular area, with a radius of 0.25 mile, centered on position 43°06'58.2"N, 28°07'31.2"E

Varnensko Ezero

Area No. 321—Area of unknown boundaries in the vicinity of position 43°12'N, 27°47'E.

Yevksinograd Zaliv

Area No. 322—Area of unknown boundaries in the vicinity of position 43°13'N, 27°59'E.

Kora Burnu to Nos Sivriburun

Area No. 315—An area 1.5 miles on either side of the cable running N from a position 9 miles E of Kora Burnu (41°53'N., 28°03'E.) to Varna and 1.5 miles on either side of the cable running NE from a position 15.5 miles E of Nos Ilandzhik (43°07'N., 27°55'E.) to a position 13 miles E of Nos Sviriburun (43°44'N., 28°35'E.).

East of Cherni Nos

Area No. 316—A circular area, with a radius of about 0.15 mile, centered on position 42°53.9'N, 28°07.4'E.

Nos Emine

Area No. 55—Area bounded by the shoreline and lines joining the following positions:

a. 42°41.96'N, 27°53.90'E. (shore)
b. 42°41.89'N, 27°54.00'E.
c. 42°41.98'N, 27°54.12'E.
d. 42°42.05'N, 27°54.07'E. (shore)

Southwest of Ostrov Sveta Anastasiya

Area No. 317—Area bounded by the shoreline and lines joining the following positions:

a. 42°27.50'N, 27°32.43'E. (shore)
b. 42°28.38'N, 27°32.95'E.
c. 42°28.20'N, 27°33.47'E.
d. 42°27.29'N, 27°32.88'E. (shore)

Nos Atiya

Area No. 51—Area bounded by the shoreline and lines joining the following positions:

a. 42°26.75'N, 27°34.54'E. (shore)
b. 42°27.20'N, 27°34.44'E.
c. 42°27.85'N, 27°35.00'E.
d. 42°27.92'N, 27°35.18'E.
e. 42°27.83'N, 27°35.42'E.
f. 42°27.30'N, 27°35.84'E.
g. 42°27.23'N, 27°35.71'E. (shore)

East of Nos Atiya

Area No. 318—A circular area, with a radius of 0.25 mile, centered on position 42°27.8'N, 27°36.2'E.

Nos Talasakra

Area No. 53—Area bounded by the shoreline and lines joining the following positions:

a. 42°27.10'N, 27°38.88'E. (shore)
b. 42°27.15'N, 27°38.88'E.
c. 42°27.15'N, 27°39.15'E.
d. 42°27.09'N, 27°39.32'E.
e. 42°26.94'N, 27°39.28'E.
f. 42°26.94'N, 27°39.15'E. (shore)

Northwest of Nos Khrisosotira

Area No. 52—Area bounded by the shoreline and lines joining the following positions:

a. 42°26.07'N, 27°39.26'E. (shore)
b. 42°25.95'N, 27°39.37'E. (shore)

South of Ostrov Sveta Ivan

Area No. 319—Area bounded by the shoreline and lines joining the following positions:

a. 42°26.40'N, 27°41.35'E. (shore)
b. 42°26.66'N, 27°41.00'E.
c. the major arc of a circle with a radius of 0.47 mile centered on Ostrov Sveti Ivan Light (42°26.37'N., 27°41.45'E.) extending counterclockwise to
d. 42°26.36'N, 27°42.00'E.
e. 42°26.36'N, 27°41.97'E. (shore)

Sozopol

Area No. 54—Area bounded by the shoreline and lines joining the following positions:

a. 42°25.56'N, 27°41.74'E. (shore)
b. 42°25.55'N, 27°41.65'E.
c. 42°25.38'N, 27°41.52'E.
d. 42°25.25'N, 27°41.27'E.
e. 42°25.29'N, 27°41.13'E.
f. 42°25.60'N, 27°41.30'E.
g. 42°25.68'N, 27°41.62'E.
h. 42°25.64'N, 27°41.75'E. (shore)

Nos Maslen-Nos

Area No. 56—Area bounded by the shoreline and lines joining the following positions:

a. 42°18.55'N, 27°47.58'E. (shore)
b. 42°18.67'N, 27°47.58'E.
c. 42°18.67'N, 27°47.86'E.
d. 42°18.32'N, 27°47.86'E.
e. 42°18.32'N, 27°47.53'E.
f. 42°18.42'N, 27°47.53'E. (shore)

Southeast of Nos Rohi

Area No. 57—Area bounded by the shoreline and lines joining the following positions:

a. 42°09.41'N, 27°52.48'E. (shore)

b. 42°09.46'N, 27°52.62'E.
c. 42°09.42'N, 27°52.74'E.
d. 42°09.34'N, 27°52.65'E. (shore)

Southeast of Nos Galata

Area No. 59—A circular area, with a radius of 1 mile, centered on position 43°06.9'N, 28°075'E.

Area No. 62—A circular area, with a radius of 1 mile, centered on position 43°02.5'N, 28°10.0'E.

Area No. 60—A circular area, with a radius of 1 mile, centered on position 43°06.9'N, 28°07.5'E.

Eastsoutheast of Cherni Nos

Area No. 61—A circular area, with a radius of 1 mile, centered on position 42°59.9'N, 28°08.9'E.

Note.—Former Regulated Areas 13, 35, 42, 44, and 45, which may still be charted on some charts, are no longer in force.

Search and Rescue

The Maritime Rescue Coordination Center (MRCC) Varna can be contacted, as follows:

1. Telephone: 359-52-603268
   359-888-952113 (mobile)
2. Facsimile: 359-52-603265
3. Telex: 67-77486 MRCCVN BG
4. E-mail: mrcc_vn@marad.bg

Varna Coast Radio Station (LZW) maintain a continuous listening watch for distress traffic on 2182 kHz, 2187.5 kHz, and VHF channel 16. Distress information is forwarded to MRCC Varna.

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time (CHARLIE (-3)) is observed from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Bulgaria are, as follows:

1. Between Burgas and Nos Kaliakra. (Government of Bulgaria)
2. In the Approaches to Burgas. (Government of Bulgaria)

U.S. Embassy

The U. S. Embassy is situated at 16 Kozyak Street, Sofia. The mailing addresses are, as follows:

1. Bulgaria address—
   16 Kozyak Street
   Sofia 1408
2. U. S. address—
   Department of State
   5740 Sofia Place
   Washington, DC (20521-5740)

U. S. Embassy Bulgaria Home Page
http://bulgaria.usembassy.gov

CANADA

General	**77**
Areas to be Avoided	**77**
Buoyage System	**78**
Cautions	**78**
Currency	**78**
Firing Areas	**78**
Fishing Areas	**79**
Government	**80**
Holidays	**82**
Ice	**82**
Industries	**84**
Languages	**84**
Meteorology	**84**
Navigational Information	**84**
Offshore Drilling	**85**
Pilotage	**85**
Pollution	**86**
Regulations	**86**
Search and Rescue	**97**
Signals	**98**
Submarine Operating Areas	**98**
Time Zone	**104**
Traffic Separation Schemes	**104**
U.S. Embassy	**104**
Vessel Traffic Service	**104**
Appendix I—ECAREG/NORDREG Ship Reporting Requirements	**105**
Appendix II—Eastern Canada Time Zones	**113**
Appendix III—MCTS Center Contact Information	**115**

General

Canada, the largest self-governing country in the Commonwealth of Nations, is a federal state established in 1867 by the British North America Act. Discovered by Cabot in 1497, it was formed from the colonies originally settled by the French and British in the 17th century together with lands owned by the Hudson's Bay Company. The Dominion was finally completed by the inclusion of Newfoundland in 1949.

The country now contains the whole of the North American continent N of the border of the United States of America, excluding Alaska, which is part of the United States of America, but including all of the islands, known as the Canadian Arctic Archipelago, which lie between the Arctic Ocean, on the W, and the median line with Greenland, on the E.

The climate varies from temperate in the S to subarctic and arctic in the N.

The terrain is mostly plains, with mountains in the W and lowlands in the SE.

Areas to be Avoided

An IMO-adopted seasonal Area to be Avoided has been established in Roseway Basin, located between Browns Bank and Baccaro Bank on the southern Scotian Shelf S of Cape Sable.

This area, applicable to vessel of 300 gross tons and over solely in transit, is seasonally active from June 1 until December 31 and is bounded by lines joining the following positions:

a. 43°16'N, 64°55'W.
b. 42°47'N, 64°59'W.
c. 42°39'N, 65°31'W.
d. 42°52'N, 66°05'W.

The major threats to right whales in this area are collisions with ships. Mariners are requested to avoid passage through this area. If passage through this area is necessary, decrease vessel speed, post a lookout, and steer the ship around any right whales.

If a right whale is sighted or a collision occurs, please report the position (in latitude and longitude) to the Department of

Fisheries and Oceans via any Marine Communications Traffic Services Center (MTSC) or by facsimile (902-426-2698).

Note.—Further information on right whales may be found in Regulations—Conservation of Marine Mammals.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

In winter, floating aids to navigation may be out of position, their equipment inoperative, their shape altered by ice formation or structural damage, and their color indistinguishable due to freezing spray, marine growth, or guano.

Cautions

Automatic Identification System

The Canadian Coast Guard's Marine Communications and Traffic Services (MCTS) Centers have commenced initial operations of their Automatic Identification System (AIS). The equipment will be installed at the following MCTS Centers:

1. Newfoundland—St. Anthony, St. John's, Placentia, and Port-aux-Basques.
2. Nova Scotia—Sydney and Halifax.
3. New Brunswick—Saint John.
4. Quebec—Riviere-au-Renard, Les Escoumins, Quebec, and Montreal.

During this period MCTS Centers will be able to receive dynamic information (position, heading, and speed), static information (vessel description), and voyage information as transmitted by the vessel's AIS. The MCTS AIS system will be on Limited Operational Condition (LOC) until further notice. The completed installation of AIS equipemnt at each MCTS Center will be advised through a Notice to Shipping. Safety and binary messages services will not be provided until the system is on Full Operational Condition (FOC), which will be announced in Canadian Notices to Shipping and Notice to Mariners.

Hudson Bay Rocket Area

The National Research Council Rocket Area is located within Hudson Bay. For further information, see Pub. 146, Sailing Directions (Enroute) Newfoundland, Labrador, and Hudson Bay.

Currency

The official unit is the Canadian dollar, consisting of 100 cents.

Firing Areas

Firing practices, bombing practices, and defense exercises take place in a number of areas off the coast of Canada. The principal types of practices carried out are:

1. Air-to-Air, Air-to-Sea, or Air-to-Ground Firing.—Air-to-air is carried out by aircraft firing at a large white or red sleeve, a winged target, or flag towed by another aircraft moving on a steady course. Air-to-sea or air-to-ground firing are carried out from aircraft at towed or stationary targets on sea or land, the firing taking place to seaward in the case of those on land. All marine craft operating as range safety craft, target towers, or control launches for radio-controlled targets will display, for identification purposes, while on or in the vicinity of the danger area, the following signals:
   a. A large red flag at the masthead.
   b. A painted canvas strip, 1.8m by 0.9m with red and white checkers in 0.3m squares, on the fore deck or cabin roof.

2. Anti-aircraft Firing.—This may be from guns, missiles, or machine guns at a target towed by aircraft as in 1 above, at a pilotless target aircraft, or at balloons or kites. Practice may take place from shore batteries or ships. Warning signals, as a rule, are shown from shore batteries; ships fly a red flag.

3. Firing from Shore Batteries or Ships at Sea at Fixed or Floating Targets.—Warning signals usually shown as in 2 above.

4. At Remote-controlled Craft.—These craft are about 20m in length and carry "not under command" shapes and lights, as well as normal navigation lights. Exercises consisting of surface firing by ships, practice bombing, air to sea firing, and rocket firing will be carried out against these craft or targets towed by them.

A control craft will keep visual and radar watch up to approximately 8 miles and there will be cover from the air over a much greater range to ensure that other shipping will not be endangered.

Warning signals, when given, usually consists of red flags by day and fixed red or flashing red lights by night. The absence of any such signal cannot, however, be accepted as evidence that a practice area does not exist. Warning signals are shown from just before practice commences until it ceases.

Ships and aircraft carrying out night exercises may illuminate with bright red or orange flares.

Firing Exercise Areas

Area	Coordinates	Chartlet No.
Delta One	44°19'N, 64°00'W 44°19'N, 63°45'W 44°10'N, 63°45'W 44°10'N, 64°00'W	1
Delta Two	44°19'N, 63°45'W 44°19'N, 63°30'W 44°10'N, 63°30'W 44°10'N, 63°45'W	1
Delta Three	44°10'N, 63°40'W 44°10'N, 63°30'W 44°00'N, 63°30'W 44°00'N, 63°40'W	1
Delta Four	44°10'N, 64°00'W 44°10'N, 63°45'W 44°00'N, 63°45'W 44°00'N, 64°00'W	1
Echo Two	44°19'N, 63°30'W 44°19'N, 63°00'W 44°00'N, 63°00'W 44°00'N, 63°30'W	1

Firing Exercise Areas		
Area	**Coordinates**	**Chartlet No.**
Golf One	44°00'N, 64°00'W 44°00'N, 63°30'W 43°30'N, 63°30'W 43°30'N, 64°00'W	1
Golf Two	44°00'N, 63°30'W 44°00'N, 63°00'W 43°30'N, 63°00'W 43°30'N, 63°30'W	1
Golf Three	43°30'N, 63°30'W 43°30'N, 63°00'W 43°00'N, 63°00'W 43°00'N, 63°30'W	1
Golf Four	43°30'N, 64°00'W 43°30'N, 63°30'W 43°00'N, 63°30'W 43°00'N, 64°00'W	1
Hotel One	44°00'N, 63°00'W 44°00'N, 62°30'W 43°30'N, 62°30'W 43°30'N, 63°00'W	1
Hotel Two	44°00'N, 62°30'W 44°00'N, 62°00'W 43°30'N, 62°00'W 43°30'N, 62°30'W	1
Hotel Three	43°30'N, 62°30'W 43°30'N, 62°00'W 43°00'N, 62°00'W 43°00'N, 62°30'W	1
Hotel Four	43°30'N, 63°00'W 43°30'N, 62°30'W 43°00'N, 62°30'W 43°00'N, 63°00'W	1

A vessel may be aware of the existence of a practice area from local Notice to Mariners or similar method of promulgation and by observing the warning signals or the practice.

The range authorities are responsible for ensuring that there should be no risk of damage from falling splinters, bullets, etc., to any vessel which may be in a practice area.

Areas are only in use intermittently or over limited periods of time. When it is intended that a firing practice and exercise area be used, this information will be promulgated by local Canadian Coast Guard Marine Radio Broadcasts and may also be advertised in local newspapers. Maritime Command vessels are informed by Navigational Warning Messages CANHYDROLANT.

Area Romeo (Halifax Harbor-Roach Cove).—An arc from shoreline to shoreline centered on position 44°42'43"N, 63°38'40"W with a radius of 365m. Used for underwater demolition training with a maximum explosive weight of 10 kilograms.

Squaw Point Firing Area (Prince Edward Island).—The arc of a circle, with a radius of 1.9 miles, centered on position 46°11'25"N, 63°02'58"W limited by an arc of 29° extending from 184° to 213°.

Fishing Areas

Throughout the year, but especially in summer, large concentrations of fishing vessels may be encountered anywhere on the Grand Banks of Newfoundland and on the Nova Scotian shelf. Vessels proceeding through this area should navigate with caution and maintain a continuous listening watch on VHF channel 16.

Large fleets may be encountered throughout the year in the S approaches to the Bay of Fundy and within the area of Grand Manan Basin between Grand Manan Island and Nova Scotia. Vessels proceeding through this area should navigate with caution and maintain a continuous listening watch on VHF channel 16. The use of the Bay of Fundy Traffic Separation Scheme is compulsory. The MCTS Center Saint John (Fundy Traffic) may be contacted for detailed information concerniong fishing vessel concentrations.

Large fleets may be encountered throughout the navigation season in the Strait of Belle Isle and its approaches. Vessels proceeding through this area should navigate with caution and maintain a continuous listening watch on VHF channel 16. The MCTS Center Saint Anthony (Saint Anthony Coast Cuard Radio) may be contacted for detailed information concerning fishing vessel concentrations.

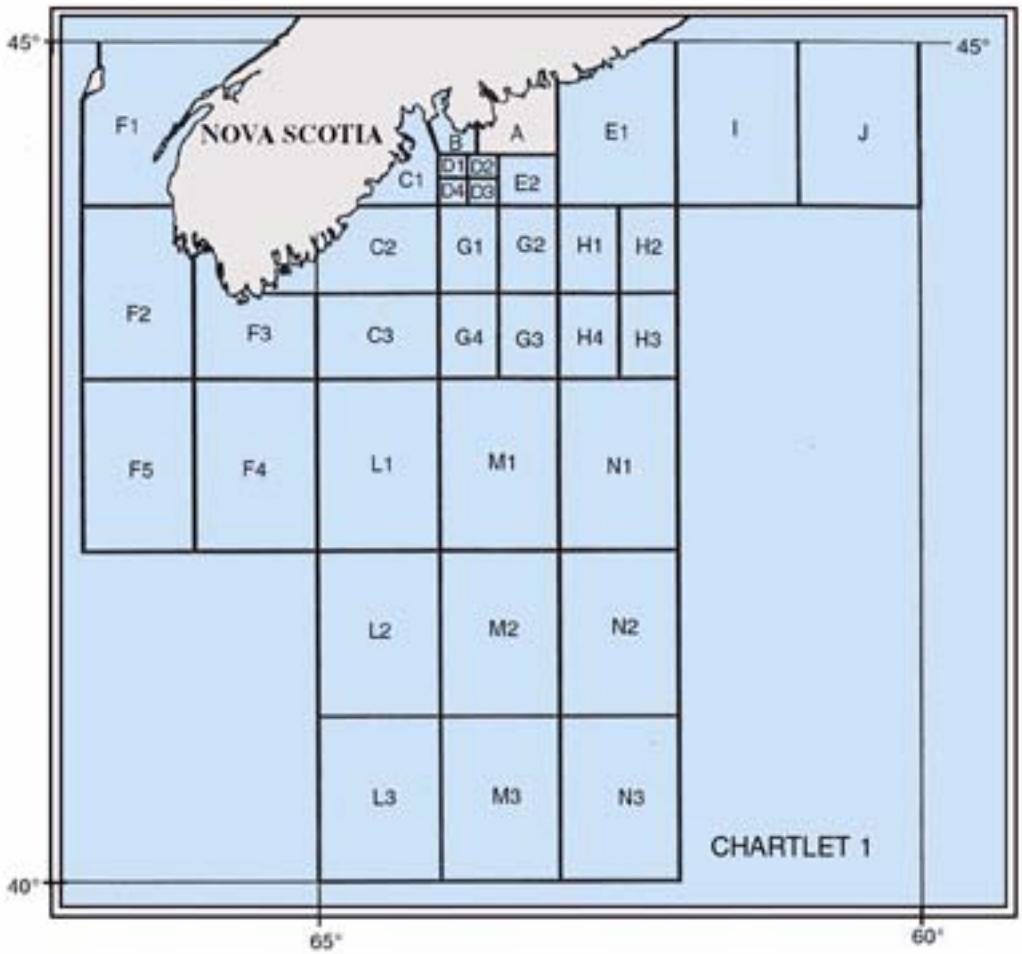
Newfoundland fisheries areas are, as follows:

1. Cod—Coastal fishing from small boats using traps, gill nets, and hook and line from April to October.
2. Caplin—A small bait fish appearing in large numbers in the shallows of the E coast of Newfoundland from mid-July until early August.
3. Herring—Fishing carried on in the shallow reaches of the great bays of Newfoundland, generally withing 3 miles of the coast. The different herring seasons are, as follows:
   - Spring season—Appear on the W coast of Newfoundland near and in St. George's Bay, appearing at the time of the full moon in the beginning of May.
   - Fall season—In the Bay of Islands from October to the following June.
   - Winter season—On the S coast of fortune Bay beginning in September.
4. Lobster—All along the coast of Newfoundland from small boats tending traps set close to shore in depths of 15 to 20m during an 8 to 10-week spring season.

Labrador fishing areas are, as follows:

1. Cod—Conducted from June to October, mainly along the Strait of Belle Isle, but also as far N as Nain; along the coasts and islands between Chateau Bay and the Ironbound Islands; and vessels working an area within 50 miles of the coast, generally NE of Venison Tickle, to seaward of Hamilton Island, NW of Makkovik, to seward of Nain, and off Cape Mugford.
2. Herring—off the coast from October until June.
3. Lobster—All along the coast of Labrador in the Strait of Belle Isle from small boats tending traps set close to shore in depths of 15 to 20m during an 8 to 10-week spring season.

Fishing gear in the waters off the Atlantic coast of Canada extending horizontally in the sea is marked, as given in the accompanying table titled **Fishing Gear Markings—East**



Coast of Canada.

Marine Farms and Aquaculture Facilities

The number of marine farms or aquaculture facilites located along the E coast of Canada is increasing. Marine farms are

Vessels should maintain a safe distance from these facilities to prevent damaging these facilities due to excessive wash and to avoid collisions and entanglements.

Open water marine farms typically consist of floating walkways from which netted pens hang into water that is usually 6m deep or greater. A large work and storage area is usually situated on the adjacent shore. Some marine farms use large work barges to contain their work, storage, and living areas. These marine farms may be moored close offshore along shipping channels or may be moored in bays and inlets used as anchorages by commercial and recreational vessels. The marine farms may also be moored in the center of shallower, less frequented bays and inlets.

Shellfish farms use floating platforms from which the shellfish are suspended off the bottom. The floating platforms are a series of buoys linked by cables which are left in one position marked by yellow cautionary buoys; black floats may be located between the cautionary buoys. Shipping channels near the marine farms are marked by a lateral system of red and green buoys. For further information on marine farm markings, see the graphic titled Typical Aquaculture Site Layouts.

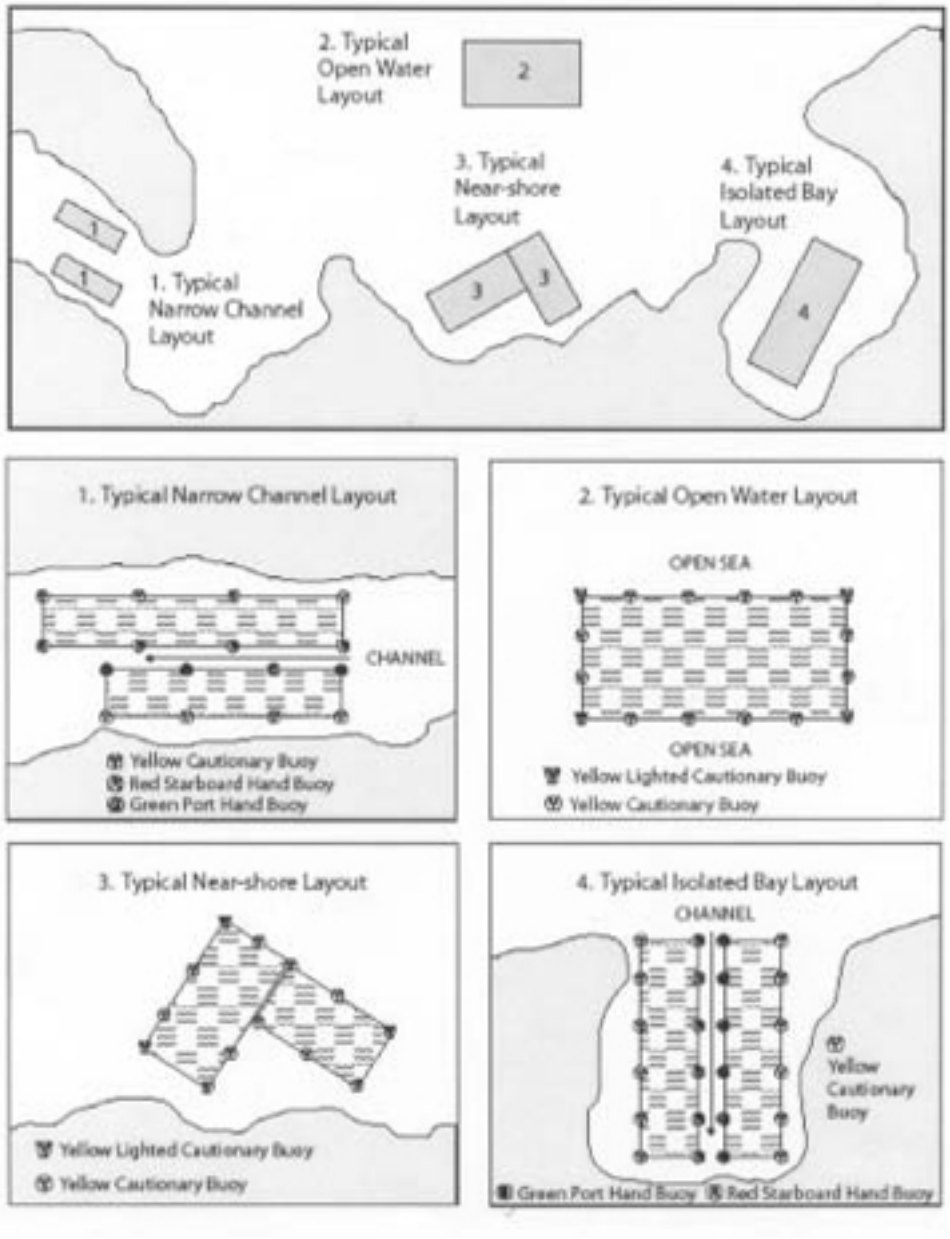
for a few years, after which the shellfish are then harvested. Depending on the season, these facilities may be located at the surface or are submerged. Large numbers of this type of facility are located in the coastal areas of Chaleur Bay, Baie de Gaspe, Iles de la Madeleine, and Prince Edward Island.

Caution.—Frequent changes in the location of marine farms require caution from the mariner. Some areas previously occupied by marine farms may contain obstructions caused by submerged debris from abandoned facilities. Vessels should avoid anchoring in these areas.

Government

Canada is a confederation with a parliamentary democracy. The country is divided into ten provinces and three territories.

Elizabeth II, recognized as the Chief of State, appoints a



Courtesy of Fisheries and Oceans Canada

Typical Aquaculture Site Layouts

Fishing Gear Markings—East Coast of Canada		
Type of gear	**Day signal**	**Night signal**
Horizontal fishing gear—West end [1]	A buoy with two square black flags or one square black flag over a black radar reflector. [2]	A buoy with two white lights. [3]
Horizontal fishing gear—East end [1]	A buoy with an square orange flag or an orange radar reflector. [2]	A buoy with one white light. [3]
Anchored fishing gear not extending horizontally	Buoy with a square blue flag or blue radar reflectore.	One white light.

Fishing Gear Markings—East Coast of Canada		
Type of gear	**Day signal**	**Night signal**
Drifting fishing gear	At each end and at distances of not more than 2 miles along its length, a buoy with a square green flag.	At each end and at distances of not more than 2 miles along its length, a buoy with a white light.

[1] The direction in which the gear extends may be marked by a buoy moored of each end, showing, as follows:
1. By day—A square white flag or white radar reflector.
2. By night—One white light.

[2] If the net is longer than 1 mile, it will be marked by additional buoys carrying either a square white flag or white relector at intervals of not greater than 1 mile.

[3] If the net is longer than 1 mile, it will be marked by additional buoys displaying a white light at intervals of not greater than 1 mile.

Flag of Canada

Governor-General. The Governor-General appoints a Prime Minister after Parliamentary elections are held. The bicameral Parliament consists of a 105-member Senate, appointed by the Governor-General for 5-year terms, and a directly-elected 308-member House of Commons, serving 5-year terms.

The legal system is based on English common law, except in the province of Quebec, where the legal system is based on French civil law.

The capital is Ottawa.

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
First Monday on or preceeding May 24	Victoria Day
June 24	Quebec Day (Quebec only)
July 1	Canada Day
August 4	Civic Holiday (except Quebec)
First Monday in September	Labor Day
Second Monday in October	Thanksgiving Day
November 11	Remembrance Day
December 25	Christmas Day
December 26	Boxing Day

Note.—Canadian holidays falling on a Saturday or Sunday are observed the following Monday.

The Province of Quebec observes the following local holidays:

Epiphany; Ash Wednesday; Ascension Day; All Saints' Day; and Immaculate Conception Day.

Newfoundland observes the following local holidays:

St. Patrick's Day; St. George's Day; Discovery Day; Orangeman's Day; Annual Regatta Day; and Boxing Day.

Ice

General

One of the main hazards to shipping when approaching the E coast of Canada is the pack ice and the large number of icebergs and growlers carried S by the Labrador Current. In the Gulf of St. Lawrence, ice formation commences in the first half of December and clears in mid-April. The danger from ice increases due to the prevalence of fog, especially in the vicinity of the Grand Banks of Newfounland and the Banks of Nova Scotia.

The Canadian Coast Guard has a limited number of icebreakers available for the escort and support of shipping, although they cannot always be provided when requested.

General requirements include the capability of communicating on the following frequencies: 2237 kHz, 2134 kHz, 2738 kHz, 2182 kHz, 156.8 MHz, and 156.3 MHz.

Experience has shown that non-ice-strengthened ships with an open water speed of about 12 knots often become hopelessly beset in relatively light ice conditions, whereas an adequately powered ice-strengthened ship should be able to make progress through six- or seven-tenths first year ice.

These latter ships are often able to proceed independently without any assistance other than routing advice. The route recommended by the appropriate Ice Operations Officer is based on the latest available information and masters are advised to adjust their course accordingly.

For further information, also see the sections on ice naviga-

tion in Bowditch (Pub. 9), and the ice communications sections in Pub. 117, Radio Navigational Aids and Pub. 102, International Code of Signals.

Superstructure icing may be encountered in the Gulf of St. Lawrence and in the proximity of the Newfoundland and Nova Scotia coasts during winter months.

Ice has been reported to form a thickness of about 10cm in 4 to 12 hours, when freezing air temperatures are combined with sea spray. This combination rapidly produces an unstable condition in smaller vessels, and the danger should be minimized by adjusting course and speed to reduce the amount of spray being accumulated and by chopping the ice as it forms on the superstructure, seeking shelter or, if circumstances permit, steering towards warmer water.

Observations indicate that icing is most frequently encountered W of the 40°W in the vicinity of Newfoundland and up to 250 miles from the Nova Scotia coastline between the months of January and March.

Vessels crossing the North Atlantic Ocean shall avoid, as far as practicable, crossing the Grand Banks of Newfoundland N of 43°N and pass outside regions known or believed to be endangered by ice.

The above precautions are also advisable in the vicinity of the Nova Scotia banks.

International Ice Patrol

In February or March of each year, depending on the iceberg conditions, the International Ice Patrol begins its annual service of guarding the SE, S, and SW limits of the regions of icebergs in the vicinity of the Grand Banks of Newfoundland for the purpose of informing ships of the extent of this dangerous region. Reports of ice in this area are collected from passing ships and from Ice Patrol aircraft. Ice information is broadcast in Ice Patrol Bulletins. See Pub. 117, Radio Navigational Aids and U.S. Notice to Mariners No. 1 of each year.

It should always be borne in mind that all original reported positions of pack ice or bergs may be subject to large observational errors and that they become less reliable as time goes on, owing to the impossibility of forecasting the drift.

In the case of the bergs, the surface current, subsurface current, wind, and the wash of the sea all have their effect on its drift, the current having the most effect, so that a berg is often seen drifting to windward.

The International Ice Patrol Service advises ship masters not to venture into pack ice N of latitude 45°30'N before the middle of April.

Ice Navigation, Routing, and Requests for Icebreaker Assistance

Commencing December 15 each year and until ice in the Gulf of St. Lawrence is no longer likely to hinder shipping, an experienced ship master will be attached to ECAREG CANADA as Ice Operations Officer. During this period, vessels inbound to the Gulf of St. Lawrence should report using the address ECAREG CANADA through any MCTS Center 24 hours prior to their expected entry into Cabot Strait, stating the following:

1. Position.
2. Destination.
3. Whether loaded or in ballast.
4. Ice class, if any.
5. Classification society.

This procedure will facilitate the passing of ice information and a suggested shipping track, as necessary. Ships bound for ports on the S and E coasts of Newfoundland and along the coast of Labrador should also report to ECAREG CANADA for ice information, routing, and escort as necessary. Gulf shipping interests are requested to maintain close contact with the Ice Operations Office so that all routing and escort assistance needed may be provided as circumstances permit.

All radio communications mentioned addressed to ECAREG CANADA and passed through an MCTS Center will be handled free of charge to the ship.

Ships outbound from Canadian ports E of Sept-Iles should report to the Ice Operations Officer ECAREG CANADA through any MCTS Center 24 hours in advance of sailing time, if possible, for ice information, suggested routing, and escort, if deemed necessary.

Contact Information for Ice Navigation, Routing, and Requests for Icebreaker Assistance

Area	Address	Telephone	Facsimile	Telex	Radiogram
The Gulf of St. Lawrence	Fisheries and Oceans Quebec Region Regional Operations Center Ice Quebec 101 Boulevard Champlain Quebec, Quebec G1K 7V7	418-648-7920 418-648-2214	418-648-3614	—	—
Chaleur Bay, New Brunswick, Prince Edward Island, and Nova Scotia	Canadian Coast Guard Operations Center—Maritimes Region Ice Operations Section 10 Hudson Way (Shannon Hill) Dartmouth, Nova Scotia B2Y 3Z8	902-426-5664 902-426-5665	902-426-6334	019-22510	ECAREG CANADA

Contact Information for Ice Navigation, Routing, and Requests for Icebreaker Assistance					
Area	**Address**	**Telephone**	**Facsimile**	**Telex**	**Radiogram**
Newfoundland and Labrador	ECAREG CANADA MCTS Center, St. John's P.O. Box 5667 St. John's, Newfoundland A1C 5X1	709-772-2078 709-772-4580	709-772-5369	016-4530	ECAREG CANADA
The St. Lawrence River W of 66°N	Fisheries and Oceans Quebec Region Regional Operations Center Ice Quebec 101 Boulevard Champlain Quebec, Quebec G1K 7V7	418-648-7920 418-648-2214	418=648-7244	—	Escoumins Traffic Quebec Traffic Montreal Traffic

Ships outbound from Sept-Iles and ports W of Sept-Iles may obtain the latest bulletin pertaining to reported ice conditions, forecast, and recommended routing for the Gulf and River St. Lawrence by calling the Quebec, Les Escoumins, or Montreal MCTS Center on the control frequency of the sector in which the vessel is located. Vessels bound seaward when passing off Sept-Iles, should further contact ECAREG CANADA through any MCTS Center for up-to-date ice information, routing, and icebreaker escort if required.

During the winter navigation season, MCTS Centers broadcast ice advisories and forecasts on a regular schedule as indicated in the MCTS Center listings. Ice forecasts will normally be for 5-day periods when ice is light and of no immediate concern to shipping. Frequency of issue will be increased and forecast periods shortened when direct tactical support to shipping is required. Ice advisories will normally include a summary of existing ice conditions, a forecast of ice conditions for an appropriate period (2 to 5 days), and may include a suggested shipping track. This information is also broadcast in the form of charts by facsimile from stations so equipped.

In the St. Lawrence River W of longitude 66°W to Montreal, vessel movement is under the control of the Vessel Traffic Services (VTS) system. During the winter navigation season, information concerning recommended ice routes, ice conditions, and icebreaker assistance is provided by the Maritime Communications and Traffic Service Centers at Escoumins, Quebec, and Montreal.

Contact information for the above systems can be seen in the table titled **Contact Information for Ice Navigation, Routing, and Requests for Icebreaker Assistance**.

Ice operations support to vessels in the Northern Canada Vessel Traffic Services (NORDREG) Zone, which includes Hudson Strait and Hudson Bay, is provided by the Canadian Coast Guard. Icebreaker assistance, as well as ice information and ice routing, should be requested through NORDREG. Further information on NORDREG can be obtained in **Appendix I—ECAREG/NORDREG Reporting Requirements**.

In Canadian waters, the Canadian Coast Guard publication *Ice Navigation in Canadian Waters* should be consulted.

Ice Navigation in Canadian Waters
http://www.ccg-gcc.gc.ca/ice-gla/pdf/IceNav_e.PDF

Industries

The main industries are transportation equipment, chemicals, processed and unprocessed minerals, food products, wood and paper products, fish products, and petroleum and natural gas.

The main exports are motor vehicles and parts, industrial machinery, aircraft, telecommunications equipment, chemicals, plastics, fertilizers, wood pulp, timber, crude oil, natural gas, aluminum, and electricity. The main export-trading partners are the United States, the United Kingdom, and China.

The main imports are machinery and equipment, motor vehicles and parts, crude oil, chemicals, electricity, and durable consumer goods. The main import-trading partners are the United States, China, and Mexico.

Languages

English and French are both official languages.

Meteorology

Marine weather forecasts are available in English and French from Environment Canada (http://weatheroffice.cg.ca/marine/indes_e.html).

Navigational Information

Enroute Volumes

Pub. 145, Sailing Directions (Enroute) Nova Scoatia and the Saint Lawrence River.

Pub. 146, Sailing Directions (Enroute) Newfoundland, Labrador, and Hudson Bay.

Pub. 154, Sailing Directions (Enroute) British Columbia.

Maritime Claims

The maritime territorial claims of Canada are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.

Continental Shelf	200 miles or the Continental Margin.

* Claims straight baselines. All waters between Canadian islands in the Arctic are claimed as internal waters. Hudson Bay is claimed as historic waters.

Maritime Boundary Disputes

Managed maritime boundary disputes with the United States at the following locations:

1. Dixon Entrance (British Columbia/State of Alaska).
2. Strait of Juan de Fuca (Vancouver Island/State of Washington).
3. Beaufort Sea (Yukon Territory/State of Alaska).
4. Machias Seal Island (44°30'N., 67°06'W.) and North Rock (New Brunswick/State of Maine).

Uncontested dispute with Denmark over the sovreignty of Hans Island (80°49'N., 66°30'W.), located in Kennedy Channel between Ellesmere Island and Greenland.

It has been reported (2008) that Canada, Denmark, Greenland, Norway, Russia, and the United States have agreed to let the United Nations rule on their overlapping territorial claims in the coastal waters of the Arctic Ocean. Coastal states may claim the sea bed beyond the normal 200-mile limit if the sea bed is part of a continental shelf of shallower waters.

Canada, the United States, and other countries dispute the status of the Northwest Passage.

Offshore Drilling

Oil Drilling

Extensive oil and gas exploration and exploitation is underway off the E coast of Canada. Mariners are cautioned that fixed and floating drilling platforms, a floating production storage and offloading unit (FPSO Sea Rose), supply vessels, and shuttle tankers may be encountered underway or at anchor within the safety zone bounded by lines joining the following positions:

a. 46°52'37.90"N, 48°03'06.00"W.
b. 46°47'41.30"N, 47°59'54.62"W.
c. 46°45'46.57"N, 47°59'22.87"W.
d. 46°45'21.15"N, 48°00'48.33"W.
e. 46°52'57.60"N, 48°03'38.55"W.
f. 46°52'07.02"N, 48°04'53.84"W.

Vessels are prohibited from navigating within the safety zone without permission from the Offshore Installation Manager. Vessels are prohibited from navigating within 500m around the FPSO Sea Rose or an offshore drilling unit when on location, unless they are specifically exempted.

All vessels are requested to contact the Mobile Offshore Drilling Unit "GSF Grand Banks" (Global Sante Fe) in advance on DSC channel 70 (MMSI 57692800) or VHF channel 16 for permission from the Offshore Installation Manager if they need to transit through the safety zone established for the White Rose Development Project or navigate within 2 miles of the boundaries of the zone. When within the safety zone, the instructions and advice of the Offshore Installation Manager are to be complied with at all times.

Notices to Mariners and Notices to Shipping broadcast by radio are issued whenever possible to give information on the establishment, or changes in position, of these platforms. Information regarding the latest positions of installations and vessels in the area may be obtained on request from ECAREG Canada.

It should be noted that information on the establishment, or change of position, may be received well after a platform is located in a new position, with the result that mariners may expect to encounter them without necessarily receiving prior information.

Pilotage

General.—Radio messages from ships requiring pilotage shall include the following information:

1. The time in **UTC** that the pilot is required on board.
2. The place the vessel is to boarded.
3. The pilot service to be performed.
4. Whether or not the vessel is granted radio pratique.

Compulsory pilotage areas are located, as follows:

1. New Brunswick—Miramichi, Restigouche, and St. John.
2. Newfoundland—Bay of Exploits (Botwood and Lewisport), Holyrood, Humber Arm, Placentia Bay, St. John's, and Stephenville.
3. Nova Scotia—Cape Breton Sydney Harbor, Bras d'Or Lakes, Chedabucto Bay, and St. Peter's), Halifax, and Pugwash.
4. Prince Edward Island—Charlottetown and the Confederation Bridge.
5. Quebec—St. Lawrence River.

Atlantic Pilotage Authority.—The Atlantic Pilotage Authority, with its office in Halifax, is responsible for pilotage in Canadian waters in and around the provinces of Nova Scotia, Prince Edward Island, Newfoundland, and New Brunswick, including the waters of Chaleur Bay in the province of Quebec, S of Cap d'Espoir (48°25'N, 64°19'W.). All pilot orders for arrival, departure, and moves are placed through the Atlantic Pilotage Authority Dispatch Office (APA DISPATCH), which can be contacted, as follows:

1.	Telephone:	1-877-272-3477 (toll free) 1-902-426-7610 (INMARSAT)
2.	Facsimile:	1-866-774-2477 (toll free) 1-902-426-7610 (INMARSAT)
3.	E-mail:	dispatch@atlanticpilotage.com
4.	Web site:	http://www.atlanticpilotage.com/agents

If direct communication is not possible, pilotage requests can be made through any Canadian Coast Guard radio station, with a clear request to "Please forward to Atlantic Pilotage Authority Dispatch, Halifax." The name of the port where the pilot is required should be clearly identified.

When requesting a pilot, vessels must provide the following information:

1. Port.
2. Vessel name.
3. Call sign.
4. Date of assignment (order date).
5. Type of order (i.e. trip, move, etc.).
6. Draft.
7. Length/breadth/molded draft.
8. Gross registered tons.
9. Air draft (if applicable).
10. Certificate number (if applicable).

11. Agent's name.
12. Requester's name
13. Any special instructions.

For a change to an existing pilotage request, the following information should be given:

1. Port.
2. Call sign.
3. Date of original assignment.
4. Agent's name.
5. Requester's name
6. Information to be changed.

Laurentian Pilotage Authority.—For all Canadian waters in and around the province of Quebec, N of the seaward entrance to St. Lambert Lock, except the waters of Chaleur Bay, S of Cap d'Espoir, the Laurentian Pilotage Authority, with headquarters in Montreal, is responsible.

The master of every vessel inbound in the Gulf of St. Lawrence and destined for a port W of Les Escoumins must request a pilot through an MCTS Center (see Appendix III) or the Laurentian Pilotage Authority, as follows:

1. Facsimile: 514-283-3647
2. E-mail: pilote.mtl@apl.gc.ca

A minimum notice of 24 hours before ETA at the pilot station must be given and a second notice of ETA 12 hours before hand, with final notice 6 hours before ETA. If a ship is arriving from a point W of the Strait of Canso, the Strait of Belle Isle, or Cabot Strait, the master must give first notice 12 hours before ETA, and final notice 6 hours before ETA.

Departing vessels and vessels moving within the harbor should request a pilot 12 hours in advance, with a confirmation sent 4 hours in advance.

When requesting a pilot, vessels must provide the following information:

1. Vessel name.
2. Flag.
3. Call sign.
4. Agent's name.
5. Length/breadth/molded draft.
6. Deepest draft
7. Deadweight tons.
8. Net registered tons.
9. The immediate and final destinations of the vessel within the compulsory pilotage area.

Great Lakes Pilotage Authority.—The Great Lakes Pilotage Authority, with its head office in Cornwall, Ontario, is responsible for pilotage in Churchill, Manitoba, and in all Canadian waters S of the seaward entrance to St. Lambert Lock in the province of Quebec, and in the province of Ontario.

Pollution

The International Convention on Civil Liability for Oil Pollution Damage 1992 (CLC) came into force on May 29, 1999 for Canada. All vessels covered by this convention are now required to carry a certificate showing that a contract of insurance or other security that satisfies the requirements of the 1992 CLC is in force with respect to the vessel. The area of application has now been extended to include voyages to offshore terminals within the Exclusive Economic Zone (EEZ). This means that some vessels previously exempt under the 1969 CLC may now be subject to the requirements for certification under the 1992 CLC. A 1992 CLC certificate is required for all ocean-going vessels carrying, in bulk as cargo, more than 2,000 tons of crude oil, fuel oil, heavy diesel oil, lubricating oil, or any other persistent hydrocarbon mineral oil that enters of leaves a port or offshore terminal within Canadian waters or the Canadian EEZ.

As of April 1995, Canadian Shipping Act amendments require that oil tankers of 150 grt, and all other vessels of 400 grt trading in Canadian waters S of 60°N, enter into an arrangement with a certified response organization.

Such vessels must also carry a declaration attesting to the existence of an arranged response also naming the ship's insurer and persons authorized to implement the vessel's oil pollution emergency plan and its clean up.

Under the amendments, any person or ship found discharging pollutants in Canadian water faces fines of up to $250,000 (Canadian dollars) and or 6 months imprisonment. Individuals found guilty of a marine pollution related offense face fines of up to $1 million (Canadian dollars), and/or 3 years imprisonment.

The *Regulations for the Prevention of Pollution from Dangerous Chemicals* expressly forbids the discharge of oil, oily mixtures, noxious liquids, dry chemicals listed in Schedule 1 of the regulations, sewage or sewage sludge, organotin compounds, or garbage in Canadian waters. Smoke pollution caused by ships is also covered by the regulations. Penalties for contravention of the regulations include fines of up to $1 million (Canadian dollars), and/or 3 years imprisonment. For further information, including mandatory documents, record keeping, inspections, and exceptions, consult the "Regulations by Title" section at the following website:

Canada Department of Justice Home Page
http://laws.justice.gc.ca/en/index.html

All vessels operating in Canadian and adjacent waters are requested to report oil slicks or pollution of any type to the nearest Marine Communications and Traffic Services (MCTS) Center (see Appendix III).

Vessels can also report spills to the nearest Canadian Coast Guard 24/7 regional spill reporting telephone line (toll free), as follows:

1. Central and Arctic Region 1-800-265-0237
2. Maritime Region 1-800-565-1633
3. Newfoundland Region 1-800-563-9089
4. Quebec Region 1-800-363-4735

The report should include the following information:

1. Name of vessel.
2. Location of vessel.
3. Time of incident or sighting.
4. Location of pollution.
5. Extent of pollution and quantity of pollution, if known.
6. Name of source of pollution, including port of registry for a vessel.
7. Any other relevant information.

Regulations

Marine Transport Security and 96-Hour Notification Prior

to Entering Canadian Waters

The *Marine Transportation Security Regulations* came into force on July 1, 2004. These regulations address marine security levels, ship reporting responsibilities, and the responsibilities of the Canadian Government for the provision of information to vessels pertaining to security.

The entire text of the *Canadian Marine Transportation Security Regulations* and the *Marine Transportation Security Act* can be found on the Transport Canada web site.

Transport Canada Home Page
http://www.tc.gc.ca

Application.—The *Canadian Marine Transportation Security Regulations* apply to vessels and marine facilities (ports) in Canada and Canadian ships outside Canada engaged on voyages between a port in one country and a port in another country and that:

1. Are more than 100 tons gross tonnage, other than a towing vessel.
2. Carry more than 12 passengers
3. Are towing vessels engaged in towing a barge astern or alongside or pushing ahead, if the barge is carrying certain dangerous cargoes means [dangerous goods], other than products, substances, or organisms identified in Class 3, 4, 8 or 9 of the schedule to the *Transportation of Dangerous Goods Act, 1992,* that are carried in bulk or in such a quantity as to require an emergency response assistance plan under section 7.1 of the Transportation of Dangerous Goods Regulations.

The regulations do not apply to pleasure craft, fishing vessels, vessels without a crew that are in drydock, dismantled or laid up vessels, or government vessels.

Maritime Security (MARSEC) Levels.—MARSEC levels are based on the International Maritime Organization's International Ship and Port Facility Security (ISPS) Code security levels and describe the levels of threat that necessitate that the master of a vessel, the operator of a marine facility, or a port administration (as defined in the Canadian Regulations) take steps to reduce the likelihood of a marine transportation security incident.

MARSEC Levels are defined in the *Marine Transportation Security Regulations*, as follows:

1. MARSEC Level 1—The level for which minimum security procedures are maintained at all times.
2. MARSEC Level 2—The level for which security procedures additional to those of MARSEC level 1 are maintained for a limited period as a result of heightened risk of a security threat or security incident.
3. MARSEC Level 3—The level for which security procedures additional to those of MARSEC Level 1 and MARSEC Level 2 are maintained for a limited period when a security threat or security incident is probable or imminent, regardless of whether the specific target is identified.

MARSEC Level 1 has been in effect since July 1, 2004. A vessel to which the regulations apply must operate under MARSEC Level 1 at all times unless directed by the Minister of Transport to increase to a higher MARSEC level.

The operator of a vessel shall, before the vessel enters a port or interfaces with a marine facility, ensure that all procedures are taken that are specified in the vessel security plan for compliance with the MARSEC level in effect for the port or marine facility.

Vessel Responsibilities.—Any vessel that is operating at a higher MARSEC level than that in effect in the port or marine facility it is interfacing with, or is about to interface with, shall report their MARSEC level to a Marine Communications and Traffic Services (MCTS) Center of the Canadian Coast Guard. MARSEC Reports shall include the following information:

1. Identification of the vessel (vessel's name and radio call sign).
2. Time and position of the vessel.
3. Destination of the vessel.
4. MARSEC level at which the vessel is operating.

If an MCTS Center advises that there is a change in the MARSEC level affecting any port or other area within Canadian waters and a vessel cannot comply with the written procedures as outlined in the vessel security plan, the vessel must notify an MCTS Center (see Appendix III).

When at anchor or alongside a marine facility, if a vessel receives notice from a Port Administration or a marine facility security officer that the MARSEC Level in the port or marine facility in which the vessel is located or is about to enter or interface with is raised to a higher level, the master of a vessel shall ensure that the vessel complies, without undue delay, before interfacing with the facility and no later than 12 hours after being notified of the higher level, with all procedures specified in the vessel security plan for compliance with that higher MARSEC level.

If the vessel is in a Canadian port, alongside or at an anchorage, it shall ensure that the local Port Authority or the marine facility security officer who issued the notice is advised if the vessel cannot comply with the higher MARSEC level that has been implemented.

If the vessel is a Canadian ship in the waters of a contracting government, the vessel should communicate its MARSEC level information to the relevant maritime authority of that country. If the vessel is a Canadian ship in the waters of a noncontracting government, and the master has to use temporary procedures or upgrade the vessel's MARSEC level to maintain the safety of the vessel, the master shall communicate this information to a Canadian MCTS Center (see Appendix III).

Pre-arrival Information Report (PAIR).—The PAIR submission applies to vessels bound for Canadian waters, as follows:

1. SOLAS vessels of 500 gross tons or more.
2. SOLAS and non-SOLAS vessels carrying 12 passengers or more.
3. Non-SOLAS vessels over 100 gross tons (excluding towing vessels).
4. Non-SOLAS vessels that are a towing vessel engaged in towing a barge astern or alongside or pushing ahead, if the barge is carrying certain dangerous cargo.

The PAIR submission does not apply to vessels operating solely on the Great Lakes or to the portions of a vessel's voyage on the Great Lakes after pre-arrival information has been given prior to its entrance into the St. Lawrence Seaway.

The PAIR should be sent to one of the addresses below:

1. Vessels planning to transit through Canadian territorial waters or enter Canadian waters inbound to a Canadian port

on the W coast shall send a PAIR to the Canadian Coast Guard Regional Marine Information Centre (RMIC) via one of the following methods:

- E-mail: offshore@rmic.gc.ca
- Telex: 21-043-52586 CGTC VAS VCR
- Any Canadian Coast Guard MCTS Center free of charge (see Appendix III)
- Directly to CVTS Offshore by facsimile: (604) 666-8453

2. Vessels planning to transit through Canadian territorial waters or enter Canadian waters inbound to a Canadian port on the E coast, including a Canadian or American port in the Great Lakes, shall send a PAIR to ECAREG Canada via one of the following methods:

St. John's MCTS Center	
Telex	21-016-4530 CCGTC SNF
Facsimile	(709) 772-5369
E-mail	ecaregsnf@innav.gc.ca
Halifax MCTS Center	
Telex	21-019-22510 CCG MRHQ DRT
Facsimile	(902) 426-4483
E-mail	hlxecareg1@innav.gc.ca

3. Vessels planning to transit through Canadian territorial waters or enter Canadian waters inbound to a Canadian port within the Canadian Arctic Zone shall send a PAIR to NORDREG Canada via one of the following methods:

Iqaluit MCTS Center	
Telex	21-063-15529 NORDREG CDA
Facsimile	(867) 979-4264
E-mail	iqanordreg@innav.gc.ca
Note.—The Iqaluit MCTS Center is only operational from mid-June to late November.	
Prescott MCTS Center	
Telex	21-063-15529 NORDREG CDA
Facsimile	(613) 925-4519
E-mail	iqanordreg@innav.gc.ca
Note.—The Prescott MCTS Center is only operational from late November to mid-June.	

All pre-arrival information must be submitted 96 hours in advance, except as follows:

1. If the duration of the segment of the voyage before entering Canadian waters is less than 96 hours but more than 24 hours, the PAIR shall be submitted at least 24 hours before entering Canadian waters.
2. If the duration of the segment of the voyage before entering Canadian waters is less than 24 hours, the PAIR shall be submitted as soon as practicable before entering Canadian waters but no later than the time of departure from the last port of call.

All vessels are required to send their PAIR fully completed. It is the responsibility of the master of the vessel to ensure that all the information provided to Transport Canada is complete and correct. Masters of vessels required to submit a PAIR who fail to submit or submit incomplete or inaccurate information subject their vessel to control actions such as, but not limited to, inspection, detention, redirection, or expulsion from Canadian waters. Vessels can obtain a blank template of the 96-hour PAIR by sending an e-mail to 96@tc.gc.ca.

The vessel's PAIR shall include the following information:

1. Vessel's name.
2. Country of registry.
3. Name of vessel's registered owner.
4. Name of vessel's operator.
5. Name of vessel's classification society.
6. Vessel's international radio call sign.
7. Vessel's International Ship Security Certificate, Canadian Vessel Security Certificate, or Ship Security Compliance Document Number.
8. Vessel's International Maritime Organization Number, if it is a SOLAS ship.
9. Date of issuance, date of expiry, and name of the issuing body of its International Ship Security Certificate, Canadian Vessel Security Certificate, or Ship Security Compliance Document.
10. Confirmation that the vessel has an approved vessel security plan.
11. Vessel's current MARSEC level.
12. A statement of when its last ten declarations of security were completed.
13. Details of any security threats to the vessel during the last ten calls at marine facilities.
14. A statement as to whether the vessel consents to tracking by the Canadian Government.
15. Details of any deficiencies in its security equipment and systems, including the communication systems, and the way in which the master of the vessel intends to rectify them.
16. Name of vessel's agent and contact person and their 24-hour telephone and facsimile numbers, if applicable.
17. Name of vessel's charterer, if applicable.
18. Vessel's position and time at which it reached that position.
19. Vessel's course and speed.
20. Vessel's destination and estimated time of arrival at its destination.
21. Name of a contact person at the marine facility that it will visit and their 24-hour telephone and facsimile numbers.
22. The following information in respect to each of the last ten marine facilities visited:
    a. Receiving facility (company dealt with).
    b. Marine facility visited (pier berthed at).
    c. City and country.
    d. Date and time of arrival.
    e. Date and time of departure.
23. A general description of the cargo, including cargo amount.
24. The presence and description of any dangerous substances or devices on board, if applicable.

If the master has reported pre-arrival information more than 24 hours prior to entering Canadian waters, the master shall ensure that the vessel does not enter Canadian waters unless the

master reports any changes in the information 24 hours prior to entering Canadian waters to the appropriate MCTS Center (see Appendix III).

The vessel security officer shall ensure that all security threats and security incidents are reported and recorded in accordance with the *Marine Transportation Security Regulations*. When underway or at anchor in an uncontrolled anchorage, reports shall be made to an MCTS Center (see Appendix III). When alongside or at anchor in a controlled anchorage, reports shall be made to the Port Administration and appropriate law enforcement. When the vessel is in a Vessel Traffic Services Zone, the vessel shall report to the MCTS Center (see Appendix III).

If the master of a vessel is required to institute temporary procedures in response to a security threat, the master shall ensure, as soon as possible, that a report is made, as follows:

1. If the vessel is in Canadian waters, to the nearest MCTS Center (see Appendix III).
2. If the vessel is a Canadian ship in the waters of a contracting government, to the relevant maritime authority of that government and an MCTS Center (ECAREG Canada on the East Coast or the Regional Marine Information Center (RMIC) on the Canadian West Coast).
3. If the vessel is a Canadian ship in other waters, to an MCTS Center (see Appendix III).

It is recommended that a complete copy of the following documents, including any pages containing endorsement information, be included with the vessel's PAIR:

1. International Ship Security Certificate (ISSC).
2. Interim International Ship Security Certificate (IISSC).
3. Canadian Vessel Security Certificate (CVSC).
4. Interin Canadian Vessel Security Certificate (ICVSC).
5. Ship Security Compliance Document.

MCTS Center Responsibilities.—When the MARSEC level increases from the normal MARSEC Level 1, the MCTS Centers will issue a broadcast informing vessels of the increase to either MARSEC Level 2 or MARSEC Level 3. Once the MARSEC level decreases, the MCTS Centers will issue a broadcast informing vessels of the downgrade in MARSEC levels.

In VTS zones, the MCTS Centers often play a role in regulating vessels at anchor on behalf of port authorities. Therefore MCTS Centers will be involved in informing ships or port authorities about the MARSEC levels at port facilities or of the vessel.

Ship Security Alert System.—If the security of a vessel is under threat or in any way compromised, the master or other competent authority onboard may activate the Ship Security Alert System, a system that transmits an automated message from vessel to shore. This message identifies the vessel and provides position information. When a security alert is received by a Canadian Maritime Rescue Coordination Center, the appropriate shore authorities will be notified.

Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR)

The NIR of the PMoU has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the Paris MoU region.

For further information, see **North Atlantic Ocean—Regulations—Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR).**

Reporting of Marine Occurrences

The Transportation Safety Board (TSB) requires that the person responsible for the ship (e.g. owner, operator, charterer, master, pilot, crew member), in Canadian waters, or a Canadian ship in any waters, report a marine occurrence (accident or incident) as soon as possible and by the quickest means available.

Information is to be reported to the TSB; this can also be accomplished by reporting via a marine radio station, a Marine Communications and Traffic Services Center, a VTS station, a marine radio station operated by the St. Lawrence Seaway Management Corpoeration, or a Canadian harbor radio station.

The occurrence shall also be reported, in writing, within 30 days following the occurrence, by completing form TSB 1808/06-02 (Report of a Marine Occurrence/Hazardous Occurrence Report). The form can be obtained through the TSB or Marine Safety offices or can be downloaded from the TSB web site:

Transportation Safety Board Home Page
http://www.tsb.gc.ca

The completed form should be mailed to the addresses mentioned in the shaded portion of the form. The original of the TSB form is to be forwarded to the appropriate regional office or to the TSB, as follows:

Transportation Safety Board of Canada
200 Promenade du Portage
4th Floor, Place du Centre
Gatineau, Quebec, Canada
K1A 1K8
Telephone: (819) 720-5540
Facsimile: (819) 953-1583

Listening Watch

All vessels in Canadian waters should maintain a continuous listening watch on VHF channel 16, unless in the area of a VTS system, when the watch should be maintained on the appropriate designated frequency. The watch should commence 15 minutes prior to departing the berth.

AMVER Reporting

Vessels proceeding on an offshore voyage of more than 24 hours' duration which will take them outside VHF and MF radio coverage areas are encouraged to participate in the Automated Mutual-assistance Vessel Rescue System (AMVER). Participation is compulsory for all Canadian vessels and all non-Canadian vessels engaged in coastal trading in Canada. Of this group, the following vessels are exempted:

1. Fishing vessels engaged in fishing.
2. Ships operated by the Canadian government on law enforcement duties.
3. Vessels whose voyages will be within the waters of an Arctic Shipping Safety Control Zone, Hudson Bay, James Bay, or Ungava Bay.
4. Vessels in other waters provided their voyages are within VHF or MF radio coverage areas.

Messages should be addressed to "AMVER Vancouver" or "AMVER Halifax." They may be sent through any Canadian

Marine Communications and Traffic Services (MCTS) Center (see Appendix III) which accepts AMVER messages or through a Canadian Coast Guard vessel.

Practices and Procedures for Public Ports

Transport Canada, pursuant to Section 76 of the Canada Marine Act, has instituted practices and procedures to be followed by all ships entering, berthing, departing, maneuvering, or anchoring in the waters of all public ports. These practices and procedures, which have been developed for the purposes of promoting safe and efficient navigation and environmental protection within the limits of public ports, can be accessed through the Internet at the website below:

Practices and Procedures for Public Ports
http://www.tc.gc.ca/eng/programs/ports/practproc-195.htm

Transport Canada Marine Acts and Regulations

Further information on Marine Acts and Regulations issued by Transport Canada can be found at the website below.

Transport Canada Marine Acts and Regulations
http://www.tc.gc.ca/eng/acts-regulations/acts-marine.htm

Chart and Publications Regulations

Extracts from the Canadian regulations are quoted below:

1. These regulations may be cited as the Chart and Nautical Publications Regulations, 1995.

. 6.1 Subject to subsection 6.3, the person-in-charge of the navigation of a ship in waters under Canadian jurisdiction shall use, in respect of each area to be navigated by the ship, the most recent edition of:

(a) the reference catalog i.e., Catalogue of Nautical Charts and Related Publications.

(b) the annual edition of the Notices to Mariners, published by the Department of Fisheries and Oceans.

(c) the following publications, namely:

(i) sailing directions, published by the Canadian Hydrographic Service.

(ii) tide and current tables, published by the Canadian Hydrographic Service.

(iii) lists of lights, buoys, and fog signals, published by the Department of Fisheries and Oceans.

(iv) where the ship is required to be fitted with radio equipment pursuant to any Act of Parliament or of a foreign jurisdiction, the Radio Aids to Marine Navigation, published by the Department of Fisheries and Oceans

(d) the documents and publications listed in the Schedule of Documents and Publications.

6.3 The documents and publications referred to in paragraphs 6.1(c) and (d) may be substituted for similar documents and publications issued by the government of another country, if the information contained in them that is necessary for the safe navigation of a ship in the area in which a ship is to be navigated is as complete, accurate, intelligible, and up-to-date as the information contained in the documents and publications referred to in those provisions.

7. The master of a ship shall ensure that the charts, documents, and publications required by these regulations are, before being used for navigation, correct and up-to-date, based on information that is contained in the Notices to Mariners, Notices to Shipping, or Radio Navigational Warnings.

Schedule of Documents and Publications

1. Ice Navigation in Canadian Waters, published by the Department of Transport, where the ship is making a voyage during which ice may be encountered.

2. Table of Life-Saving Signals, published by the International Maritime Organization and reprinted by the Department of Transport, where the ship is making a foreign voyage, a home-trade voyage, Class I, II, or III, or an inland voyage, Class I.

3. The Merchant Ship Search and Rescue Manual (MERSAR), published by the International Maritime Organization, where the ship is making a foreign voyage or a home-trade voyage, Class I or II.

4. Where the ship is required to be fitted with radio equipment and is making a foreign voyage or a home-trade voyage, Class I or II, the following publications, published by the International Maritime Organization and reprinted by the Department of Transport:

(a) the International Code of Signals

(b) the Standard Marine Navigational Vocabulary

St. Lawrence Seaway

The Seaway Handbook contains the St. Lawrence Seaway Regulations, and other information related to the use of the Seaway. A copy of this publication is to be carried on every vessel in transit through the St. Lawrence Seaway and can be obtained from the St. Lawrence Seaway Management Corporation, as follows:

Mail:	St. Lawrence Seaway Management Corporation 202 Pitt Street Cornwall, Ontario K6J 3P7, Canada
Telephone:	(613) 932-5170
Facsimile:	(613) 932-7268
E-mail:	marketing@seaway.ca publications @seaway.com
Web site:	http://www.greatlakes-seaway.com http://www.grandslacs-voiemaritime.com

Seaway Notices are issued as conditions require and are available upon request to the Canadian Seaway Authority or the U.S. Seaway Development Corporation, which is headquartered in Washington, D.C.

The St. Lawrence Seaway Management Corporation has instituted the mandatory use of Automatic Identification System (AIS) on board most commercial vessels operating in the waters of the St. Lawrence Seaway. For more information, see Seaway Notice No. 1 of 2003 or contact the St. Lawrence Seaway Management Corporation by telephone, facsimile, or in-

ternet, as listed above.

Conservation of Marine Animals

The Federal Department of Fisheries and Oceans ensures the protection and conservation of marine mammals in Canadian waters. Harassing whales changes or interferes with their behavior, forces them away from their habitat at critical times in their annual reproduction and feeding cycles, and may cause them injury.

The Fisheries Act prohibits any form of harassment of cetaceans, including repeated attempts to pursue, disperse, or herd whales and any repeated intentional act of negligence resulting in disruption of their normal behavior. Individuals who contravene the Marine Mammal Regulations are guilty of an offense and liable to a fine not exceeding $500,000 and twenty four (24) months imprisonment (Fisheries Act sec. 78).

The following are general guidelines for dealing with marine mammals:

1. Do not hunt, chase, follow, disperse, drive, herd, or encircle whales.
2. Avoid any sudden changes of course or speed.
3. Avoid heading directly toward a whale.
4. If in an area known to be frequented by whales, be on the lookout to avoid collisions.
5. Travel parallel to whales' direction of travel.
6. The whales may come close to you; if they do, do not chase them and be wary of any individuals that appear to be tame. Keep clear of the flukes.
7. If you are operating a sailing vessel with an auxiliary motor, leave it in idle or turn on the echo sounder to signal your presence.
8. If it is impossible to detour around a whale or group of whales, slow down immediately and wait until you are more than 400m away before resuming speed.

The North Atlantic right whale (Eubalaena glacialis) is the rarest large whale species in the world. Current estimates indicate that only about 300 occur along the E coast of North America. Sightings have been reported from the Gulf of Mexico to Iceland, but most of the population now is distributed between Nova Scotia and Florida. Concentrations of right whales have been documented in the Bay of Fundy and in Roseway Basin (between Browns and Baccaro Banks on the southern Scotian Shelf) from early summer to late autumn.

Right whales can be identified from a distance by the shape of the blow or spout, which is bushy and appears "V" shaped when seen head-on, and can be 5m high. Adult right whales are medium-sized robust whales 14 to 17m long and can weigh up to 100 tons. Calves are 6 to 7m long. Right whales have dark gray or black skin. Their backs are broad and they have no dorsal fin or ridge. On the top of their heads, patches of raised and roughened skin (called callosities) that appear white occur.

Right whales are slow swimmers, seldom moving faster than 3 to 5 knots. They may stay submerged for 15 to 20 minutes when feeding on plankton. Because a right whale or group of right whales frequently spend periods lying at the surface, they are vulnerable to collisions with ships. Collisions with ships are one of the main sources of human-related mortality.

Ships operating in the right whale critical areas in the Bay of Fundy and Roseway Basin should ask all watches to keep a lookout for right whales. During the night and other periods of reduced visibility, vessel operators should use the slowest safe speed to reduce the risks of collisions with right whales.

Despite all precautions, collisions may still occur. Please report all sightings to the appropriate authority. The information you provide is important in monitoring the population and will be held in confidence.

The following seasonal guidelines for Right Whale Critical Areas are in effect from July through November and are provided to assist mariners avoid, disturb, or strike right whales:

1. Grand Manan Basin, Bay of Fundy.—This area, which is important to right whales for feeding and is where mothers bring their calves, is bounded by lines joining the following positions:
   a. 44°45'N, 66°35'W.
   b. 44°45'N, 66°18'W.
   c. 44°30'N, 66°18'W.
   d. 44°30'N, 66°35'W.

   The major threats to right whales in this area are collisions with ships and entanglement in fixed fishing gear.

   Avoid this area if possible. Due to a large portion of this habitat occurring in or near the main shipping channel to Saint John, New Brunswick, this may not be possible.

   If the area cannot be avoided, decrease vessel speed, post a lookout, and steer ship around any right whales.

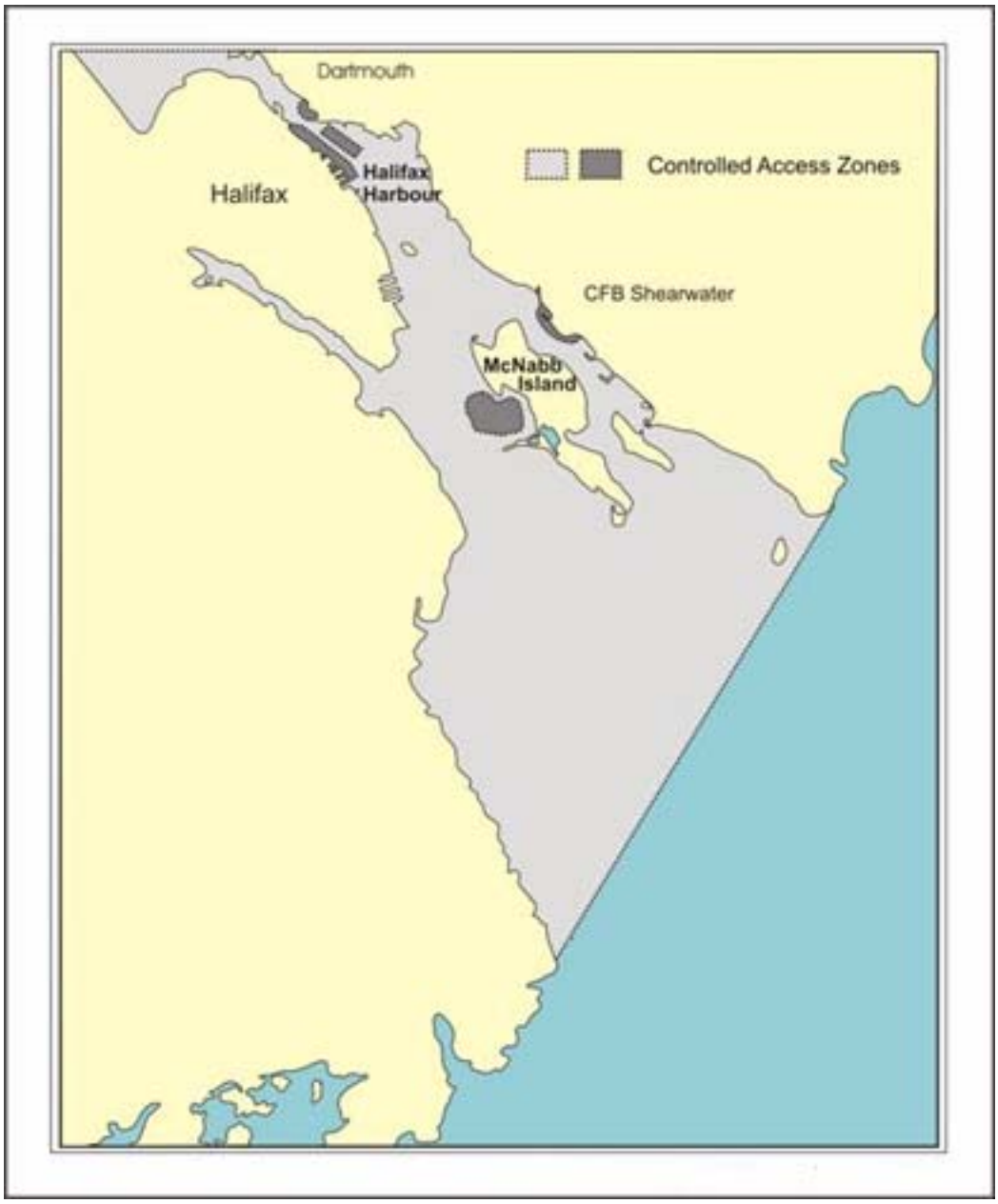
If a right whale is sighted or a collision occurs, please report the position (in latitude and longitude) to the Department of Fisheries and Oceans via any Marine Communications Traffic Services Center (MTSC) or by facsimile (902-426-2698).

2. Roseway Basin, located between Browns and Baccaro Banks on the southern Scotian Shelf.—An IMO-adopted seasonal Area to be Avoided has been established in this area. For further information, see **Areas to be Avoided**.

Marine Protected Areas

Marine Mammal Protection in Marine Protected Areas.—All marine mammal species are protected in Marine Protected Areas. The key threats associated with shipping are acoustic disturbances and vessel collisions. Vessels must adhere to the following provisions:

1. Passage through the area should be avoided, if possible.
2. If passage through the area is required, transit the area at a reduced safe speed and post a lookout to increase the likelihood of sighting and avoiding marine mammals. Be aware that marine mammals often travel in small groups dispersed over an area of several miles.
3. When maneuvering around any marine mammal activity:
   - Avoid any sudden changes in speed or direction.
   - Avoid heading directly towards marine mammals.
   - Travel parallel to marine mammals.
   - If it is not possible to maneuver around marine mammals, slow down and wait until the animals are more than 400m away before resuming speed.
   - If operating a sailing vessel with an auxiliary engine, leave it in idle or use the echo sounder to signal your presence.
4. Comply with all relevant provisions of the *Marine Mammal Regulations* pursuant to the *Fisheries Act*.
5. Report any marine mammal collisions, entaglements, strandings, distressed animals, or any other incidents to the Canadian Coast Guard via any Marine Communications



Fisheries and Ocean Canada

Controlled Access Zones—Chartlet 1

Traffic Services (MCTS) Center (see Appendix III). If possible, sightings of northern bottlenose whales, blue whales, or North Atlantic right whales should also be reported.

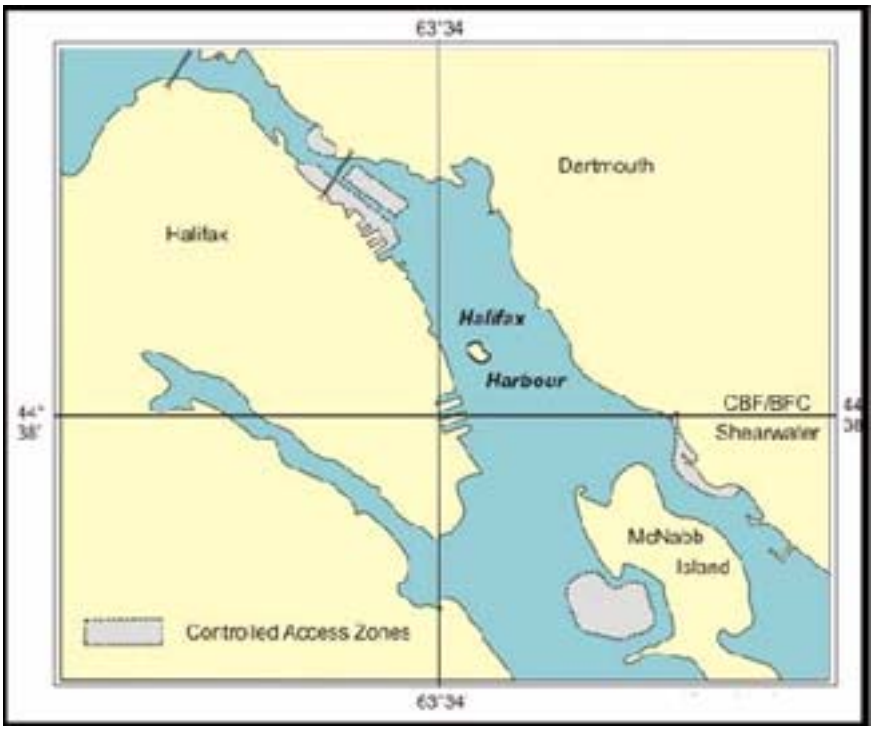
Pollution Prevention in Marine Protected Areas.—Vessels must adhere to the following measures to ensure the protection of the quality of the marine environment:

1. Any discharges, including discharge of ballast water, within the Marine Protected Area is prohibited. Vessels should avoid such discharges within 27 miles of the Marine Protected Area.
2. Report any pollution sightings or incidents to Transport Canada, Marine Safety via any Marine Communications Traffic Services (MCTS) Center (see Appendix III).

Gully Marine Protected Area.—The Gully Marine Protected Area covers The Gully, a deep-canyon ecosystem on the edge of the Scotia Shelf near Sable Island. The area is bounded by lines joining the following positions:

a. 44°13'N, 59°06'W.
b. 43°47'N, 58°35'W.
c. 43°35'N, 58°35'W.
d. 43°35'N, 59°08'W.
e. 43°55'N, 59°08'W.
f. 44°06'N, 59°20'W.

Any activity within or in the vicinity of the Marine Protected



Fisheries and Ocean Canada

Controlled Access Zones—Chartlet 2

Area that disturbs, damages, destroys, or removes any living marine organism or any part of its habitat is prohibited. The depositing, discharging, or dumping of any substance likely to result in harm to the Marine Protected Area is also prohibited.

The exercise of international navigational rights in the Marine Protected Area is permitted year round. Vessels must operate in compliance with the relevant provisions of the *Canada Shipping Act* and the relevant requirements of the International Maritime Organization.

Vessels not in compliance with these requirements are subject to penalties under the *Oceans Act*.

Vessels must report all accidents or incidents to the Canadian Coast Guard via any Marine Communications Traffic Services (MCTS) Center (see Appendix III)within 2 hours of occurence or detection.

Species at Risk Act

The goal of the Species at Risk Act (SARA) is to prevent the extinction of wild species. It sets requirements defining the essential habitats and the measures to protect them. Some marine mammal populations were granted the status of endangered species or of threatened species. To protect these populations, the SARA prohibits the hunting or willful disturbance of these populations in the Gulf of Saint Lawrence, the St. Lawrence River, and the Saguenay River or their affluents.

Many marine mammals populate the waters of the Gulf of Saint Lawrence, the St. Lawrence River, and the Fjord du Saguenay. In some areas, mariners will have proceed with caution in order to avoid colliding with marine mammals or with observation vessels.

Controlled Access Zones

The Minister of National Defense has designated certain areas of Canadian waters as Controlled Access Zones (CAZ). A designated CAZ is in effect for an indeterminate period. The Chief of the Defense Staff sets conditions for access/non-access into a CAZ.

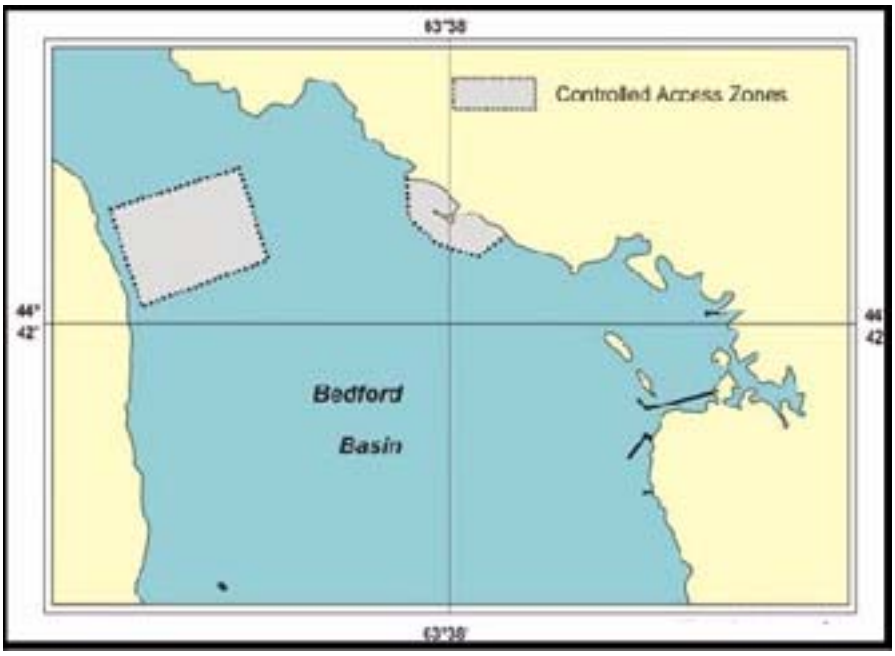
Information on the status of a CAZ is given in the Canadian Annual Notice to Mariners, the Canadian Monthly Notice to Mariners, and through the local Vessel Traffic Management System. The local Queen's Harbourmaster should be contacted if a vessel determines that it will pass through a CAZ.

The only CAZ located in the waters covered by this publication is in Halifax, Nova Scotia and its approaches. The Halifax CAZ is comprised of the water area in Halifax Harbour and the contiguous area of water NW of a line joining the following positions (Chartlet 1):

a. 44°30.19'N, 63°31.19'W.
b. 44°35.55'N, 63°26.61'W.

Designated CAZs within the Halifax Harbour CAZ are, as follows (Chartlet 2):

1. Water area contiguous to Canadian Forces Base Halifax Naval Jetty NA1 bounded by lines joining the following positions (Chartlet 2):
   a. 44°37.98'N, 63°31.50'W.
   b. 44°37.86'N, 63°31.48'W.
   c. 44°37.81'N, 63°31.42'W.
   d. 44°37.73'N, 63°31.55'W.
   e. 44°37.58'N, 63°31.43'W.
   f. 44°37.45'N, 63°31.22'W.
   g. 44°37.38'N, 63°30.93'W.



Fisheries and Ocean Canada

Controlled Access Zones—Chartlet 3

h. 44°37.45'N, 63°30.75'W.

2. Water area contiguous to Canadian Forces Base Halifax Naval Jetties NB, NC, ND, NE, NF, NG, NH, NI, NJ, and NK2 bounded by lines joining the following positions (Chartlet 2):
   a. 44°39.87'N, 63°35.52'W.
   b. 44°39.93'N, 63°35.40'W.
   c. 44°39.78'N, 63°35.12'W.
   d. 44°39.49'N, 63°34.55'W.
   e. 44°39.33'N, 63°34.43'W.
   f. 44°39.20'N, 63°34.64'W.

3. Water area contiguous to Canadian Forces Base Halifax Naval Jetty NL3 bounded by lines joining the following positions (Chartlet 2):
   a. 44°40.22'N, 63°35.27'W.
   b. 44°40.14'N, 63°35.42'W.
   c. 44°40.03'N, 63°35.35'W.
   d. 44°39.96'N, 63°35.19'W.
   e. 44°39.98'N, 63°35.09'W.

4. Water area contiguous to Canadian Forces Base Halifax Naval Jetty NN3 bounded by lines joining the following positions (Chartlet 2):
   a. 44°42.52'N, 63°38.23'W.
   b. 44°42.38'N, 63°38.22'W.
   c. 44°42.29'N, 63°38.08'W.
   d. 44°42.24'N, 63°37.87'W.
   e. 44°42.32'N, 63°37.73'W.

5. Water area in Bedford Basin bounded by lines joining the following positions (Chartlet 3):
   a. 44°42.06'N, 63°39.55'W.
   b. 44°42.23'N, 63°38.92'W.
   c. 44°42.55'N, 63°39.06'W.
   d. 44°42.41'N, 63°39.71'W.

6. Water area SE of MacDonald Bridge bounded by lines joining the following positions (Chartlet 2):
   a. 44°39.92'N, 63°34.91'W.
   b. 44°39.63'N, 63°34.34'W.
   c. 44°39.51'N, 63°34.48'W.
   d. 44°39.77'N, 63°35.05'W.

7. Water area SW of McNabb Island bounded by lines joining the following positions (Chartlet 2):
   a. 44°36.34'N, 63°32.45'W.
   b. 44°36.32'N, 63°32.05'W.
   c. 44°36.37'N, 63°31.85'W.
   d. 44°36.39'N, 63°31.72'W.
   e. 44°36.65'N, 63°31.76'W.
   f. 44°36.74'N, 63°31.92'W.
   g. 44°36.69'N, 63°32.14'W.
   h. 44°36.80'N, 63°32.30'W.
   i. 44°36.73'N, 63°32.66'W.

8. Water area within 200m of a designated vessel underway in the Halifax CAZ.

9. Water area within 500m of a designated vessel that is stationary, including at anchor, in the Halifax CAZ.

Quarantine Reporting Requirements

In the following circumstances only, the person in charge of a vessel shall, by radio, at least 24 hours prior to the vessel's ETA at its port of destination, notify the quarantine officer at the quarantine station for that port of the occurrence, as listed in the table titled **Quarantine Stations**, when one of the following occurs:

1. A member of the crew or a passenger on board the vessel exhibits one or more of these symptoms:
   - Appears obviously ill.
   - Cough with blood.
   - Fever or chills (profuse sweating, unusually flushed or pale skin, shivering).
   - Shortness of breath or difficulty breathing.
   - Repeated coughing.
   - Diarrhea.
   - Severe headache.
   - Recent confusion.
   - Skin rash.
   - Bruising or blleding without injury.
   - Death.
2. The person in charge of the vessel is, during the period of 4 weeks preceding the ETA of the vessel or since the last submission of a declaration of health (as required by Section 16 of the Quarantine Act), whichever is lesser, aware of any instance of illness among the crew or passengers that is suspected to be communicable in nature and may lead to the spread of the disease.
3. A certificate establishing that the vessel has been de-ratted or exempted from de-ratting procedures has expired or is about to expire.

At the same time, the person is charge of a vessel shall, by radio, provide the quarantine officer with the following information:

- Vessel name and nationality.
- The ports called at during the vessel's voyage.
- The nature of the cargo on board the vessel.
- Number of crew members.
- Number of passengers.
- Port of destination of the vessel and the name of the vessel's owner or, if the owner is not in Canada, the name of the vessel's agent in Canada.
- The condition of all persons on board the vessel and details of any death or illness occurring during the voyage.
- Whether the body of any person is being carried on the vessel.
- The ETA of the vessel at its port of destination.
- The date and place of issuance of any de-ratting certificate or de-ratting exemption certificate applicable to the vessel.

When the circumstances outlined in paragraph 1 require vessels bound for any St. Lawrence River or Great Lakes port to notify the quarantine officer, this should preferably be done 48 hours prior to arriving in Quebec City or, if not proceeding past Quebec City, 48 hours prior to arrival at the destination. To ensure prompt and efficient service, messages should be sent through an E coast MCTS Center (see Appendix III).

The person in charge of a vessel who wishes to change the port of destination after receiving instructions from the quarantine officer shall notify the quarantine officer of the change and request new instructions.

Ship Sanitation Certificate Program

Health Canada protects public health by ensuring that international vessels stopping in Canada are free of contamination and infection which could introduce communicable diseases. Vessels engaged in international trade are required to obtain a Ship Sanitation Control Certificate or a Ship Sanitation Control Exemption Certificate every 6 months. For further information, a free copy of the *Ship Sanitation Certificate Program Inspection Policy and Procedure Manual* can be requested by e-mail (phb_bsp@hc-sc.gc.ca).

Inspections can be requested, as follows:

1. Facsimile: 514-283-4317
2. E-mail: giles.chartrand@hc-sc.gc.ca
   janice.valliere@hc-sc.gc.ca

Asian Gypsy Moth High Risk Period

The Asian Gypsy Moth High Risk Period in Canada is in effect from March 1 until October 15. Vessels that have called at high-risk ports in Russia, Japan, China, and Korea from June to December of the previous year will not be permitted to enter Canada unless they possess a Phytosanitary Certificate or are inspected at the entrance to Canadian waters. If signs of Gypsy Moths are found during the inspection, the vessel will be rejected and not allowed to enter Canadian waters during the High Risk Period. For a listing of high risk ports in Asia, see the table titled **Asian Gypsy Moth High Risk Ports**.

Quarantine Stations

Entry Point	Quarantine Station Location	Telephone	Facsimile	Contact Number (24 hours)
British Columbia or Yukon Territories	Vancouver	1-604-666-2499	1-604-666-4947	1-604-317-1720
Nova Scotia, Prince Edward Island, New Brunswick, Newfoundland, or Labrador	Halifax	1-902-873-7656	1-902-873-7657	1-902-873-7659
Quebec or any Canadian port accessed via the St. Louis River	Montreal	1-514-633-3024 1-514-633-3015	1-514-633-3031	1-514-229-2561
Alberta, Saskatchewan, Manitoba, or North West Territories	Calgary	1-403-221-3068	1-403-250-9271	1-403-221-3067

Asian Gypsy Moth High Risk Ports						
Country	**High Risk Ports**					
Russia	Kosmina	Nadhotka	Olga	Plastun	Posyet	Russkiy Island
Japan	Aicha	Akita	Aomori	Chiba	Ehime	Fukui
	Fukuoka	Fukushima	Hachinohe	Hakodate	Hannan	Horoshima
	Hokkaido	Hyogo	Ibaraki	Ishikawa	Kagaw	Kagoshima
	Kanagawa	Kobe	Kochi	Kumamoto	Kyoto	Mie
	Miyagi	Miyazaki	Niigata	Oita	Okayama	Ooita
	Osaka	Otaru	Saga	Sakarta	Shimane	Shimuzu
	Tokushima	tokyo	Tomakomai	Tottori	Toyama	Wakyama
	Yamagata	Yamaguchi				
China	All ports in northern China, including all ports N of Shanghai					
Korea	All ports in Korea					

Minor Waters

The following sheltered waters on the E coast of Canada are specified as minor waters:

1. New Brunswick:
   a. St. John Harbor—Inside the S breakwater and inside a line drawn between the S extremity of the N breakwater and the easternmost point of Partridge Island.
   b. Shediac Harbour—West of a line drawn between Pointe du Chene and Caissie Point.
   c. Miramichi Bay—West of a line drawn from the E shore of Neguac Beach to the E shores of Portage Island and Fox Island and then to the W point of Preston Beach.
   d. Nepisiquit Bay—Inside a line drawn between Alston Point and Cron Point.
   e. Dalhousie Harbour and the Restigouche River—West of a line drawn from Maguacha Point, Quebec to the mouth of the Charlo River.
   f. Shippigan Sound—Inside the breakwater at Shippigan Gully and S of a line drawn between Grasse Point and Pokesudi Point.
   g. Miscou Harbour—East of a line drawn between Herring Point and Mya Point.
   h. Passamoquoddy Bay—As far as Campobello Island and inside a line drawn at the N entrance between East Quoddy Head and Deadman Head.
2. Newfoundland.—Humber Arm E of a line drawn between Frenchman's Head and McIver's Point.
3. Nova Scotia:
   a. Bras d'Or Lake, Great Bras d'Or and all connected waters—Inside a line drawn between Carey Point and North Point, and N of the seaward entrance of St. Peters Canal.
   b. Annapolis Gut and Digby Gut—Inside a line drawn between Prim Point Light and Victoria Beach at the entrance to Digby Gut.
   c. Halifax Harbour—Inside a line drawn between Osborne Head and the E extremity of Chebucto Head.
4. Prince Edward Island:
   a. Charlottetown Harbour—Inside a line drawn between Canseaux Point and Battery Point.
   b. Summerside Harbor—Inside a line drawn between Phelan Point and Indian Head Breakwater.
   c. Cardigan Bay—Inside a line drawn between Panmure Head and Red Point.

Canadian Coast Guard

In addition to their traditional roles, Canadian Coast Guard vessels are utilized for maritime security patrols. The patrols will be conducted in Canadian waters from Les Escoumins to Thunder Bay. Canadian Coast vessels dedicated to maritime security operations will be clearly marked as police vessels. In addition, these vessels may exhibit a flashing blue light, flashing at regular intervals at a rate of 50 to 70 flashes per minute.

Mariners are advised that the police officers on board Canadian Coast Guard Maritime Security vessels have the authority to stop other vessels in appropriate circumstances. Mariners must obey the directions of the police and comply with any orders.

Beam Restrictions—St. Lawrence River between Quebec and Montreal

Much of the navigable channel between Quebec and Montreal is designed for unrestricted two-way navigation of vessels with a maximum beam of 32.5m. In order to provide safe access to newer larger vessels, the Canadian Coast Guard, Transport Canada, and the Laurentian Pilotage Authority are undertaking a study to determine the maximum beam allowed for these vessels to safely navigate the St. Lawrence River between Quebec and Montreal.

The following measures are applicable:

1. **Vessels with a beam greater than 32.5m and up to 40.1m—**The following measures apply:
   a. Vessels with a beam between 32.5m and 40.2m are authorized to transit at any time.
   b. When two vessels whose combined beam is between 65.0m and 72.6m meet, each vessel's individual speed through the water shall not exceed 9 knots where the navigable channel does not exceed 245m.
   c. No two vessels whose combined beam is between 65.0m and 72.6m shall meet at the following locations:
      - Sainte-Croix Bend.
      - Cap Charles Bend.

- Cap-a-la-Roche Bend.
- Belmouth Bend.
- The section between Cap Saint-Michel and Ile aux Vaches.
- The downstream sector of Tetrauville.

d. All overtaking situations involving two vessels whose combined beam is between 65.0m and 72.6m shall not be permitted in the locations mentioned in c above and in areas where the navigable channel does not exceed 245m.

e. The Marine Communications and Traffic Services Officer (MCTSO) shall notify all vessels of the presence of these large vessels and inform the latter of the vessels to which measures will apply when meeting or overtaking.

f. For vessels whose combined beam is greater than 72.6m, the following apply:

- These vessels shall not meet or overtake one another in the bends or straight sections of the navigable channel that do not exceed 245m.
- If a vessel must stop, the vessel proceeding with the current or the tidal current will be the stand-on vessel.
- The MCTSO will give the vessels involved enough advance notice to allow them to make the necessary arrangements to comply with these measures.
- Pilots shall advise the MCTSO of the arrangements made to enable the MCTSO to advise other traffic.

2. **Vessels with a beam greater than 40.1m—**These vessels are not authorized to transit upstream from Quebec.

Search and Rescue

The Canadian Forces coordinate all search and rescue activities in Canada, in Canadian waters, and on the high seas off the Atlantic coasts of Canada and operate a Joint Rescue Coordination Center (JRCC) at Halifax, N.S., for this purpose. Canadian Coast Guard officers are attached to the JRCC to give advice on marine matters and to assist the Canadian Forces Officers in coordinating Search and Rescue operations.

The JRCC and the Maritime Rescue Coordination Subcenters (MRSC), located in Saint John's and Quebec, can be contacted, as follows:

1. JRCC Halifax
   a. Telephone: 1-902-427-8200
   b. Facsimile: 1-902-427-2114
2. MRSC St. John's
   a. Telephone: 1-709-772-5151
   b. Facsimile: 1-709-772-2597
   c. E-mail: mrscsj@sarnet.dnd.ca
3. MRSC Quebec City
   a. Telephone: 1-418-648-3599
   b. Facsimile: 1-418-648-3614
   c. E-mail: mrscqbc@dfo-mpo.gc.ca

The JRCC at Halifax maintains a 24-hour watch (call sign VCS) on 500 kHz, 2182 kHz, and 156.8 MHz.

Canadian government vessels deployed on search and rescue missions may display a square flag having an orange triangle on a yellow background.

A ship-to-air distress signal for use in Canadian waters has been designed in conjunction with the Canadian Forces Search and Rescue Authorities. The signal consists of a cloth painted with fluorescent paint showing a disc and square to represent the ball and flag of the well-known visual distress signal.

The signal should be secured across a hatch or cabin top. In the event of foundering it should be displayed by survival craft. Search and rescue aircraft will recognize this signal as a distress signal and will look for it in the course of a search. Other aircraft on seeing this signal are requested to make a sighting report to the JRCC.

Search Initiator Buoys on tugs of more than 5 gross tons consist of a float free buoy attached to the tug with free running cable. In the event the tug sinks, the buoy will float free and mark the wreck. It is equipped with a radio transmitter capable of sending radio signals on frequencies of 121.5 MHz and 243 MHz. An amber or white light of high intensity attached to the top of the buoy is visible for at least 5 miles and operates for 48 hours. The buoy is radar reflective and painted fluorescent orange.

Coast Guard stations, which are equipped with a lifeboat and are operational 24 hours, are located, as follows:

1. St. John, New Brunswick.
2. Shippegan, New Brunswick.
3. Westport, Nova Scotia.
4. Clarks Harbor, Nova Scotia.
5. Sambro, Nova Scotia.
6. Bickerton, Nova Scotia.
7. Louisbourg, Nova Scotia.
8. Souris, Prince Edward Island.
9. Summerside, Prince Edward Island.
10. Cap-aux-Melles, Quebec.
11. Havre Saint-Pierre, Quebec.
12. Riviere-au-Renard, Quebec.
13. Tadoussac, Quebec.
14. Quebec, Quebec (seasonal).
15. Burin, Newfoundland.
16. Burgeo, Newfoundland.
17. Port-aux-Chois (seasonal).
18. Lark Harbor (seasonal).

There are no Coast Guard stations on the coasts of Labrador or Hudson Bay. In Hudson Strait, a Coast Guard icebreaker on station can be contacted for assistance in an emergency.

Ship Reporting System

EACAREG/NORDREG

The purpose of this section is to describe the ship reporting procedures to be followed by vessels when within or intending to enter the waters of Eastern Canada or Arctic Canada to which the *Arctic Waters Pollution Prevention Act* applies. The two systems are, as follows:

1. **ECAREG.—**The Eastern Canada VTS Zone (ECAREG) consists of Canadian waters on the E coast of Canada S of the parallel of 60°N latitude and in the St. Lawrence River E of the meridian of 66°W longitude, except the waters within Ungava Bay and the waters within the VTS Zones referred to in the *Vessel Traffic Services Zones Regulations*.

2. NORDREG,—The Arctic Canada VTS Zone (NORDREG) includes those waters of Ungava Bay, Hudson Bay, and James Bay S of the parallel of 60°N latitude and the waters to which the *Arctic Waters Pollution Prevention Act* apply. It excludes MacKenzie Bay and Kugmallit Bay S of the

parallel of 70°N latitude and E of the meridian of 139°W longitude.

Further information on both ECAREG and NORDREG can be found in Appendix I.

Signals

Mariners are informed that, if it is necessary for the Department of National Defense to take control of certain Canadian ports, the signals listed in the table titled **Canada—Port Control Signals** will be displayed from a conspicuous position at or near the ports concerned or by an Examination or Traffic Control Vessel.

Canada—Port Control Signals

Meaning	Day signal	Night signal
Entry prohibited	Three red balls, vertically displayed	Three flashing red lights vertically displayed and visible all around the horizon
Entry permitted	—	Three green lights vertically displayed and visible all around the horizon
Movement within a port or anchorage prohibited	Blue flag	One green light between two red lights vertically displayed and visible all around the horizon

Masters of vessels are warned that should they approach the entrance to a port which is being controlled by the Department of National Defense they should not enter a declared Dangerous Area or approach boom defenses without permission, nor should they anchor or stop in a dangerous area or prohibited anchorage unless instructed to do so.

Masters are advised therefore to communicate with any government or port authority vessel found patrolling in the area to ascertain the recommended approach route to the port.

In certain circumstances, it may be necessary to take special measures to examine, or to establish the identity of, vessels desiring to enter ports and to control their entry. This is the function of the Examination Service, whose officers will be afloat in Examination Vessels or Traffic Control Vessels.

These vessels will wear the distinguishing flags of the Examination Service. The examination service special flag consists of a red and white center with a blue border, and the national flag of Canada.

Canadian signal regulations are subject to frequent additions and changes. U.S. Notice of Mariners No. 1 for the current year should be consulted.

Submarine Operating Areas

The Canadian Maritime Command operates submarines on the Atlantic coast, based at Halifax, N.S. Mariners are cautioned that they may encounter these submarines anywhere off the Canadian coasts, particularly in the vicinity of the home port. U.S. Navy submarines are also frequently encountered off the coasts of Canada. Submarines may be surfaced or submerged, operating independently or with surface ships and/or aircraft.

Submarine Operating Areas

Area	Coordinates	Chartlet No.*
Alpha	44°42'N, 63°00'W 44°19'N, 63°00'W 44°19'N, 63°40'W 44°28'N, 63°40'W **Note.—**Does not include Halifax Harbor. Extends to harbor limits only.	1
Bravo	44°28'N, 63°40'W 44°19'N, 63°40'W 44°19'N, 64°00'W 44°28'N, 64°05'W	1
Charlie One	44°28'N, 64°05'W 44°19'N, 64°00'W 44°00'N, 64°00'W 44°00'N, 64°40'W	1
Charlie Two	44°00'N, 64°40'W 44°00'N, 64°00'W 43°30'N, 64°00'W 43°30'N, 65°24'W	1
Charlie Three	43°30'N, 65°00'W 43°30'N, 64°00'W 43°00'N, 64°00'W 43°00'N, 65°00'W	1
Delta One	44°19'N, 64°00'W 44°19'N, 63°45'W 44°10'N, 63°45'W 44°10'N, 64°00'W	1
Delta Two	44°19'N, 63°45'W 44°19'N, 63°30'W 44°10'N, 63°30'W 44°10'N, 63°45'W	1
Delta Three	44°10'N, 63°45'W 44°10'N, 63°30'W 44°00'N, 63°30'W 44°00'N, 63°45'W	1
Delta Four	44°10'N, 64°00'W 44°10'N, 63°45'W 44°00'N, 63°45'W 44°00'N, 64°00'W	1
Echo One	44°59'N, 62°00'W 44°00'N, 62°00'W 44°00'N, 63°00'W 44°42'N, 63°00'W	1

Submarine Operating Areas		
Area	**Coordinates**	**Chartlet No.***
Echo Two	44°19'N, 63°30'W 44°19'N, 63°00'W 44°00'N, 63°00'W 44°00'N, 63°30'W	1
Foxtrot One	45°03'N, 66°46'W 44°48'N, 66°46'W Along the E coast of Grand Manan Island 44°36'N, 66°54'W 44°00'N, 66°54'W 44°00'N, 66°09'W	1
Foxtrot Two	44°00'N, 66°09'W 44°00'N, 66°36'W 43°00'N, 66°36'W 43°00'N, 66°00'W 43°43'N, 66°00'W	1
Foxtrot Three	43°33.0'N, 66°00.0'W 43°00.0'N, 66°00.0'W 43°00.0'N, 65°00.0'W 43°30.0'N, 65°00.0'W 43°30.0'N, 65°24.5'W	1
Foxtrot Four	43°00'N, 66°00'W 43°00'N, 65°00'W 42°00'N, 65°00'W 42°00'N, 66°00'W	1
Foxtrot Five	43°00'N, 66°54'W 43°00'N, 66°00'W 42°00'N, 66°00'W 42°00'N, 66°54'W	1
Golf One	44°00'N, 64°00'W 44°00'N, 63°30'W 43°30'N, 63°30'W 43°30'N, 64°00'W	1
Golf Two	44°00'N, 63°30'W 44°00'N, 63°00'W 43°30'N, 63°00'W 43°30'N, 63°30'W	1
Golf Three	43°30'N, 63°30'W 43°30'N, 63°00'W 43°00'N, 63°00'W 43°00'N, 63°30'W	1
Golf Four	43°30'N, 64°00'W 43°30'N, 63°30'W 43°00'N, 63°30'W 43°00'N, 64°00'W	1
Hotel One	44°00'N, 63°00'W 44°00'N, 62°30'W 43°30'N, 62°30'W 43°30'N, 63°00'W	1

Submarine Operating Areas		
Area	**Coordinates**	**Chartlet No.***
Hotel Two	44°00'N, 62°30'W 44°00'N, 62°00'W 43°30'N, 62°00'W 43°30'N, 62°30'W	1
Hotel Three	43°30'N, 62°30'W 43°30'N, 62°00'W 43°00'N, 62°00'W 43°00'N, 62°30'W	1
Hotel Four	43°30'N, 63°00'W 43°30'N, 62°30'W 43°00'N, 62°30'W 43°00'N, 63°00'W	1
India	45°16'N, 61°00'W 44°00'N, 61°00'W 44°00'N, 62°00'W 44°59'N, 62°00'W	1
Juliet	45°53'N, 60°00'W 44°00'N, 60°00'W 44°00'N, 61°00'W 45°16'N, 61°00'W	1
Lima One	43°00'N, 65°00'W 43°00'N, 64°00'W 42°00'N, 64°00'W 42°00'N, 65°00'W	1
Lima Two	42°00'N, 65°00'W 42°00'N, 64°00'W 41°00'N, 64°00'W 41°00'N, 65°00'W	1
Lima Three	41°00'N, 65°00'W 41°00'N, 64°00'W 40°00'N, 64°00'W 40°00'N, 65°00'W	1
Mike One	43°00'N, 64°00'W 43°00'N, 63°00'W 42°00'N, 63°00'W 42°00'N, 64°00'W	1
Mike Two	42°00'N, 64°00'W 42°00'N, 63°00'W 41°00'N, 63°00'W 41°00'N, 64°00'W	1
Mike Three	41°00'N, 64°00'W 41°00'N, 63°00'W 40°00'N, 63°00'W 40°00'N, 64°00'W	1
November One	43°00'N, 63°00'W 43°00'N, 62°00'W 42°00'N, 62°00'W 42°00'N, 63°00'W	1

Submarine Operating Areas		
Area	**Coordinates**	**Chartlet No.***
November Two	42°00'N, 63°00'W 42°00'N, 62°00'W 41°00'N, 62°00'W 41°00'N, 63°00'W	1
November Three	41°00'N, 63°00'W 41°00'N, 62°00'W 40°00'N, 62°00'W 40°00'N, 63°00'W	1
Papa	Gulf of St. Lawrence bounded by three sets of lines, as follows: **Line 1—** 47°00'00.0"N, 60°25'00.0"W 47°37'17.1"N, 59°18'16.8"W **Line 2—** 51°35'N, 56°00'W 51°54'N, 56°00'W **Line 3—** 49°18'N, 68°00'W 48°41'N, 68°00'W	3
Quebec One	46°56'N, 55°30'W 46°00'N, 55°30'W 45°17'N, 60°00'W 45°53'N, 60°00'W and a line joining 47°00'00.0"N, 60°25'00.0"W to 47°37'17.1"N, 59°18'16.8"W **Note.—**Does not include French territorial waters of Saint-Pierre and Miquelon.	2
Quebec Two	45°17'N, 60°00'W 46°00'N, 55°30'W 45°20'N, 55°30'W 44°45'N, 60°00'W **Note.—**Does not include French territorial waters of Saint-Pierre and Miquelon.	2
Quebec Three	44°45'N, 60°00'W 45°20'N, 55°30'W 44°00'N, 55°30'W 44°00'N, 60°00'W **Note.—**Does not include French territorial waters of Saint-Pierre and Miquelon.	2
Sierra One	48°40'N, 53°05'W 48°40'N, 50°00'W 46°47'N, 50°00'W 46°00'N, 55°30'W 46°56'N, 55°30'W	2

Submarine Operating Areas		
Area	**Coordinates**	**Chartlet No.***
Sierra Two	46°00'N, 55°30'W 46°47'N, 50°00'W 46°10'N, 50°00'W 45°20'N, 55°30'W	2
Sierra Three	45°20'N, 55°30'W 46°10'N, 50°00'W 44°00'N, 50°00'W 44°00'N, 55°30'W	2
Note.—Chartlet No. 1 may be found in the section titled "Firing Areas."		

When a surface ship is operating with a submarine the surface ship will fly the International Code Group "NE2" meaning "Submarines are exercising in this vicinity, you should proceed with great caution."

Vessels should steer so as to give a wide berth to any ship flying this signal. If, from any cause, it is necessary to approach it, vessels should proceed at slow speed until warning is given of the danger zone by VHF bridge-to-bridge radio, flags, or signal lamp. At all times, a good lookout should be kept for submarines whose presence may only be indicated by a periscope or snorkel showing above the water.

A submarine operating either independently or with a surface ship or aircraft, when at a depth too great to show its periscope, may indicate its position by releasing a "smoke candle" or a "flare."

Warnings that submarines are exercising in specified areas may be issued as "CANHYDROLANT" messages on standard navigational warning broadcasts.

Canadian submarines operating on the surface display an all round rotating amber light (group flashing (3) at ten times per minute).

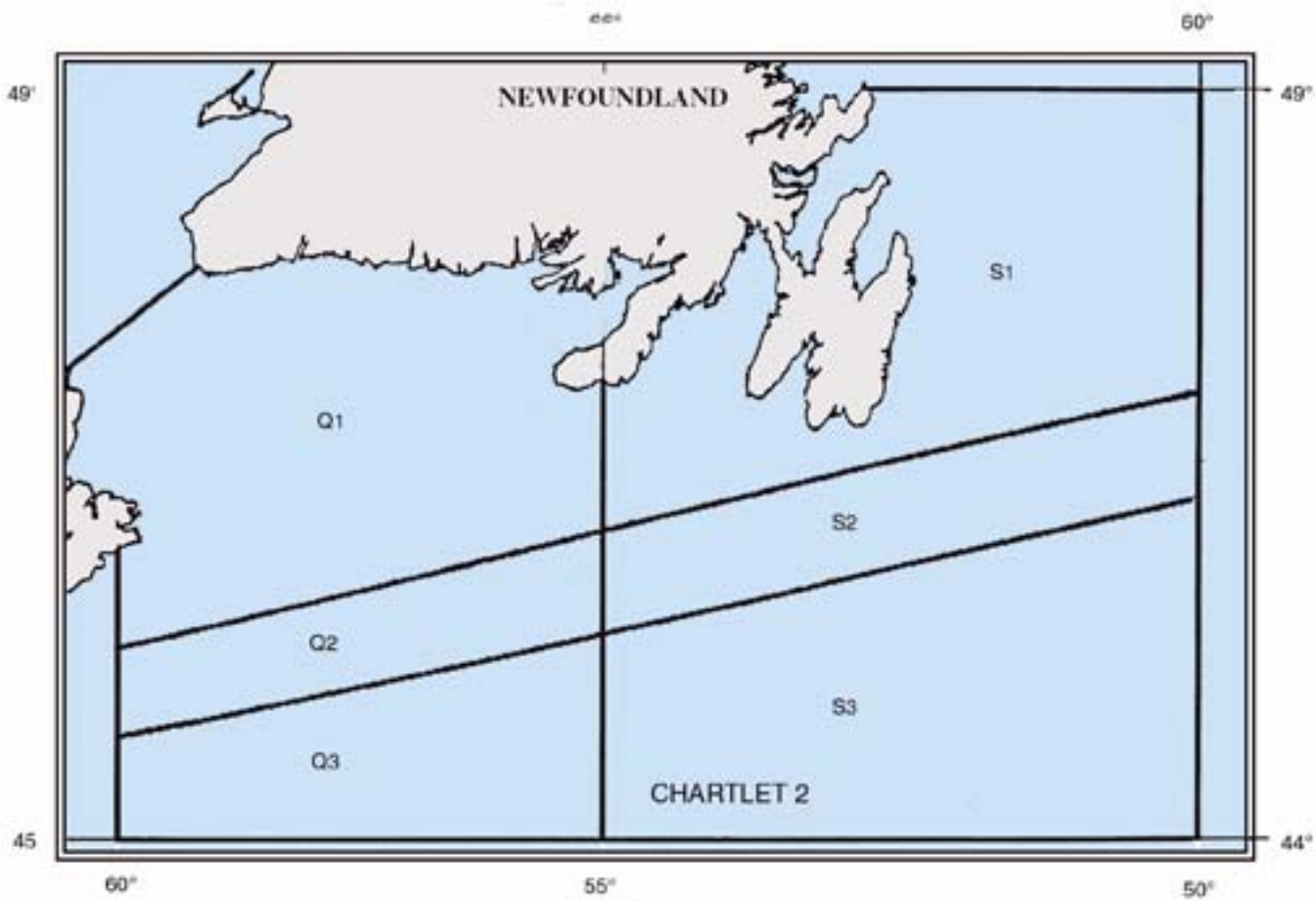
Distress Signals

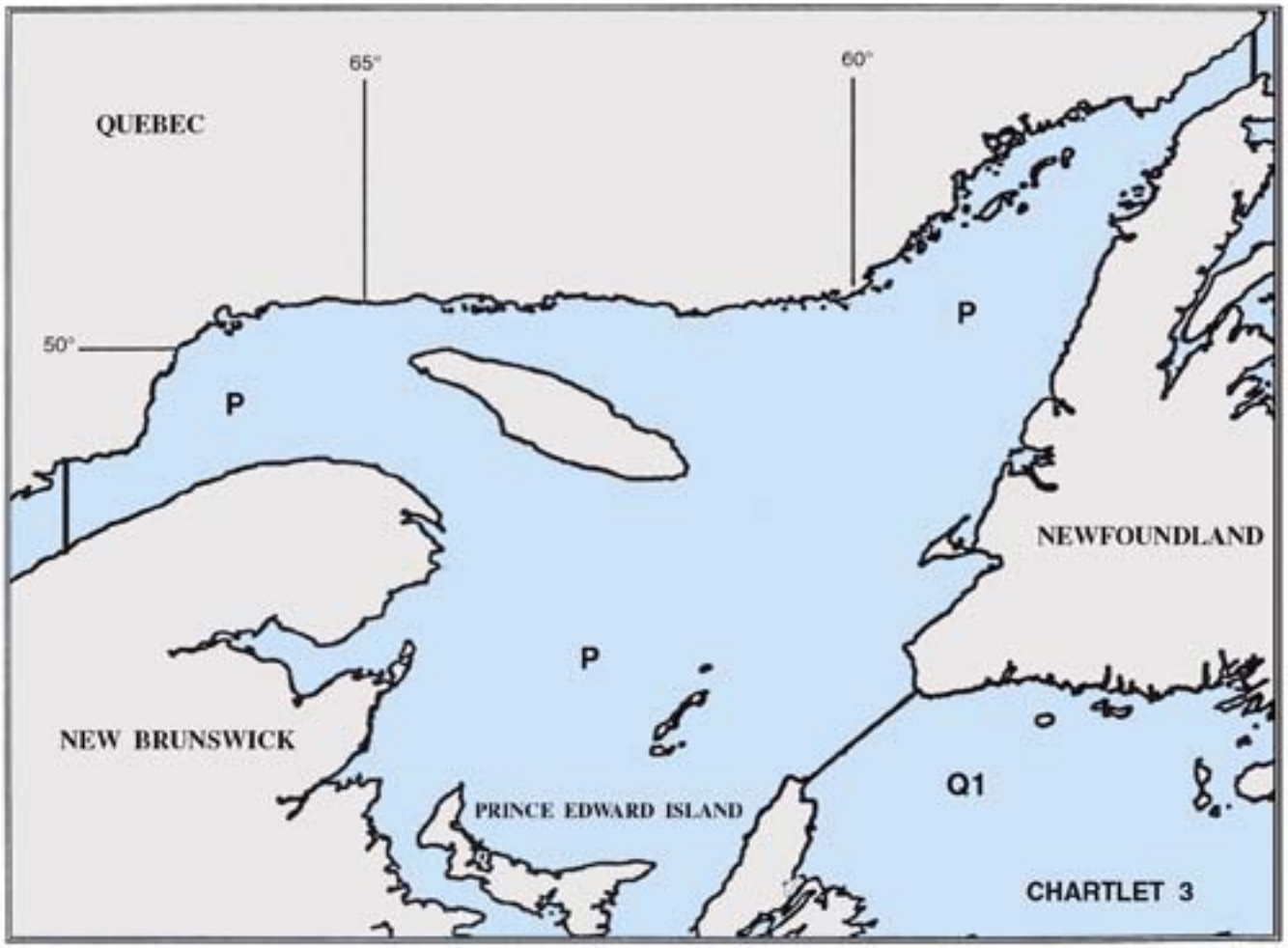
A bottomed submarine which is unable to surface will try to indicate its position by the following methods:

1. Releasing an indicator buoy as soon as the accident occurs.
2. Firing red pyrotechnic signals.
3. Pumping out fuel or lubricating oil.
4. Releasing air bubbles.
5. Personnel or debris floating on the surface.

In any submarine accident, time is the most vital factor affecting the chances of rescue of survivors. At the first indication that a submarine accident has occurred, by sighting the signals described above or actually being in a collision with a submarine, an immediate report should be made by the quickest means possible, to the appropriate authority, as follows:

1. Atlantic Coast—Headquarters of Maritime Forces Atlantic at Halifax, telephone (902) 427-2501.
2. Pacific Coast—Headquarters of Maritime Forces Pacific at Esquimalt, telephone (604) 363-2425.


60°
49°
49°
NEWFOUNDLAND
S1
Q1
S2
Q2
S3
Q3
CHARTLET 2
45
44°
60°
55°
50°


65°
60°
50°
QUEBEC
P
P
P
P
NEWFOUNDLAND
NEW BRUNSWICK
PRINCE EDWARD ISLAND
Q1
CHARTLET 3

3. The nearest Marine Communications and Traffic Services (MCTS) Center (see Appendix III).

The aim of a submarine rescue operation is to save lives and will have to achieve the following:

1. Fixing the exact position of the submarine.
2. To get a ship standing by to pick up survivors, with boasts already lowered, if practicable.
3. To inform the trapped personnel that help is at hand.
4. To get medical assistance to the recovered survivors.
5. To get a recompression chamber to the scene.
6. To get divers, rescue equipment, etc. on the scene to assist the submarine personnel.

There are Canadian Maritime Forces Atlantic and Maritime Forces Pacific organizations, designed to respond to a submarine search and rescue event, which are kept at an immediate readiness for action. It is clear, however, that any ship may at any time find evidence of a submarine disaster and, if it takes prompt and correct action as described above, may be in a position to play a vital role.

There should be no reluctance to make a report of a suspected submarine accident because the observer has been unable to establish beyond any reasonable doubt that a submarine accident has occurred. The Canadian Maritime Forces Atlantic and Maritime Forces Pacific are prepared to react appropriately.

At any time between the accident and the arrival of assisting or rescue forces, conditions in the bottomed submarine may deteriorate to the point where the crew have to escape. Any ship finding an indicator buoy should not leave the position but should remain in the area, well-clear, ready to pick up survivors.

If the escape option is started, escapees will ascend nearly vertically from the bottomed submarine, either individually or in small groups. It is important that sufficient sea room is given to enable them to do so in safety. On arrival at the surface, they may be exhausted or ill, and the presence of an already lowered boat to assist in their recovery is very desirable. Some personnel may require recompression treatment, and it will be the aim of the Commander of either Canadian Maritime Forces Atlantic and Maritime Forces Pacific, as appropriate, to get such personnel to a recompression chamber as soon as possible.

In order that those trapped in the submarine know that help is at hand, Canadian Maritime Forces will drop up to 12 small charges, individually at 5-second intervals, into the sea. There is no objection to the use of small charges for this purpose, but it is vital that they are not dropped to close, since men in the process of making ascents are particularly vulnerable to underwater explosions and may easily receive fatal injuries; a distance of 0.25 mile is considered safe. Vessels can also indicate their presence by the intermittent running of an echo sounder on high power, or by banging on the outer skin of an underwater portion of the ship's hull with a hammer. Such sounds are likely to be heard by the submarine and should be carried out at frequent intervals.

Submarine Indicator Buoys

Canadian Victoria Class submarines are fitted with two indicator buoys, one at each end of the ship, which are tethered to the submarine by a mooring wire and can be released from inside in case of emergency or if for any reason the submarine is unable to surface. The buoys are marked either FORWARD or AFT to indicate which end of the submarine they were released and are all marked with the submarine's identification number.

These buoys do not contain a telephone and there is, therefore, no requirement to approach it close by. Great care should be taken to avoid damage to the buoy and its wire and it should only be touched if it shows signs of sinking. In this case, a boat should endeavor to support the buoy while putting minimal possible strain on the wire. Attaching a life raft to the wire may be the best means of achieving adequate support. There is a great danger of parting the wire and losing the location of the distressed submarine.

The buoys, known as Type 639 Model 060, are made of aluminum and are cylindrical in shape. They are 76.2cm in diameter and 79.8cm high, with a cylindrical projection on the bottom about 16.5cm deep. There is a mooring bolt on the bottom, from which is suspended 1,000m of 1.3cm (circumference) steel mooring wire. Orange and silver reflective tape is wrapped alternately around the upper half of the buoy.

The buoy floats with a freeboard of about 15.2cm. The buoy has an extending vertical whip antenna, which extends to a height of 1.77m above the buoy.

A white light, which flashes twice per second for at least 40 hours, is mounted in the center of the top surface. In darkness and good weather, the visibility of the light without binoculars is 3.2km. A ring, carrying cat's eye reflectors, which will reflect searchlight beams from searching vessels, is fitted around the base of the light.

For identification purposes, the following inscriptions are carried on each buoy around the top surface:

1. In English—"S.O.S. H.M.C.S. (identification number) Finder inform Navy, Coastguard or Police. Do not secure to or touch."
2. In French—"S.O.S. SOUS-MARIN H.M.C.S. (numero d'identification) Prevenir immediament autorites maritimes. Defense de toucher."

The buoys are fitted with an automatic transmitting radio unit which is activated when the indicator buoy is released. The operating characteristics are, as follows:

1. 243.0 MHz—the sound is a high-pitched tone dropping to a low-pitched tone, then a break. This is repeated and these repeating tones will trigger automatic-receiving SAR equipment.
2. GMDSS frequency 406.025 MHz—a 15-digit code is transmitted in digitized format. This code is received by satellite, which will correspond to the specific indicator buoy. The code is identified by the Rescue Coordination Centers.

Ships hearing these signals should immediately report their position, depth of water, and, if possible, an indication of signal strength. It the buoy is sighted in depths of water greater than 1,000m, it is certain to be adrift; this fact should also be reported as soon as possible.

Distress Radio Transmitting Buoys

Canadian Victoria Class submarines carry expendable communications buoys. These buoys, known as Type ECB 680, are silver-colored radio rescue spar buoys. They are about 10cm in diameter and 60cm long and are powered by a lithium cell. Upon reaching the surface, the buoy transmits a SABRE tone radio distress signal on 243.0 MHz for about 8 hours. The buoy is free-floating and is not attached to the submarine.

Submarine Emergency Position Indicating Radiobeacon (SEPIRB)

Each submarine carries two SEPIRB devices. They are designed to be launched from submarines or manually over the side by hand.The device is about 7.6cm in diameter and about 105cm long, with a maximum weight of about 8.2 pounds. Once launced and on the surface, the SEPIRB operates, as follows:

1. The device obtains a GPS fix and begins transmitting a digital message to COSPAS-SARSAT on 406.25 MHz. The message contains its initial GPS fix (a default value until a GPS fix is obtained), elapsed time from activation, and its unique ID number. No further position updates are performed.
2. Six hours after initial activation, the SEPIRB begins transmitting a homing beacon signal on 121.5 MHz to assist in the location of the buoy.

The SEPIRB continues to operate until it is deactivated or it reaches the end of its battery life (a minimum of 48 hours).

Time Zone

Eastern Canada is covered by several time zones. Information is given in the table in Appendix II titled **Eastern Canada—Time Zones**.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) on the E coast of Canada are, as follows:

1. Approaches to the Bay of Fundy. (IMO adopted)
2. Approaches to Halifax. (Government of Canada)
3. Approaches to Chedabucto Bay. (IMO adopted)
4. Gulf and River St. Lawrence. (Government of Canada)
5. St. George's Bay. (Government of Canada)
6. Placentia Bay. (Government of Canada)

During the ice season (beginning of December through mid-April), mariners are cautioned that when navigating in ice, the Traffic Separation Schemes may not necessarily represent the best shipping routes. MCTS Centers (see Appendix III) should be contacted for further information.

U.S. Embassy

The U.S. Embassy is situated at 490 Sussex Drive, Ottawa, Ontario.

The mailing address is P.O. Box 866, Station B, Ottawa, Ottawa K1P 5T1.

U. S. Embassy Canada Home Page
http://canada.usembassy.gov

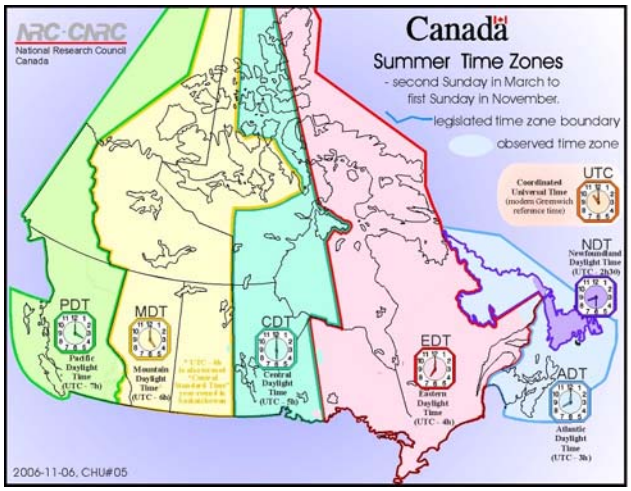
Vessel Traffic Service

Vessel Traffic Services are located, as follows:

1. Bay of Fundy VTS.[1] (44°58'N., 65°52'W.).

Courtesy of National Research Council of Canada

Canada—Standard Time Zones



Courtesy of National Research Council of Canada

Canada—Daylight Savings Time Zones

2. Halifax VTS.[1] (44°38'N., 63°34'W.).
3. Strait of Canso and Eastern Approaches VTS.[1] (45°33'N., 61°20'W.).
4. Northumberland Strait VTS.[1] (45°59'N., 63°14'W.).
5. St. Lawrence River VTS.[1] (49°35'N., 65°51'W.).
6. Port aux Basques VTS.[2] (47°35'N., 59°08'W.).
7. Placentia Bay VTS.[2] (46°57'N., 54°31'W.).
8. St. John's, Newfoundland VTS.[2] (47°34'N., 52°41'W.).
9. Strait of Belle Isle VTS.[2] (51°41'N., 56°06'W.).

[1] For further information, see Pub. 145, Sailing Directions (Enroute) Nova Scotia and the Saint Lawrence.

[2] For further information, see Pub. 146, Sailing Directions (Enroute) Newfoundland, Labrador, and Hudson Bay.

Appendix I—ECAREG/NORDREG Ship Reporting Requirements

The purpose of this appendix is to describe the ship reporting procedures to be followed by vessels when within or intending to enter the waters of Eastern Canada or Arctic Canada to which the *Arctic Waters Pollution Prevention Act* applies.

Responsibilities

There is no intention on the part of the Canadian Coast Guard to attempt to navigate or maneuver ships from a shore station and nothing in this publication overrides the authority of the master for the safe navigation of the ship. Information passed to the master is intended to assist in the safe conduct of the ship.

A Marine Communications and Traffic Services (MCTS) Officer may, under specific circumstances:

1. Grant a clearance to the vessel to enter, leave, or proceed within the VTS Zone.
2. Direct the master, pilot, or person in charge of the deck watch of the vessel to provide any pertinent information in respect of that vessel that may be specified in the direction.
3. Direct the vessel to use any radio frequencies in communications with coast stations or other vessels that may be specified in the direction.
4. Direct the vessel, at the time, between the times or before or after any event that may be specified in the direction to:
   a. Leave a VTS Zone.
   b. Leave or refrain from entering any area within a VTS Zone that may be specified in the direction.
   c. Proceed to or remain at any location within a VTS Zone that may be specified in the direction.

A vessel, as well as the master, pilot, or person in charge of the deck watch of the vessel, shall comply with a direction given to it or them by the MCTS Officer. Notwithstanding, the master, pilot, or person in charge of the deck watch of the vessel may take any action that may be required to ensure the safety of life, the ship, or any other ship.

The master of a ship shall ensure that before the ship enters a VTS Zone the ship's radio equipment is capable of receiving and transmitting radio communications on the appropriate VTS sector frequency.

Traffic Clearance

A Traffic Clearance is an authorization for a ship to proceed subject to such conditions as may be included in the authorization. The Traffic Clearance is predicated upon ship report information and known waterway/traffic conditions. A traffic clearance does not eliminate the need for other authorizations required by legislation or by-laws.

Should any factor upon which the clearance is predicated alter to the detriment of safe navigation, the clearance may be delayed or other conditions may be attached to the clearance.

A traffic clearance is required prior to:

1. Entering a VTS Zone.
2. Commencing a departure maneuver.
3. Commencing a maneuver that may be detrimental to safe navigation.
4. Proceeding after being stranded, stopped due to breakdown of main propulsion machinery or steering gear, or having been involved in a collision.

Communications

Radiotelephone procedures used in communicating with an MCTS Center are those specified by the International Telecommunications Union in the *Manual for Use by the Maritime Mobile and Maritime Mobile Satellite Services.*

A continuous listening watch shall be maintained on the appropriate VTS sector frequency on radio equipment located:

1. At any place on board the ship, where the ship is at anchor or moored to a buoy.
2. In the vicinity of the ship's conning space, where the ship is underway.

The continuous listening watch may be suspended if an MCTS Officer directs the ship to communicate with coast stations and/or other ship stations on a different VHF radio frequency.

All times given in local VTS Zone reports should be in local time and in accordance with the 24-hour clock system.

Navigation safety calls on the designated VTS sector frequencies should be kept to the minimum consistent with the safety requirement of the situation.

Communication Difficulties.—Where a ship, for any reason other than shipboard radio equipment failure, is unable to obtain the required Traffic Clearance or after receiving a Traffic Clearance, is unable to maintain direct communication with the appropriate MCTS Center, the master may nevertheless proceed along the route, but shall take all reasonable measures to communicate with the appropriate MCTS Center as soon as possible and obtain the specified clearance.

Shipboard Radio Equipment Malfunction.—In the event of a shipboard radio equipment failure where the ship is unable to obtain the required Traffic Clearance or, after receiving a Traffic Clearance, is unable to maintain direct communication with the appropriate MCTS Center, the vessel shall:

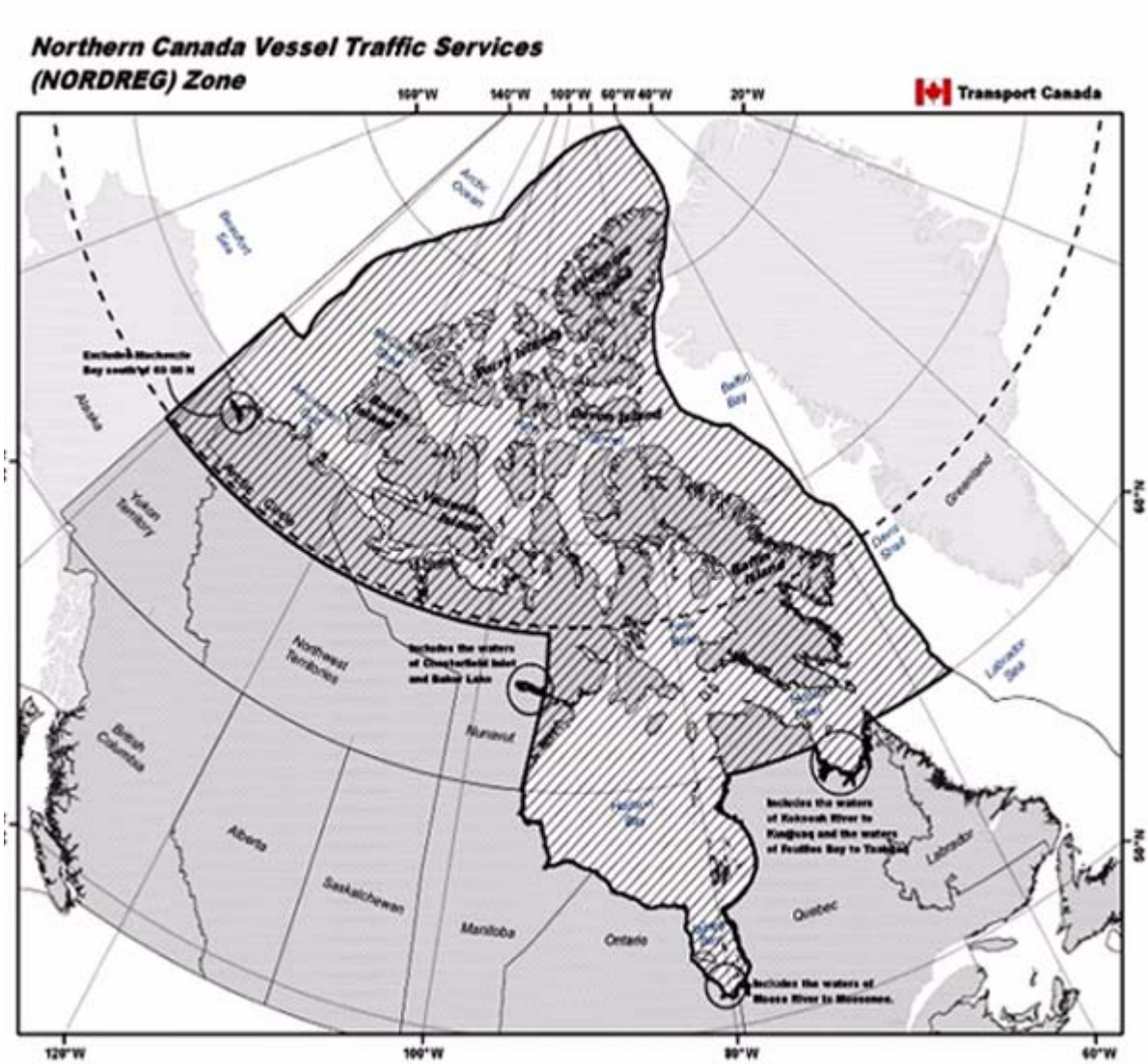
1. If it is in a port where repairs can be made, remain in the port until the vessel is able to establish communications in accordance with the *Canada Shipping Act 2001, Part 5, Section 6(a).*
2. If it is not in a port where repairs can be made, proceed to the nearest reasonably safe port or anchorage on its route and remain their until the vessel is able to establish communications in accordance with the *Canada Shipping Act 2001, Part 5, Section 6(b).*

Zone Descriptions

Eastern Canada.—The Eastern Canada VTS Zone (ECAREG) consists of Canadian waters on the E coast of Canada S of the parallel of 60°N latitude and in the St. Lawrence River E of the meridian of 66°W longitude, except the waters within Ungava Bay and the waters within the VTS Zones referred to in the *Vessel Traffic Services Zones Regulations*.

Northern Canada.—The Northern Canada VTS Zone (NORDREG) consists of:

1. The Shipping Safety Control Zones prescribed by the *Shipping Safety Control Zones Order.* cover Canada's N waters within the area enclosed by the parallel of 60°N, the meridian of 141°W, and the outer limit of the Exclusive Economic Zone; however, where the boundary between Canada and Greenland is less than 200 nautical miles from the baseline of the territorial sea of Canada, the international



Courtesy of Transport Canada

Northern Canada Vessel Traffic Services Zone (NORDREG) Zone

boundary shall be substituted for that outer limit.

2. The waters of Ungava Bay, Hudson Bay, and Kugmallit Bay that are not in a Shipping Safety Control Zone.
3. The waters of James Bay.
4. The waters of the Koksoak River from Ungava Bay to Kuujjuaq.
5. The waters of Feuilles Bay from Ungava Bay to Tasiujaq.
6. The waters of Chesterfield Inlet that are not within a Shipping Safety Control Zone and the waters of Baker Lake.
7. The waters of the Moose River from James Bay to Moosonee.

Local Zones.—East Coast VTS Local Zones have been established for traffic to St. John's, Placentia Bay, Port aux Basques, the Strait of Belle Isle, the Strait of Canso, Halifax, Northumberland Strait, the Bay of Fundy, and St. Lawrence Waterway. Further information can be found in Pub. 145, Sailing Directions (Enroute) Nova Scotia and the St. Lawrence River or Pub. 146, Sailing Directions (Enroute) Newfoundland, Labrador, and Hudson Bay, as appropriate.

Zone Application

Eastern Canada VTS Zone (ECAREG).—With respect to ECAREG, in which participation is mandatory, the *Eastern Canada Vessel Traffic Services Zone Regulations* apply in respect of:

1. Every ship of 500 gross tons or more.
2. Every ship that is engaged in towing or pushing a vessel, where the combined tonnage of that ship and the vessel being towed or pushed amounts to 500 gross tons or more.
3. Every ship carrying a pollutant or dangerous goods, or engaged in towing or pushing a vessel carrying a pollutant or

dangerous goods as prescribed in the following:

a. International Maritime Dangerous Goods (IMDG) Code.

b. Regulations for the Prevention of Pollution from Ships and Dangerous Chemicals.

Northern Canada VTS Zone (NORDREG).—With respect to the Northern Canada VTS Zone (NORDREG), in which participation is mandatory, the *Northern Canada Vessel Traffic Services Zone Regulations* apply to the following classes of vessels:

1. Vessels of 300 gross tons and over.
2. Vessels engaged in towing or pushing another vessel, if the combined gross tonnage of the vessel and the vessel being towed is 500 gross tons and over.
3. Vessels carrying, as cargo, pollutant or dangerous cargo, or are engaged in towing or pushing a vessel that is carrying, as cargo, pollutant or dangerous cargo.

Local VTS Zones.—With respect to the VTS Zones specified in the *Vessel Traffic Services Zones Regulations,* these regulations apply in respect of:

1. Every ship 20m or more in length.
2. Every ship engaged in towing or pushing any vessel or object, other than fishing gear, where:

a. The combined length of the ship and any vessel or object towed or pushed by the ship is 45m or more.

b. The length of the vessel or object being towed or pushed by the ship is 20m or more in length.

With respect to the VTS Zones specified in the *Vessel Traffic Services Zones Regulations,* these regulations do not apply in respect of:

1. A ship engaged in towing or pushing any vessel or object within a log booming ground.
2. A pleasure yacht that is less than 30m in length.
3. A fishing vessel that is less than 24m in length and not more than 150 gross tons.

Reporting Requirements

Pre-arrival Information Report (PAIR).—The Canadian Maritime Transportation Security Regulations require a Pre-arrival Information Report (PAIR) to be filed prior to entry into Canadian waters. Message format and contact information can be found in Regulations—Pre-arrival Reporting Information (PAIR).

Change in information.—A report shall be made whenever a significant change occurs in the information previously provided in any report made pursuant to the *Eastern Canada Vessel Traffic Services Zone Regulations* or the *Vessel Traffic Services Zones Regulations* except where the report was made when departing from a VTS Zone.

Non-routine reports.—Pursuant to the *Eastern Canada Vessel Traffic Services Zone Regulations* or the *Vessel Traffic Services Zones Regulations,* a report indicating the vessel's name, position, and a description of the incident shall be made prior to the vessel proceeding, as soon as the master becomes aware of any of the following conditions:

1. The occurrence on board the ship of any fire.
2. The involvement of the ship in a collision, grounding, or striking.
3. Any defect in the ship's hull, main propulsion systems, steering systems, radars, compasses, radio equipment, anchors, or cables.
4. Any discharge or probable discharge of a pollutant from the ship into the water.
5. Another ship in apparent difficulty.
6. Any obstruction to navigation.
7. Any aid to navigation that is functioning improperly, damaged, out of position, or missing.
8. The presence of any pollutant in the water.
9. The presence of a ship that may impede the movement of other ships.
10. Any ice and weather conditions that are detrimental to safe navigation.

Note.—Items 6, 7, and 8 are not required if the information has been previously promulgated by a Notice to Shipping.

Mariners are encouraged to provide, on a voluntary basis, any information pertaining to charts and publications which may not be on board so that arrangements can be made to embark the necessary items.

ECAREG Information Requirements

ECAREG Zone Reports shall be communicated either directly to ECAREG or to the nearest Canadian Coast Guard MCTS Center. All times given in ECAREG Zone Reports shall be in Coordinated Universal Time (UTC).

Depending upon the reporting requirements, the following information may be required to be reported:

1. The name of the ship.
2. The radio call sign of the ship.
3. The name of the master of the ship.
4. The position of the ship.
5. The time the ship arrived at the position.
6. The course of the ship, if any.
7. The speed of the ship, if any.
8. The prevailing weather conditions (including ice, if applicable).
9. The estimated time that the ship will enter the Eastern Canada VTS Zone.
10. The estimated time the ship will depart the berth.
11. The destination of the ship.
12. The ETA of the ship at the destination.
13. The route the ship intends to take through the Eastern Canada VTS Zone to arrive at the destination.
14. The name of the last port of call of the ship.
15. The draft of the ship.
16. Any dangerous cargo, listed by class, or pollutant, that is carried on board the ship or vessel being towed or pushed by the ship.
17. Revoked.
18. Any defect in the ship's hull, main propulsion machinery, steering system, radars, compasses, radio equipment, anchors or cables.
19. Any discharge, or threat of discharge, of a pollutant from the ship into the water, and any damage to the ship that may result in the discharge of a pollutant from the ship into the water.
20. The name of the Canadian or United States agent of the ship.
21. The date of expiration of a certificate referred to in Article VII of the International Convention on Civil Liability for Oil Pollution Damage, 1969/1992; the International Oil Pollution Prevention Certificate; the International Pollution Prevention Certificate for the Carriage of Noxious Liquid

Substances in Bulk; the Certificate of Fitness; the Certificate of Compliance, if any issued to the ship.

The date of expiration of the following items are also requested, if issued to the ship:

a. ISM Safety Management Certificate.

b. ISM Document of Compliance.

c. International Convention on Civil Liability for Bunker Oil Pollution Damage, 2001 Certificate (known as the Bunkers Convention Certificate).

Search and Rescue authorities have requested that ships entering Canadian waters for the first time answer the following question; this information is only required to be supplied once and updated when the situation changes.

Is your vessel EPIRB equipped? If not, please supply the following information:

1. Number of crew and passengers.
2. Number of lifeboats and life rafts plus make and capacity.
3. Color of hull and superstructure.
4. Distinctive features.

ECAREG Zone Reports

Prior to Entering the Zone.—A report containing all the required information listed under **ECAREG Information Requirements**, except Item 10, shall be made 24 hours prior to entering the zone, or as soon as practicable where the estimated time of arrival of the ship at the zone is less than 24 hours after the time the ship departed from the last port of call.

This report is not required where:

1. The ship is on a voyage between two ports within the zone, and
2. The ship is entering the zone directly from the Arctic Canada Traffic Zone and is in possession of a valid NORDREG Clearance.

Entering at a Zone Boundary.—A report consisting of Items 1, 2, 4, 8, and 9 from the information listed under **ECAREG Information Requirements** shall be made immediately before the ship crosses the Zone Boundary when entering the VTS Zone.

This report is not required when entering directly from a Local VTS Zone.

Arrival at a Berth.—A report consisting of Items 1 and 2 from the information listed under **ECAREG Information Requirements**, as well as the port of arrival and the time of arrival, shall be made on arrival of the ship at a berth.

Departing a Berth.—A report containing all the required information listed under **ECAREG Information Requirements**, except Item 9, shall be made 2 hours before a ship departs a berth.

A traffic clearance to depart a berth is valid for 1 hour from estimated time of departure. Where a traffic clearance to depart a berth has expired because of a revised time of departure, a new traffic clearance is required. In this case, the report need only contain the ship's name, call sign, position, and revised time of departure

This report is not required where the ship is proceeding to another berth in the same port.

Exiting the Zone.—A report consisting of Items 1, 2, 4, and 8 from the information listed under **ECAREG Information Requirements** shall be made immediately before the ship crosses the seaward boundary of the VTS Zone.

In a case where exiting a VTS Zone coincides with entering a Local VTS Zone, this report is not required. The Local VTS Zone reporting requirements procedures shall be followed.

NORDREG Zone Reports

NORDREG Reports shall be addressed to NORDREG CANADA and communicated either directly to NORDREG CANADA or to the nearest Canadian Coast Guard MCTS Center (see Appendix III). The master of the ship shall ensure that these reports are made in accordance with the stated requirements.

Every report shall begin with the term NORDREG and be followed by whichever of the following two letters corresponds to the report:

1. SP—Sailing Plan Report.
2. PR—Position Report.
3. FR—Final Report.
4. DR—Deviation Report.

Sailing Plan (SP) reports shall be sent, as follows:

1. *Prior to Entering the NORDREG Zone.*—A Sailing Plan report shall be provided 24 hours prior to entering the NORDREG Zone or as soon as possible after leaving a port that is less than 24 hours from the NORDREG Zone. This ensures that vessels are not delayed in obtaining a clearance from the MCTS Center and enables the MCTS Center to assess current conditions and prepare relevant safety information for the vessel.

Vessels must obtain a clearance from the MCTS Center before entering the NORDREG Zone.

The information required for this report is given in the column labeled SP1 in the tabled titled **NORDREG—Message Formats.**

2. *Departing a Berth or Anchorage*.—A Sailing Plan report shall be provided at least 1 hour but not more than 2 hours prior to departing from a berth within the NORDREG Zone, unless the vessel is moving to another berth in the same port.

The information required for this report is given in the column labeled SP2 in the tabled titled **NORDREG—Message Formats**.

3. *Getting Underway After an Incident.*—A Sailing Plan report shall be provided immediately before a vessel gets underway within the NORDREG Zone if the vessel has been stranded, has stopped as a result of a breakdown in the main propulsion systems or steering systems, or has been involved in a collision.

The information required for this report is given in the column labeled SP3 in the tabled titled **NORDREG—Message Formats**.

Position Reports (PR) shall be sent, as follows:

1. *Entering at the NORDREG Zone boundary.*—A Position Report shall be provided immediately after a vessel enters the NORDREG Zone.

The information required for this report is given in the column labeled PR1 in the tabled titled **NORDREG—Message Formats**.

2. *Daily Report*.—A Position Report shall be provided daily at 1600 UTC unless the vessel is transmitting LRIT information.

The information required for this report is given in the col-

umn labeled PR2 in the tabled titled **NORDREG—Message Formats**.

3. *Other situations.*—A Position Report shall be provided as soon as feasible after a vessel's master becomes aware of any of the following:

a. Another vessel in apparent difficulty.

b. Any obstruction to navigation.

c. Any aid to navigation that is not functioning properly or is damaged, out of position, or missing.

d. Any ice or weather conditions that are hazardous to safe navigation.

e. Any pollutant in the water.

The information required for this report is given in the column labeled PR3 in the tabled titled **NORDREG—Message Formats**.

Final Reports (FR) shall be sent, as follows:

1. When the vessel arrives at a berth in the NORDREG Zone.

2. Immediately before a vessel exits the NORDREG Zone.

Deviation Reports (DR) shall be sent, as follows:

1. When a vessel's position varies significantly from the position that was expected based on the SP.

2. When a vessel's intended voyage changes from the SP.

NORDREG—Message Formats

Identifier	Content	SP1	SP2	SP3	PR1	PR2	PR3	FR	DR
A	Vessel name, flag, call sign (if applicable), IMO number (if applicable), and MMSI number (if applicable).	X	X	X	X	X	X	X	X
B	Date and time (UTC)—date and time of report (6 digits followed by a Z (day of month is 2 digits; hour and minutes is 4 digits))	X	X	X	X	X	X		X
C	Vessel position by latitude and longitude—latitude is a 4-digit group in degrees and minutes with N or S; longitude is a 5-digit group in degrees and minutes W	X[1]	X[1]	X[1]	X[1]	X[1]	X[1]		X[1]
D	Vessel position by geographical place name. If the vessel is not at a known place, use the name of a known place followed by the vessel's true bearing (a 3-digit group) and distance in nautical miles from that place.								
E	Course—true heading (a 3-digit group)	X			X	X	X		O
F	Speed in knots (a 2-digit group)	X			X	X	X		O
G	Port of departure (name of last port of call)	X							O
H	Date/time/position of entry into the NORDREG Zone or departure from a berth within the NORDREG Zone (date and time as expressed in B; position as expressed in C or D)	X	X						O
I	Destination and ETA (as expressed in B)	X	X	X					O
K	Date/time/position of departure from the NORDREG Zone or arrival at a berth within the NORDREG Zone (date and time as expressed in B; position as expressed in C or D)							X	O
L	Vessel's intended route (a brief description of the intended route through the NORDREG Zone)	X	X	X					O
O	Draft in meters and centimeters (a 4-digit group)	X[2]	X[3]	X[3]					O
P	Cargo—A brief description of the vessel's cargo and the cargo of any vessel being towed or pushed. The description must include: 1. The class and quantity of all dangerous cargo. 2. The technical name and quantity of a pollutants.	X	X[3]	X[3]					O

NORDREG—Message Formats									
Identifier	**Content**	**SP1**	**SP2**	**SP3**	**PR1**	**PR2**	**PR3**	**FR**	**DR**
Q	Defects, damages, and deficiencies, as well as circumstances adversely affecting the vessel's normal navigation (brief details)	X[2]	X[3]	X[3]					O
S	Weather and ice (brief description of prevailing weather and ice conditions)	X	X[3]	X[3]	X	X	X		O
T	Name and contact information, as follows: 1. In the case of a Canadian vessel—the vessel's authorized representative. 2. In the case of a foreign vessel—the vessel's Canadian or American agent or owner. 3. In the case of a pleasure craft that is not a Canadian vessel—the pleasure craft's owner.	X[2]	X[3]	X[3]					O
W	Persons on board (state number of persons on board)	X	X[3]	X[3]					O
X	Additional information	X[4]	X[3, 4]	X[3, 4]			X[5]		

KEY	
X	Required information.
X[1]	Either format may be used.
X[2]	This information is not required for vessels entering directly from the ECAREG Zone.
X[3]	Not required if the corresponding information has not changed since the previous Sailing Plan report.
X[4]	The following details should be included: 1. The total amount of oil on board that is for use as fuel or carried as cargo, expressed as cubic meters. 2. If the vessel's owner or master holds an Arctic Pollution Prevention Certificate in respect of the vessel, give the certificate's expiration date and the name of the issuing authority. 3. The vessel's ice class, if applicable, and the name of the classification society that assigned the ice class. 4. If the vessel is getting underway after having been stranded, stopped as a result of a breakdown in the main propulsion or steering system, or involved in a collision, give a brief description of the applicable incident.
X[5]	A brief description if any of the following items occur: 1. Another vessel in apparent difficulty. 2. Any obstruction to navigation. 3. Any aid to navigation that is not functioning properly or is damaged, out of position, or missing. 4. Any ice or weather conditions that are hazardous to safe navigation. 5. Any pollutant in the water.
O	Information to be included only if corresponding information has changed since the last report.

ECAREG/NORDREG Reporting Contacts

See the accompanying table titled **ECAREG/NORDREG Contact Reporting Information**.

Local VTS Zone Reports

With respect to Local VTS Zones as specified in the *Vessel Traffic Services Zone Regulation*s, the master of a ship shall report to the MCTS Officer in accordance with the regulations described below.

Information Required.—Depending on the reporting requirements, the following information may be required to be reported:

1. The name of the ship.
2. The radio call sign of the ship.
3. The position of the ship.
4. Estimated time that the ship will enter the VTS Zone.
5. The destination of the ship.
6. Estimated time the ship will arrive at its destination.
7. Whether any pollutant or dangerous goods cargo is carried on board the ship or any vessel or object being towed or pushed by the ship.
8. The estimated time that the ship will depart the berth.
9. The estimated time at which the ship will next arrive at a location requiring a report.

Entering a Zone.—At least 15 minutes before a ship intends to enter a zone, a report shall be made specifying the information contained in Items 1, 2, 3, 4, 5, 6, and 7 above.

Ships in possession of a valid Traffic Clearance are not required to provide this report.

Arriving at a Calling-In-Point (CIP).—When a ship arrives

at a CIP, a report shall be made specifying the information contained in Items 1, 3, and 9 above.

Arriving at a Berth.—As soon as practicable after a ship arrives at a berth, a report shall be made specifying the information contained in Items 1 and 3 above.

Departure Maneuvers.—A departure maneuver is defined as an operation during which a vessel leaves a berth and gets safely underway. Immediately before commencing a departure maneuver, a report shall be made specifying the information contained in Items 1, 2, 3, 5, 6, 7, and 8 above.

Immediately after completing a departure maneuver, a report shall be made specifying the information contained in Items 1, 2, and 9 above.

Maneuvers.—A Traffic Clearance is required 15 minutes prior to commencing any maneuver, such as:

1. A compass adjustment.
2. The calibration and servicing of navigational aids.
3. A sea trial.
4. A dredging operation.
5. The laying, picking up, and servicing of submarine cables.
6. Any other maneuver that may be detrimental to safe navigation.

The request for Traffic Clearance should include the information contained in Items 1 and 3 above, as well as a description of the intended maneuver. As soon as practicable after the maneuver is completed, a report describing the maneuver just completed shall be made.

Variations

Ferries and other vessels on a regularly scheduled voyage may be exempted from making routine reports. Formal variations to reporting procedures will be granted only where alternate arrangement to provide essential information are made and where the equivalent procedure or practice is deemed to be as safe as that required in the regulations.

Formal variations may be obtained by submitting a written request to the appropriate Regional MCTS Superintendent, Canadian Coast Guard.

In circumstances other than those described above, informal variations may be granted from time to time on a one time only basis by an MCTS Officer where the procedure or practice requested is deemed to be as safe as that required in the regulations.

ECAREG/NORDREG Contact Reporting Information

Contact	Telephone	Facsimile	Telex	E-mail
ECAREG				
St. John's MCTS Center P.O. Box 5667 St. John's NL A1C 5X1	709-772-2083	709-772-5369	21-016-4530 CCGTC SNF	ecaregsnf@innav.gc.ca
Halifax MCTS Center P.O. Box 1000 Dartmouth NS B2Y 3Z8	902-426-4956	902-426-4483	—	hlxecareg1@innav.gc.ca
Riviere au Renard MCTS Center P.O. Box 100 Riviere au Renard QC G4X 1S0	418-269-3843	418-269-5514	—	rarecareg@innav.gc.ca
NORDREG				
Iqaluit MCTS Center * P.O. Box 189 Iqaluit NU X0A 0H0	867-979-5724	867-979-4264	21-063-15529 NORDREG CDA	iqanordreg@innav.gc.ca
Prescott MCTS Center **	613-925-4471	613-925-4519	21-063-15529 NORDREG CDA	iqanordreg@innav.gc.ca

* Operational from mid-June until late-November.

** Operational from late-November until mid-June.

Appendix II—Eastern Canada Time Zones

Eastern Canada—Time Zones		
Location	**Standard Time**	**Daylight Savings Time**
Newfoundland (except Labrador)	+3 $^1/_2$	+2 $^1/_2$ Observed from the second Sunday in March until the first Sunday in November.
Atlantic Zone—New Brunswick, Nova Scotia, Anticosti E of 63°W, and Labrador	QUEBEC (+4)	PAPA (+3) Observed from the second Sunday in March until the first Sunday in November.
Atlantic Zone—Eastern Quebec	QUEBEC (+4)	Not observed.
Eastern Zone—Eastern Northwest Territories, Ottawa, eastern Ontario, western Quebec, and Anticosti W of longitude 63°W	ROMEO (+5)	QUEBEC (+4) Observed from the second Sunday in March until the first Sunday in November.
Eastern Zone—Nunavet and western Ontario	ROMEO (+5)	Not observed.
Central Zone—Manitoba, central Northwest Territories, Cambridge Bay, and Kugluktuk/Coppermine	SIERRA (+6)	ROMEO (+5) Observed from the second Sunday in March until the first Sunday in November.

Appendix III—MCTS Center Contact Information

Marine Communications and Traffic Services (MCTS) Centers—Contact Information				
Location	**Telephone**	**Facsimile**	**E-mail**	**Web address**
Pacific Coast				
MCTS Comox	250-339-3613	250-339-2372	mctscomox@dfo-mpo.gc.ca	http://www.ccg-gcc.ca/e0003902
MCTS Prince Rupert	250-627-3074	250-624-9075	mctsprincerupert@dfo-mpo.gc.ca	http://www.ccg-gcc.ca/e0003903
MCTS Tofino	250-726-7777	250-726-4474	mctsc_tofino@telus.net	http://www.ccg-gcc.ca/e0003904
MCTS Vancouver	604-775-8919	604-666-8543	mctsvancouver@dfo-mpo.gc.ca	http://www.ccg-gcc.ca/e0003905
MCTS Victoria	250-363-6611	250-363-6556	mctsvictoria@dfo-mpo.gc.ca	http://www.ccg-gcc.ca/e0003905
Arctic Coast				
MCTS Inuvik	867-777-2667	867-777-2851	vfa@dfo-mpo.gc.ca	—
MCTS Nunavet	867-979-5269	867-979-4264	iqanordreg@innav.gc.ca	—
Atlantic Coast				
MCTS Halifax	902-426-9750	902-426-4483	ccgops@elsmail.net	—
MCTS Goose Bay	709-896-2252	709-896-8455	ecagoy@innav.gc.ca	—
MCTS Les Escoumins	418-233-2194	418-233-3299	LesSector1@innav.gc.ca	—
MCTS Montreal	450-928-4544	450-928-4547	mtlsup@innav.gc.ca	—
MCTS Placentia	709-227-2181 709-227-2182	709-227-5637	ecapla@innav.gc.ca	—
MCTS Port aux Basques	709-695-2167	709-695-7784	paxtfc@innav.gc.ca	—
MCTS Quebec	418-648-4427	418-648-7244	queraa1@innav.gc.ca	—
MCTS Riviere-au-Renard	418-269-5686	418-269-5514	raracareg@innav.gc.ca	—
MCTS Saint John	506-636-4694	506-636-5000	cgcops@elsmail.net	—
MCTS St. Anthony	709-454-3852	709-454-3716	ecasny@innav.gc.ca	—
MCTS St. John's	709-772-2106 709-772-2083	709-772-5369	ecaregsnf@innav.gc.ca	—
MCTS Sydney	902-564-7751	902-564-7662	ccgops@elsmail.net	—

CAPE VERDE ISLANDS

General	**117**
Buoyage System	**117**
Cautions	**117**
Currency	**117**
Government	**117**
Holidays	**118**
Industries	**118**
Languages	**118**
Navigational Information	**118**
Regulations	**118**
Search and Rescue	**118**
Time Zone	**118**
U.S. Embassy	**118**

General

The Cape Verde Islands consists of ten major islands and five small islets. This group, lying between 350 and 450 miles off the African coast, is of volcanic origin and is mountainous.

The climate, which is dry and tropical, and vegetation are similar to the adjoining African mainland.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

The haze over the islands is often so thick that surf is sighted before the land is visible.

Currency

The official unit of currency is the Cape Verde escudo, consisting of 100 centavos.

Government

Flag of the Cape Verde Islands

Cape Verde Islands is a republic. The country is divided into 17 municipalities.

Cape Verde Islands is governed by a directly-elected President who serves a 5-year term. The Prime Minister is nominated by the National Assembly and appointed by the President. The unicameral National Assembly is composed of 72 directly-elected members serving 5-year terms.

The legal system is modeled after the Portuguese legal system.

The capital is Praia.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 13	Democracy and Liberty Day
January 20	National Heroes' Day
Ash Wednesday	Variable
Good Friday	Variable
Easter Sunday	Variable
May 1	Labor Day
May 19	Municipal Day
June 1	Children's Day
July 5	Independence Day
August 15	Assumption Day
November 1	All Saints' Day
December 25	Christmas Day

Industries

The main industries are food and beverages, fish processing, clothing and footwear, salt mining, and ship repair.

The main exports are fuel, footwear, clothing, fish, and hides. The main export-trading partners are Spain, Portugal, and the Netherlands.

The main imports are foodstuffs, industrial products, transport equipment, and fuels. The main import-trading partners are Portugal, Italy, the Netherlands, Spain, Ivory Coast, and Brazil.

Languages

Portuguese is the official language. Criolo, an indigenous language, is a mixture of Portuguese and West African words.

Navigational Information

Enroute Volume

Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Maritime Claims

The maritime territorial claims of the Cape Verde Islands are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles.

* Claims archipelagic status. Requires advance permission or notification for innocent passage of warships in the territorial sea.

Regulations

Quarantine messages must be sent between 0700 and 1800, not more than 12 hours or less than 6 hours prior to the arrival of the vessel.

Search and Rescue

Capitania dos Portos de Barlavento (CPB) is responsible for coordinating search and rescue operations. A Rescue Coordination Center, which operates 24 hours and relays all calls to CPB, is located on Sal Island.

Cape Verde MRCC CPB can be contacted, as follows:

1. Telephone: 238-2-324342
   238-2-326475
2. Facsimile: 238-2-324271
3. E-mail: capitaniasv@cvtelecom.cv

Sao Vicente Coast Radio Station (D4A) maintains a continuous listening watch for distress traffic on 2182 kHz, 2187.5 kHz, VHF channel 16, and VHF channel 70. The radio station can be contacted, as follows:

1. Telephone: 238-2-322158
   238-2-232263
2. Facsimile: 238-2-321882
3. E-mail: s.movelmaritimo@cvtelecom.cv

Time Zone

The Time Zone description is NOVEMBER (+1). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at Rua Abilio Macedo 6, Praia. The mailing address is C. P. 201, Praia.

U. S. Embassy Cape Verde Islands Home Page
http://praia.usembassy.gov

CARIBBEAN SEA

General	**119**
Cautions	**119**
Climatology	**119**
Currents	**124**
Fishing Areas	**125**
Navigational Information	**125**
Pollution	**125**
Ship Reporting System	**126**

General

The Caribbean Sea, one of the world's largest salt water seas, is a tropical body of water that is part of the Atlantic Ocean lying SE of the Gulf of Mexico. It is bounded on the S and W by South America and Central America and on the N and E by the Greater Antilles and the Lesser Antilles.

The Caribbean Sea consists of two large basins, separated by a sill with depths of less than 1,830m, extending from Honduras to Hispaniola.

The deepest point in the Caribbean Sea is the Cayman Trench, in the W basin, with a depth of 7,686m, lying between Cuba and Jamaica. The E basin, sometimes called the Grenada Deep, rarely exceeds a depth of 4,000m.

Cautions

Special Warning 120 (Issued 16 November 2001)

Information on Special Warning 120 can be found in **North Atlantic Ocean—Cautions**.

Particularly Sensitive Sea Areas (PSSA)

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

The Sabena-Carmaguey Archipelago in Cuba has been declared by the IMO to be a PSSA.

Dangerous Waves

High waves, induced by the persistent trade winds, are frequent in the Caribbean Sea during most of the year. Elsewhere, wave conditions are generally favorable. Mountainous waves of 12m and over are observed only in major hurricanes during summer and autumn.

The prevailing direction of waves during autumn and winter is NE. As the Bermuda High shifts NW during spring and summer, sea and swell generally become more E. In the S part of the region, waves prevail from the E and NE more than 60 per cent of the time.

Floating Hazards

Floating logs and other timber debris can be expected off the river entrances and ports along the coast of Central America.

Climatology

General

Weather in this region is generated primarily by the North Atlantic Subtropical High. The Northeast Trade Winds blowing clockwise around this high are accompanied by partly cloudy skies and occasionally showers. This pattern changes N of 25°N, so that near Bermuda, S winds exceed E winds during most of the year.

Between the North Atlantic Subtropical High and its counterpart in the South Atlantic Ocean lies the Intertropical Convergence Zone (ITCZ). This broad band of light variable winds, clouds, and showers moves N and S with the sun, lagging about a month behind. Its farthest N penetration is in mid to late summer, when it brings weather to the area between 5°

and 15°N; the center of activity is along 10°N latitude. This, then, is the rainy season in these latitudes and it stretches through November or December in some areas. By February, the ITCZ has retreated S and the weather is usually S of 5°N.

While fair weather is generally the rule in the tropics, the warm maritime air is occasionally disturbed by outbreaks of cold continental air from North America and by tropical cyclones. The cold outbreaks, or "northers," occur during the winter months, usually in the Gulf of Mexico and the Bahama Islands region. The tropical cyclones are most likely in late summer and fall and are a threat to the entire region.

Extratropical cyclones occasionally affect the N portions of this region in winter. Many of these storms come to life in the northern Gulf of Mexico and move NE or ENE into the Atlantic Ocean. The Bahama Islands region is occasionally troubled by these storms.

The Naval Research Laboratory Monterey, a corporate research laboratory for the United States Navy and Marine Corps, publishes port studies and forecaster handbooks that may be of use to the mariner. These publications can be accessed at the Naval Reserach Laboratory web site.

Naval Research Laboratory Monterey Home Page

http://www.nrlmry.navy.mil/pubs.htm

The Hurricane Haven Handbook North Atlantic contains information on the following ports:

1. Cuba—Guantanamo Bay.
2. Curacao.
3. Jamaica—Montego Bay and Ocho Rios.
4. Sint Maarten.

Tropical Cyclones

Tropical cyclones are encountered throughout this region and are the most serious weather threat to navigation. The tropical cycle season runs from June through early November; August, September, and October are the most active months. Tropical cyclones can form in any month. In an average year, nine or ten tropical cyclones come to life and about six of these reach hurricane intensity.

In Hurricane Camille (1969) and in the Florida Keys hurricane of 1935, winds were estimated to be at least 175 knots. True readings of extreme winds are hard to get, because recording stations are few and anemometers fail to survive. Land winds tend to have slightly lower velocity because of friction. During Hurricane Camille, at an oil rig along the Louisiana coast, a peak gust of 149 knots was recorded before the instrument failed. At La Habana, Cuba, in October 1944, a wind speed of 141 knots was recorded. In the Florida hurricane of September 1947, a reliable one-minute speed of 130 knots was measured at Hillsboro Light near Pompano Beach.

Some of the highest ocean waves have been generated by tropical cyclones. It has been found that in an average hurricane, waves of 10.7 to 12.2m are generated; in intense hurricanes these waves may exceed 15.2m.

The most dangerous single element of the hurricane for coastal areas is the storm tide, which is the result of the hurricane's pressure and winds on the tide, plus the normal astronomical tide. When normal high water occurs at the time of a peak storm surge, the hazard can be great. Storm tides of 4.6m or more above mean sea level have occurred in the Labor Day hurricane of 1935. The storm tides generated by hurricane Camille in 1969 were measured above 7.3m along the Mississippi coast.

Early and late season tropical cyclones tend to form in the western Caribbean Sea or the eastern Gulf of Mexico and move in a NW through NE direction. In both June and November an average of two tropical cyclones, one of which reaches hurricane strength, can be expected every 3 years. In July, activity spreads E to the Windward Islands and four tropical cyclones can be expected every 5 years. Storms have a tendency to move into the Gulf of Mexico or recurve along the E coast of the United States. During August and the first half of September, the breeding ground for storms lies between the West Indies and Africa. During the latter part of September, it extends into the Caribbean Sea and the Gulf of Mexico. In August and September, about seven tropical cyclones develop; an average of four of these reach hurricane strength. Early August tracks are similar to those in July, while late August storms move on a more W track in the lower latitudes and either continue into the southern Gulf of Mexico or recurve over Puerto Rico and on out into the mid-Atlantic Ocean. This is also true of many late September storms. In early September many tropical cyclones move ENE to N of Puerto Rico, where they either continue through the Straits of Florida into the Gulf of Mexico or recurve NE into the mid-Atlantic Ocean. October activity decreases to August levels of about two or three tropical cyclones, of which one reaches hurricane intensity. Early in the month, storm development occurs just E of the West Indies and in the western Caribbean Sea, while late activity is concentrated in the western Caribbean Sea. The mean tracks run W across the southern Caribbean Sea, then NW to western Cuba, and either continue into the Gulf of Mexico or NE across Cuba and into the Atlantic Ocean.

General Winds

The trade winds that prevail over this region originate in the clockwise circulation around the Subtropical High. In the summer when the high is strongest and most extensive, the trade winds are very persistent. They are mainly NE through E, except in the Gulf of Mexico, on the W edge of the high, where SE through S winds prevail. Although trade winds frequently reach 10 to 15 knots, summer gales occur less than 5 per cent of the time and are most often associated with a tropical storm or hurricane. East and S of the Gulf of Mexico, the Northeast Trade Winds still prevail in winter. In the Gulf of Mexico, winds are variable, mostly from the E semicircle; N winds are frequent in the northern Gulf of Mexico, and NE through SE winds are common to the S. South of 30°N, these regimes are often penetrated by strong outbreaks of cold air from the N known as "northers."

"Northers" penetrate as far south as the Caribbean coast of Colombia. They often result in gales in the northern Gulf of Mexico; squalls of gale force may occasionally occur along the SW shore of Bahia de Campeche. Gales do not usually reach the Caribbean Sea, although "northers" may reinforce the trade winds enough to cause gales along the Colombian coast.

In the waters around Bermuda, winds are steadiest in summer, when S through SW winds are common. Gales are rare. Northeast and E winds are also frequent in a variable fall wind regime. From December through April, winds are mostly from

the SW through NW; N and S winds are also common. During this period gales blow 3 to 8 per cent of the time; January and February are the roughest months.

Coastal and Local Winds

The trade winds prevail along most coasts, particularly in summer. Winter winds are sometimes interrupted by weather systems from higher latitudes. These interruptions are most frequent in the Bahamas and the Gulf of Mexico. When the circulation is weak, the land-sea breeze effect is noticeable. This effect often results in a weakening or strengthening and perhaps a deflection of the prevailing flow. On windward coasts, the sea breeze reinforces the trade winds, usually NE through SW winds, while on leeward coasts it opposes and diminishes this flow.

From Cabo Orange to Trinidad, trade winds blow from the NE through E; they are steadiest and strongest in winter when afternoon wind speeds often reach 15 to 20 knots. Gale force winds are unlikely more than once a year, occurring in a thunderstorm or a rare tropical cyclone. Along the Caribbean coast of Venezuela and Colombia and on the offshore islands, E winds are common in winter and prevalent in summer; NE winds are secondary winds. Winter winds are strongest, with average speeds ranging from 8 to 12 knots in the morning to 12 to 14 knots during the afternoon. Along the Colombian coast, trade winds reinforced by "northers" result in gales blowing 3 to 4 per cent of the time from January through March. Elsewhere these winds reach 20 to 25 knots. Extreme winds have reached 50 knots along these coasts and hurricanes, which usually remain well to the N, could bring even higher speeds. The trades are strong enough and persistent enough that land-sea breezes are usually only modifying influences.

Local influences and the land-sea breeze effect are more important along the E coasts of Central America and Mexico, which lie on the fringes of the Subtropical High. Winds here are steadiest in spring and summer. Along the Central America coasts E and NE winds are common year round, except in the area of the Panama Canal, where NE and N winds are frequent. Summer winds are the steadiest. East winds blow more than one-half the time and NE winds nearly one-half the time around the Panama Canal. At most Central American ports, E winds prevail from April through July and, with the aid of the sea breeze, blow up to 80 per cent of the time during the afternoon. In the waters just north of the Panama Canal, winter winds reach speeds of 17 to 27 knots about 27 per cent of the time, but gale-force winds are rare. Summer winds are weaker. Off Belize, summer winds are stronger and reach 17 to 27 knots up to 20 per cent of the time compared to 13 per cent in January. At Central American ports, average afternoon speeds range from 12 to 16 knots compared to 8 to 10 knots in the morning. Hurricanes have been responsible for winds of 150 knots along these coasts N of Costa Rica.

Along the E coast of Mexico, winds are most variable in winter, when NW through SE winds are common. Winds blow at 17 to 27 knots about 20 per cent of the time in winter. Gales are infrequent except from Coatzacoalcos to Tampico, where they blow from 4 to 9 per cent of the time. In summer, NE through SE winds prevail. E winds blow 40 to 50 per cent of the time E of Coatzacoalcos. Winds reach 17 to 27 knots about 5 to 15 per cent of the time. Gales occur in rare tropical cyclones. Wind speeds have exceeded 100 knots in both hurricanes and "northers."

In the West Indies and southeastern Bahamas, trade winds dominate throughout the year. In the northwestern Bahamas, winds are also under the influence of extratropical systems in winter. In general, winter winds are more variable. Northeast through E winds blow about 70 to 85 per cent of the time at average speeds of 10 to 14 knots; in the northwestern Bahamas, NE through SE winds prevail. Gales blow less than 1 per cent of the time and wind speeds of 28 knots or more occur up to 5 per cent of the time. These speeds are most likely off Haiti and Cuba and in the northwestern Bahamas. In summer, the trade winds are even more persistent. East winds blow 60 to 80 per cent of the time while NE or SE winds are secondary and occur about 15 to 25 per cent of the time. Gales are rare and wind speeds average 10 to 15 knots with some diurnal variations. Winds of 28 knots or more usually occur less than 1 per cent of the time; S of Haiti they occur 2 to 3 per cent of the time. Except during tropical cyclones, brief squalls, and northers, wind speeds remain below gale force. "Northers" are most likely in winter and most frequent in the Bahamas and Cuba, where gales blow on 1 or 2 days during the winter season (November through April).

The winds around Bermuda, which lies between the trade regime and the westerlies, are variable. Winter winds blowout of the S through NW. Wind speeds average 12 to 14 knots on the island and in waters to the S, and range up to 17 to 18 knots north of Bermuda. Gales blow 3 to 8 per cent of the time and are most likely N of the island. Summer winds are steadier and blow out of the S through SW about 60 per cent of the time at average speeds of 8 to 10 knots. Southeast and W winds are also common. Gales are rare.

Waterspouts

In the SW part of the North Atlantic Ocean, waterspouts are usually either tornadoes that have moved off the coast or ones that have formed over water. Usually the land tornado is more severe. They are most likely to occur along the shores of the Gulf of Mexico and the Bahamas, where 20 to 30 have been reported in every 10,000 marine observations. In general, in the Caribbean Sea region, 5 to 10 waterspouts per 10,000 observations is average.

North Coast of South America

Dry and rainy seasons, abundant cloudiness, and warm humid days are characteristic of conditions along these shores. South of Trinidad, the Intertropical Convergence Zone (ITCZ) is the controlling factor, while systems from the United States are an additional influence along the N coasts. Showers are more likely over the ocean at night and along the coasts in the afternoon.

From Cabo Orange to Trinidad, showers in the ITCZ are responsible for most of the 1,775 to 3,800mm of rain that falls along these coasts. Along the French Guiana coast, the rainy season runs from winter through early summer, while fall is dry. To the N, the start of the rainy season is delayed until late spring, when the ITCZ begins its N movement; a secondary rainy season is the fall when it is moving S again. Along this entire coast, late spring or early summer is the rainiest time, when 255 to 405mm of precipitation occur on 15 to 30 days per month. Thunderstorms are most likely in spring and summer and can occur on up to 5 to 10 days per month. They are often

responsible for heavy rains, which may total 100mm in 24 hours, or 150 to 175mm in rare occurrences.

Rainfall decreases to an average of 380 to 1,010mm annually along the Venezuela-Colombia coast. The driest region is on the Peninsula de Paraguana in the Gulf of Venezuela; here at Las Piedras less than 50mm accumulates each year. The rainy season runs from May through December and is the product of the N reaches of the ITCZ and the S extent of cold air surges from the United States. When either of these two factors is more active than normal, monthly amounts can double or triple along these shores. On the average, the rainiest time is between September and December, when 100 to 255mm per month can be expected on 5 to 12 days per month. Summer showers often cause more rainy days but less rain. Thunderstorms occur on 2 to 13 days per month from May through November; September and October are the most active months.

Cloudiness is frequent year round on these coasts, while poor visibilities are infrequent. South of Trinidad, December through May is the cloudiest time, when overcast conditions (cloud cover equal to or greater than 2/8) appear on 6 to 12 days per month, while clear skies (cloud cover equal to or less than 2/8) are rare. March through November is the cloudiest time along the N coasts of Colombia and Venezuela, where overcast skies are observed on up to 18 to 28 days per month. Visibilities are usually excellent along these coasts. They drop to near zero briefly in heavy showers and to less than 1 mile on less than 5 days annually in fog; this is most likely in the rainy season.

Temperatures and humidities are fairly constant along these shores. The diurnal range of both is usually greater than any seasonal fluctuation. Warm and humid are the general conditions. During the year average daytime high temperatures range from the upper 20s (°C) to the low 30s (°C), while nighttime lows range from the upper teens (°C) to low 20s (°C). Except for Colombia, September and October are usually the hottest and driest months, although humidities remain near 80 per cent. Along the Colombian coast, July and August are usually warmest. Extreme temperatures range from lows in the upper teens (°C) to highs around 37.8°C.

In general, relative humidities on exposed coasts will rise to near 90 per cent at night and drop to the 70 per cent range during the afternoon. Sheltered ports show much more diurnal variability in both temperature and relative humidity.

Central America

The ITCZ, "northers," E waves, tropical cyclones, and the windward position of these coasts are responsible for the abundant rainfall and cloudiness found on the shores.

The rainy cloudy season generally runs from about May through December. Average annual rainfall amounts range from about 2,030 to 6,100mm. These amounts are variable from year to year. Annual totals of as little as 3,810mm to as much as 7,620mm have fallen along the southern Nicaragua-northern Costa Rica coast where precipitation is normally heaviest. Along the N coast of Belize, where average amounts run 1,270 to 2,030mm, totals of more than 2,540mm and less than 1,015mm have been recorded. During the rainy season, precipitation, mostly in the form of heavy showers, can be expected on 15 to 20 days per month along the coasts of Belize, Guatemala, and northern Honduras. This increases to 18 to 27 days per month to the S. Thunderstorms are frequent and most likely from June through October, when they occur on 10 to 20 days per month around the Panama Canal; they are almost as frequent along the NE coast of Honduras. Elsewhere they occur on less than 10 days per month. Heavy showers are common along these coasts and more than 405mm of rain has fallen in a 24-hour period.

The rainy season is also the cloudy season. Along the coasts of Belize, Guatemala, and northern Honduras from June through October, overcast conditions (sky cover equal to or greater than 2/8) occur on about 18 to 24 days per month; the least cloudy time is March and April when skies are overcast on about 6 to 8 days per month. To the S, skies are overcast on 15 to 31 days per month from May through December; June, July, and August are usually the cloudiest when almost every day is overcast at some time. Cloudiness is particularly abundant along the coasts of Costa Rica and Panama. Late winter and early spring are the least cloudy times; overcast skies occur on 5 to 12 days per month.

Visibilities are usually good. They drop below 2 miles only infrequently in early morning fog, heavy showers, haze, and smoke. Along some coasts there are many days with haze, which is caused by the abundance of tiny sea-salt particles. It is most apparent in the daytime, but only infrequently reduces visibilities to less than 6 miles. Poor visibilities are most likely to occur during the rainy season in heavy showers, so they are likely for a brief period every day or two.

Temperatures and relative humidities vary more during the day than they do during the year. January is usually the coolest time of the year, while spring and early fall are the warmest and spring often the driest. Average daily maximums are usually in the upper 20s (°C) in winter and the low 30s (°C) from spring through fall. During this time, temperatures get above 32.2°C on 10 to 25 days per month N of Cabo Gracias a Dios, but on only 1 to 10 days per month to the S. Mean daily minimum temperatures range from the upper teens (°C) to low 20s (°C). Extremes range from near 37.8°C down to the low to upper teens (°C), except on the coast of Belize, where temperatures have fallen to the upper single digits (°C) in winter.

Relative humidities reach the 80 and 90 per cent range during the early morning hours throughout the year; the highest humidities often occur in fall and winter, with the lowest humidities occurring in spring. During the afternoons, relative humidities fall into the 70 per cent range; in the S, some summer readings fall only to the low 80s (per cent).

Gulf Coast of Mexico

This coastal region is swept by prevailing moist onshore winds year round. It is characterized by high humidity, moderate to large annual rainfall totals, and considerable cloudiness. Temperatures are high and winter temperatures remain mild. There are noticeable differences in climate from N to S.

Precipitation is the result of onshore winds, E waves, tropical cyclone activity, and frontal systems from the N. The rainiest area is along the S shore of Bahia de Campeche, where Coatzacoalcos records an annual average of 2,925mm. Amounts decrease N to about 760mm around Brownsville and S to 460mm at Progreso. Most of the rain falls from May through November. It occurs on 10 to 20 days per month from June through October between Tampico and Chetumal, in the lower part of Yucatan. Thunderstorms occur on about 2 to 6 days per month from May through October along the entire coast. From about

Tampico N, November through March is the cloudiest time, while farther S the summer and fall months are cloudiest.

Visibilities are generally good. However, N of Coatzacoalcos fog drops visibilities to less than 0.5 mile up to 1 to 2 per cent of the time in winter and on 50 to 80 days annually. These poor visibilities are most likely during the morning hours. Heavy showers during the rainy season can also reduce visibilities to this level for a short period.

The temperatures along this coast show a real difference from N to S. For example, the average daily maximum temperature at Brownsville varies -4.4°C from winter to summer compared to -13.3°C at Chetumal. This changeover is gradual from N to S. East of Veracruz, the more tropical regime is apparent. Coldest temperatures still occur in January. Average daytime readings are in the low to upper 20s (°C), while nighttime lows vary from the upper teens to low 20s (°C). Highest temperatures usually occur in the late spring or early summer, reaching the upper 20s to low 30s (°C) during the day and falling to the low 20s (°C) at night. Extremes range from around 37.8°C down to 10.0°C. Along the N coast, January daytime temperatures range from the upper teens to low 20s (°C), with nighttime lows in the low teens (°C). August is usually the hottest time of the year, with daytime highs in the low 30s (°C) and nighttime lows in the low 20s (°C). Extremes range from over 37.8°C down to as low as -11.1°C at Brownsville. However, freezing temperatures are restricted to N of Tampico.

Relative humidities are fairly high year round. For example, at Brownsville in the morning relative humidities range from the mid 80s to low 90s (per cent), dropping off to mid 50s (per cent) during summer afternoons and the mid 60s (per cent) during winter afternoons. Similar diurnal variations occur to the S, but to a lesser degree. Along the shores of Bahia de Campeche and on the E coast of Yucatan, humidities are often highest in summer and early fall, when averages reach the upper 80s (per cent).

Caribbean Islands

Most of these islands are mountainous, with the exceptions of Bermuda, the Bahamas, and the E fringe of the Lesser Antilles. The islands differ widely in physical characteristics and to a lesser extent in climate. Despite the fact that climate varies with altitude and exposure, tropical or semi-tropical conditions exist throughout. With the exception of Bermuda, the area is dominated by trade winds, which make the high temperatures and humidities bearable. Rain comes mostly in the form of seasonal showers that are the result of the trade winds, E waves, tropical cyclones, and extratropical systems from the N. Visibilities are usually good.

In the N islands there are often two rainy seasons, but this varies from island to island and even on the same island. In the Lesser Antilles, the rainy season usually runs from April or May through December. Showers often occur during the afternoon on the coast and are sometimes heavy. Over open waters they are more likely at night or in the early morning hours and are seldom heavy or prolonged.

Temperatures are remarkably uniform as monthly averages range from about 21.1°C to 29.4°C, except for Bermuda, where it gets a little cooler in winter (about 17.2°C). Places exposed to the trades are cooler and more pleasant than those to the leeward.

Relative humidities are high, averaging around 70 to 80 per cent for the year. Since it varies with temperature, relative humidity is usually highest just before sunrise, around 85 to 90 per cent, and lowest in the afternoon, around 60 to 70 per cent.

While cloudiness is abundant in this area, usually neither completely cloudy skies nor completely clear skies persist for an entire day. Average amounts range from 4/10 to 6/10; the cloudiest periods usually coincide with rainy seasons.

Bermuda

Bermuda has the most changeable climate of all the island groups. The surrounding sea is its controlling feature, as there are no topographic effects.

During the winter, maximum temperatures are in the upper teens (°C), while in summer they climb to around 29.4°C. Mean minimum temperatures are about 6°C lower than the maximums. The Gulf Stream protects Bermuda somewhat from extremely cold or hot outbreaks from the United States. Extremes range from 37.2°C to 4.4°C; this compares to 40.6°C and -8.9°C extremes at Savannah.

The average annual rainfall of 1,140 to 1,400mm is well distributed throughout the year.

Relative humidities run in the 70 to 80 per cent range in all months.

Bahamas

Topographic effects are slight since the islands are small and low.

During the winter, average daily maximums range from the low 20s (°C) in the NW to around 26.7°C in the SE, while nighttime lows usually drop to the upper teens (°C). Summer daytime temperatures often climb to near 32.2°C while falling to the mid 20s (°C) at night. Extremes of 35.0°C and 3.3°C have occurred.

In general, rainfall decreases and temperatures increase from NW to SE. In the NE, an average of 100 to 175mm of rain falls on 10 to 17 days per month from May through October.The rainiest season in the SE is September through November, when 75 to 125mm falls on 10 to 14 days per month on the average.

Relative humidities show little monthly variation, but range from 75 to 85 per cent at night down to the 65 to 75 per cent during the afternoon.

Cuba

Cuba exerts a definite topographic influence upon the tropical marine climate. Average daily maximums are generally above 26.7°C, climbing to near 32.2°C during the summer months at some locations. Average daily minimums range from 21.1° to 23.9°C in summer and 16.7° to 21.1°C in winter.

Along the coast precipitation averages range from about 1,015 to 1,140mm annually; the S coast is slightly less rainy than the N. Western Cuba has one dry season between November and April and a rainy one from May through October. Eastern Cuba has two dry periods around February or March and again around July, and two rainy seasons, from April to June and from September to December.

The average relative humidity is about 75 per cent, ranging from 85 to 90 per cent at sunrise down to 60 to 65 per cent during the warmest part of the day.

Fog is uncommon, occurring on 1 or 2 days per month in late winter or early spring.

Hispaniola (Haiti and the Dominican Republic)

This large island modifies temperature and rainfall. The N coast, due to the trade winds, has a more typical maritime climate than either the S or W coasts. On the S and W coasts average daily maximum temperatures range from 27.8° to 34.4°C throughout the year, compared to a 26.1° to 30.6°FC range along the N coast; also, the range between maximums and minimums is much smaller on the N coast.

Rainfall varies considerably along the coasts. The driest localities on the W coast record about 505 to 635mm, reaching nearly 2,030mm per year in the NE. Along the S coast, rainfall is least at the center of the island, increasing to the E and W. The rainy season is quite irregular, but December through March are the driest months on the S and W coasts, while June to August is the driest time on the N coast.

Relative humidities range from around 80 per cent around sunrise down to 70 per cent in the afternoon.

There are few visibility problems.

Jamaica

Although the island is relatively small, it is high, so its climate is influenced by topography. At Kingston, the average daily maximum is always above 29.4°C; it reaches 32.2°C in July and August. Average daily minimums range from 19.4°C in January and February to 23.3°C in August.

Annual rainfall averages vary from around 760mm along the lee coast to the S, to up to 255 to 510mm along the windward slopes of the NE part of the island. Winter and mid-summer are the dry seasons, while the rainy seasons occur in May and June and again from August to November.

Relative humidities range from the mid 80s to low 90s (per cent) in the early morning to the 60 per cent range during the afternoon.

Puerto Rico

Average daily and annual temperature ranges are small along the coasts of Puerto Rico. Average winter daytime temperatures are in the upper 20s (°C), while nighttime lows fall into the upper teens to low 20s (°C). During the summer and early fall, daytime highs usually climb to near the 32°C mark, while nighttime lows fall into the low 20s (°C).

The island's topography most affects rainfall. Most rain falls on the N and E slopes of the mountain range that extends E to W across the S central part of the island. Average annual coastal amounts range from 890 to 1,780mm. The smallest amounts are generally found along the S coast while the largest amounts are found on the N coast. In general, precipitation is greatest in October and November with a secondary maximum in May. February and March are the driest months.

Relative humidities are usually in the 80 per cent range in the early morning and the 60 to 70 per cent range during the afternoon.

Showers are about the only detriment to good visibilities.

Leeward Islands

Average daily maximum temperatures during January through March are in the upper 20s (°C), while mean daily minimums are in the low 20s (°C). During the summer and early fall, the temperatures range from the low 20s to low 30s (°C).

The annual average rainfall is about 1,270 to 1,525mm, depending on exposure. Most rain occurs from September through November, while February and March are the driest months. During the rainy season about 125 to 175mm fall on 10 to 20 days per month.

Average relative humidity increases from 65 to 70 per cent in March up to 70 to 80 per cent by November.

Windward Islands, Barbados, Trinidad, and Tobago

Average daily maximum temperatures range from the upper 20s to low 30s (°C) from January through March, and reach the 29° to 32°C range the rest of the year. Minimums are usually 5.5° to 8.3°C cooler.

Rainfall amounts, which vary with exposure and topography, range from 1,270mm on leeward slopes up to 2,540mm on some windward coasts. Maximum rainfall occurs between June and November. February through April is usually the dry period.

Relative humidities, which are high year round, reach a peak in summer and autumn, when early morning readings climb to near 90 per cent and afternoon readings drop to about 75 per cent.

Currents

A part of the west-setting North Equatorial Current flows past the Lesser Antilles and through the Caribbean, and another part flows north of the Bahama Islands as the Antilles Current.

The Antilles Current is probably stronger, larger, and more persistent than previous descriptions have indicated. Generally, the surface flow shows little seasonal variation in speed, direction, and size. The current originates in the vicinity of the Leeward Islands as part of the Atlantic North Equatorial Current. The frequency of set in the prevailing direction averages about 55 per cent, the main surface speed being about 0.6 knot. About 85 per cent of the observations are between 0.1 and 0.9 knot, 10 per cent between 1.0 and 2.0 knots, and 1 per cent over 2.0 knots. The greatest seasonal change is likely to occur near the northern boundary of the Antilles Current. During winter, when the Bermuda High migrates to its southernmost position, the N boundary of the current also moves S, and the current tends to be more variable.

The Caribbean Current is a strongly persistent and well-defined current that sets W throughout the year; its mean speed is 0.9 knot and its maximum speed is about 3.5 knots. The highest speeds occur in the axis of the current located in the S part of the Caribbean Sea, where speeds average 1.1 knots about 80 per cent of the time. The speed of the current over Rosalind Bank (16°30'N., 80°30'W.) is strong, averaging 1.2 knots; however, this region is not included in the main band of highest speed, and the swift flow over the bank appears to be due to funneling of the slower prevailing flow from the E. The flow in the prevailing direction is very consistent, being located in a steady trade wind region, and there is little variation between seasons. Because of the limiting topography of the region, the Caribbean Current has the basic characteristic of a one-way flow through a channel. Countercurrents may form along the shores of the Caribbean; one of these, moving E along the coasts of Panama and Colombia, is strongest from August to October, when it attains a maximum speed of 2 knots.

The Yucatan Current passes through Yucatan Strait between

18° and 26°N and has a predominant NNW set. It extends from the Caribbean Sea N of Honduras to the N edge of Campeche Bank and toward the Mississippi Delta. The outstanding feature of this current is its W intensification, which occurs most noticeably in the region of maximum current strength, about 40 to 60 miles wide between about 21°N and 22°N. West of 86°W, the current is strongest and most constant in April, May, and June and weakest during October, November, and December. East of 86°W, the current is considerably weaker, with lessened persistence in the prevailing direction. The strength of the Yucatan Current is practically independent of the width of the strait; its speed may vary at any time of the year. A number of observations made in October, 1961 did not exceed 2.0 knots; in October, 1959, speeds as high as 4.0 knots were recorded. In May 1959, measurements 30 miles north of the strait showed surface current speeds of about 3.5 knots; but 12 days later the speed had decreased to only about 1.0 knot.

When the Yucatan Current is strong, the core is narrow and farther W, being located close to the 183 curve. When it is weakest, during winter, the core is broader and lies 10 to 20 miles E of the 183m curve. The current is about 65 miles wide. Clockwise eddies occur about 60 miles N and S of the W tip of Cuba. Eddies are also observed on the E edge of Banco de Campeche.

After passing through Yucatan Channel, the current widens and branches out as it enters the Gulf of Mexico. During winter, strong N winds intensify the countercurrents that frequently occur in the W and S parts of the gulf; these winds may induce a S current over the entire gulf.

The Florida Current sets through the Straits of Florida from the Gulf of Mexico. In summer, the part of the surface current S of 25°N moves farthest S; it flows at a mean speed of 2.0 knots and a maximum speed of about 6.0 knots. The part of the current N of25°N shifts farther W of its mean position, flowing at a mean speed of 2.9 knots and a maximum speed of 6.5 knots. In winter, the shift is in the opposite direction and the mean speeds are less by about 0.2 to 0.5 knot. The Florida Current does not significantly change direction during the year, but its speed varies slightly from one season to another.

Fluctuations in current speed can occur under the influence of tide-producing forces, with maximum speed occurring daily about 9 hours before the upper or lower transit of the moon over the local meridian. The mean speed also appears to increase in some regions and to decrease in others after maximum N and S lunar declinations. The current in the Miami-Cat Cay region is partly out of phase with astronomical forces; mean maximum speeds of 2.8 knots occur about 3 days after neap tides and mean maximum speeds slightly below 2.5 knot occur at spring tides.

Fishing Areas

The coastal waters and offshore banks of this region are rich fishing areas. Large numbers of fishing vessels, ranging in size from small canoes to large trawlers, may be encountered in this area.

Navigational Information

Electronic Navigational Communications

For information on the International Maritime Satellite Organization (INMARSAT), the Global Maritime Distress and Safety System (GMDSS(), the Global Positioning System (GPS), and SafetyNET, see **North Atlantic Ocean—Navigational Information**.

International Ship and Port Facility (ISPS) Code

The ISPS Code applies to ships on international voyages and port facilities directly interfacing with these ships. All vessels should fully comply with the provisions of Chapter XI-Part 2 of the SOLAS Convention and Part A of the ISPS Code. Vessels shall demonstrate that appropriate maritime security measures are in place according to ISPS Code regulations. For further information, see **North Atlantic Ocean—Navigational Information**.

Enroute Volumes

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2.

Pollution

Single-hull Tanker Phase-out Schedule

In accordance with Regulation 13G of Annex I of the MARPOL Convention, single-hull tankers should be phased out or converted to a double-hull configuration according to a schedule based on their year of delivery. These requirements are designed to reduce the risk of oil spills from tankers involved in low-energy collisions or groundings. For further information, see **North Atlantic Ocean—Pollution—Single Hull Tanker Phase-out Schedule**.

Ballast Water Management

International guidelines have been adopted by the IMO to prevent the introduction of unwanted aquatic organisms and pathogens from ships' ballast water and sediment discharge into marine ecosystems. The guidelines include the retention of ballast water onboard, ballast exchange at sea, ballast management aimed at preventing or minimizing the uptake of contaminated water or sediment, and the discharge of ballast ashore. Particular attention is drawn to the hazards associated with ballast exchange at sea. For further information, see **North Atlantic Ocean—Pollution—Ballast Water Management**.

MARPOL Special Areas

MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

The Wider Caribbean Region, consisting of the sea area of the Gulf of Mexico and the Caribbean Sea including the bays and seas therein and that portion of the Atlantic Ocean within the boundary constituted by latitude 30°00'N from Florida E to longitude 77°30'W; then by a rhumb line to position 7°20'N, 50°00'W; then by a rhumb line to position 7°20'N, 50°00'W; and then by a rhumb line leading SW to the E boundary of French Guiana, is a MARPOL Special Area.

For further information, see **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Sulphur Emission Control Areas

Sulphur Emission Control Areas (SECA) are areas where special controls are in effect to reduce sulphur oxide (SO_x) emissions from ships. The Gulf of Mexico coast of the United States is part of the North American Emission Control Area. For further information, see **North Sea and the English Channel—Pollution—Sulphur Emission Control Areas.**

Ship Reporting System

CARICOM (Caribbean Community) Advance Passenger Information System (APIS)

CARICOM APIS is a mandatory reporting system providing Advance Passenger Information (API) about passengers and crew to the Joint Regional Communications Center (JRCC) Barbados for vessels bound for or departing from a port in the following participating CARICOM member states:

1. Antigua and Barbuda.
2. Barbados.
3. Dominica.
4. Grenada.
5. Guyana.
6. Jamaica.
7. St. Kitts and Nevis.
8. St. Lucia.
9. St. Vincent and the Grenadines.
10. Trinidad and Tobago.

The JRCC Barbados has been selected by the governments of the participating CARICOM states as the agent for collecting and collating data from arriving and departing vessels and can be contacted, as follows:

1. Telephone: 1-246-4297931 (Maritime)
   1-246-4354659 (eAPIS)
2. Facsimile: 1-246-2284040
3. E-mail: maritime.compliance@impacsjrcc.org
4. Web site: http://www.impacsjrcc.org

The Electronic Advance Passenger Information Service (eAPIS) is a web-based application that provides a means of uploading and transmitting passenger and crew information. Further details and downloadable forms can be obtained from CARICOM Advance Passenger Information System web site. Failure to provide these reports may result in heavy fines and/or prosecution.

Arriving vessels should submit an API, as follows:

1. Vessels arriving from a port outside of the CARICOM area—Not less than 24 hours prior to arrival.
2. Vessels arriving from a port within the CARICOM area—Not less than 1 hours prior to arrival.

Departing vessels should submit an API, as follows:

1. Vessels departing for a port outside of the CARICOM area—Not more than 15 minutes after departure.
2. Vessels departing for a port within the CARICOM area—Not less than 1 hour prior to arrival at that port.

CARICOM Advance Passenger Information System Home Page

http://www.caricomeapis.org

SURNAV

The SURNAV system is intended to prevent accidental pollution in the territorial waters of Guadeloupe and Martinique as well as in the waters within 50 miles of the coast of Guadeloupe and Martinique.

For further information, see **Martinique—Ship Reporting System**

CAYMAN ISLANDS

General	**127**
Buoyage System	**127**
Currency	**127**
Government	**127**
Holidays	**127**
Industries	**128**
Languages	**128**
Navigational Information	**128**
Regulations	**128**
Search and Rescue	**128**
Time Zone	**128**
U.S. Embassy	**128**

General

The Cayman Islands are three low-lying coral islands lying WSW of Jamaica. Grand Cayman, about half of which is swamp, features a shallow reef-protected sound along its NW part. Cayman Brac and Little Cayman, lying NE of Grand Cayman, are both wooded.

The climate is tropical maritime, with a cool season from November to March. Hurricanes may be experienced between July and November.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Cayman Islands dollar, consisting of 100 cents.

Government

Flag of the Cayman Islands

The Cayman Islands are a self-governing dependent overseas territory of the United Kingdom, with Queen Elizabeth II as its chief of state. It is divided into eight districts.

The Cayman Islands are governed by a Governor appointed by the Queen. The 20-member unicameral Legislative Assembly consists of two appointed members and 18 directly-elected members, all serving 4-year terms.

The legal system is based on British common law and local statutes.

The capital is Georgetown.

Holidays

The following holidays are observed:

January 1	New Year's Day

January 27	National Heroes Day
Ash Wednesday	Variable
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
Third Monday in May	Discovery Day
Whitsunday	Variable
Whitmonday	Variable
First Monday following the second Saturday in June	Queen's Birthday
First Monday in July	Constitution Day
November 11	Remembrance Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are tourism, banking, insurance and finance, construction and contruction materials, and furniture.

The main exports are turtle products and manufactured consumer goods. The main export-trading partner is the United States.

The main imports are foodstuffs and manufactured goods. The main import-trading partners are the United States, Trinidad and Tobago, the United Kingdom, the Netherlands Antilles, and Japan.

Languages

English is the official language.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of the Cayman Islands are, as follows:

Territorial Sea	12 miles.
Fisheries or Economic Zone	200 miles.

Regulations

Quarantine

The Pre-Arrival Notification Form should be sent at least 24 hours prior to arrival in the Cayman Islands. The form is an Excel spreadsheet; the spreadsheet and instructions on how to complete the form can be downloaded from the website of the Cayman Islands Port Authority (http://www.caymanport.com).

The form should be e-mailed, as follows:

1. Port Security Officer: jwoods@caymanport.com
2. Immigaration Office: icm@gov.ky

Vessels should contact Port Security on VHF channel 16 when within VHF range.

Search and Rescue

The Marine Unit of the Cayman Islands Police is responsible for coordinating search and rescue operations and can be contacted, as follows:

1. Telephone: 1-345-9499009
   1-345-9497710
2. Facsimile: 1-345-9499133

Time Zone

The Time Zone description is ROMEO (+5). Daylight Savings Time is not observed.

U.S. Embassy

The Cayman Islands are a dependent territory of the United Kingdom. There is no diplomatic representation.

COLOMBIA

General	**129**
Buoyage System	**129**
Cautions	**129**
Currency	**130**
Government	**130**
Holidays	**130**
Industries	**130**
Languages	**130**
Navigational Information	**130**
Pilotage	**130**
Pollution	**131**
Regulations	**131**
Search and Rescue	**131**
Submarine Operating Areas	**131**
Time Zone	**131**
U.S. Embassy	**131**

General

Colombia is located in northern South America. The country borders the Caribbean Sea between Panama and Venezuela, and the North Pacific Ocean between Ecuador and Panama.

The climate is tropical along the coast and eastern plains, becoming cooler in the highlands.

The terrain is flat coastal lowlands, central highlands, high interior Andes Mountains, and eastern lowland plains.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Caution is necessary, as the following obsolete navigational aids may still be found in Colombian waters:

1. Starboardhand buoys—Conical and usually painted red, but the upper part may be white. If numbered, they have even numbers; if lighted, they exhibit red lights.
2. Porthand buoys—Can-shaped and usually painted black, but the upper part may be white. If numbered, they have odd numbers; if lighted, they exhibit white lights.
3. Quick flashing lights—Usually exhibited in positions where special attention is called for, such as at bends in a channel.
4. Mid-channel buoys—May be either conical or can-shaped and are painted in black and white stripes. If lighted, they exhibit green lights.
5. Middle ground buoys—May be either conical or can-shaped and are painted in black and white bands. If the uppermost band is red, the vessel will continue in the main channel by passing the buoy to starboard; if the uppermost band is black, the vessel will continue in the main channel by passing the buoy to port. If lighted, they exhibit interrupted quick flashing green lights.
6. Anchorage buoys—Painted white.
7. Dredged area buoys—Painted white, with the upper part painted green.
8. Fishing ground buoys—Painted in black and white bands.

Cautions

Drilling platforms and drill rigs are found off the coast of Colombia.

Piracy incidents have been reported (2006) in Barranquilla.

Currency

The official unit of currency is the Colombian peso, consisting of 100 centavos.

Government

Flag of Colombia

Colombia is a constitutional republic in which the executive branch dominates the government structure. The country is divided into 32 departments and one capital district.

Colombia is governed by a directly-elected President who serves a 4-year term. The bicameral Congress is composed of a 102-member Senate and a 166-member House of Representatives. Members of both houses are directly elected to serve 4-year terms.

The legal system is based on Spanish law and a criminal code modeled after United States procedures.

The capital is Bogota.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 6 *	Feast of the Epiphany
March 19 *	St. Joseph Day
Holy Thursday	Variable
Good Friday	Variable
Easter Sunday	Variable
May 1	Labor Day
Ascension Day	Variable
Corpus Christi	Variable
Feast of the Sacred Heart	Variable
June 29 *	St. Peter and St. Paul
July 20	Independence Day
August 7	Battle of Boyaca
August 15	Assumption Day
October 12 *	Dia de la Raza
November 1	All Saints' Day
November 11 *	Cartagena Independence Day
December 8	Immaculate Conception
December 25	Christmas Day

* If the holiday does not fall on a Monday, it is celebrated on the following Monday.

Industries

The main industries include textiles, food processing, oil, clothing and footwear, beverages, chemicals, cement, and mining (gold, coal, and emeralds).

The main exports are petroleum, coffee, coal, nickel, emeralds, clothing, bananas, and cut flowers. The main export-trading partners are the United States and Venezuela.

The main imports are industrial equipment, transportation equipment, consumer goods, chemicals, paper products, fuels, and electricity. The main import-trading partners are the United States, Mexico, China, Brazil, and Venezuela.

Languages

Spanish is the official language.

Navigational Information

Enroute Volumes

Pub. 125, Sailing Directions (Enroute) West Coast of South America.

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2.

Maritime Claims

The maritime territorial claims of Colombia are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles

* Claims straight baselines.

Maritime Boundary Disputes

Colombia, Honduras, Nicaragua, Jamaica, and the United States assert various claims to Bajo Nuevo and Serranilla Bank.

Dispute with Nicaragua over using the 82°W meridian as the maritime boundary.

Maritime boundary dispute in the Gulf of Venezuela with Venezuela.

Pilotage

Pilotage is compulsory for all vessels exceeding 250 nrt and must be requested 48 hours in advance.

Pollution

Vessels may not clean tanks within 60 miles of the coast of Colombia. A vessel arriving at a port with dirty ballast will be ordered to proceed to sea beyond the 60-mile limit and take on clean ballast.

Regulations

General

Within the territorial waters of Colombia, masters of vessels are liable to heavy fines, seizure of vessel or cancellation of licenses if they:

1. Fail to obey the orders of the competent authorities regarding departure and arrival at ports.
2. Moor at piers, off beaches, or off river banks where this is not permitted by the authorities.
3. Alter their port of destination without permission.
4. Unjustifiable delay passage between two ports.
5. Carry out unauthorized embarking or disembarking of persons and loading or unloading of cargo.
6. Disobey instructions from military, naval, police, customs, or port authorities.
7. Do not comply with the regulations of the competent authorities in force for maritime and river traffic.

ETA Messages

The vessel's ETA should be sent 48 hours and 12 hours in advance through the agent. Any delay in the ETA should be sent at least 6 hours in advance.

Vessels carrying dangerous cargo must notify the port, through their agent, 48 hours in advance, giving the details of packing and stowage, as well as whether the cargo is in transit or will be off-loaded in the port.

Berthing

Berthing priority in Colombian ports is, as follows:

1. Warships.
2. Passenger and mail vessels running on a fixed schedule.
3. Vessels carrying livestock and perishable cargo.
4. Passenger vessels not on a fixed schedule.
5. Vessels loading cargo for export.
6. Vessels discharging cargo for import.
7. Tankers.
8. Coastal vessels.
9. Vessels carrying explosives.

Search and Rescue

Colombian Coast Guard stations maintain continuous listening watches for distress traffic, as follows:

1. Atlantic coast—VHF channels 11 and 16.
2. Pacific coast—VHF channels 16 and 68.

Colombian Coast Guard stations can be contacted as listed in the table titled **Colombian Coast Guard—Contact Information**.

Submarine Operating Areas

Submarine exercise areas are located, as follows:

a. Two areas lying up to 26 miles W of Isla Tierra Bomba (10°21'N., 75°35'W.).

b. 5 miles WNW of Punta San Bernardo (9°42'N., 75°42'W.).

c. 8 miles NW of Punta San Bernardo.

Time Zone

The Time Zone description is ROMEO (+5). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at Calle 24 bis, No. 48-50 Bogota.

The mailing address is Carrera 45, #24B-27, Bogota, D.C.

U. S. Embassy Colombia Home Page
http://bogota.usembassy.gov

Colombian Coast Guard—Contact Information

Station	Telephone	Facsimile	E-mail
Caribbean Coast			
Ballenas	57-5-6550316	57-5-6550316	ceguc@fnc.armada.mil.co
Barranquilla	57-5-3441428 ext. 206	57-5-6550316	cegbar@fnc.armada.mil.co
Cartagena	57-5-6550316	57-5-6550316	ceguc@fnc.armada.mil.co
Covenas	57-5-6550316	57-5-6550316	ceguc@fnc.armada.mil.co
Puerto Bolivar	57-5-6550316 57-5-3506690 57-5-3506631	57-5-6550316	ceguc@fnc.armada.mil.co
San Andres	57-8-5132153	57-8-5132153	cegsai@fnc.armada.mil.co
Santa Marta	57-5-4231666	—	cegsam@fnc.armada.mil.co

Colombian Coast Guard—Contact Information			
Station	**Telephone**	**Facsimile**	**E-mail**
Turbo	57-4-8275379	57-4-8275380	cegut@fnc.armada.mil.co
Pacific Coast			
Centro de Operaciones del Pacifico (COPA)	57-2-2460585	57-2-2460630	copafnp@armada.mil.co

COSTA RICA

General	**133**
Buoyage System	**133**
Currency	**133**
Fishing Areas	**133**
Government	**133**
Holidays	**134**
Industries	**134**
Languages	**134**
Navigational Information	**134**
Regulations	**134**
Search and Rescue	**134**
Time Zone	**134**
U.S. Embassy	**134**

General

Costa Rica is located in Central America, bordering the Caribbean Sea and the North Pacific Ocean, between Nicaragua and Panama.

The climate is tropical, having its dry season from December to April and its rainy season from May to November.

The terrain is primarily coastal plains separated by rugged mountains.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Costa Rican colon, consisting of 100 centimos.

Fishing Areas

The coastal areas on the Caribbean Sea coast are extensively fished by local vessels working out of small harbors and rivers. Fishing vessels are also found on Miskito Bank (14°28'N., 82°42”W.).

Government

Flag of Costa Rica

Costa Rica is a democratic republic. The country is divided into seven provinces.

Costa Rica is governed by a directly-elected President who serves for a 4-year term. The unicameral Legislative Assembly is composed of 57 directly-elected members serving 4-year terms.

The legal system is based on Spanish civil law.

The capital is San Jose.

Holidays

The following holidays are observed:

January 1	New Year's Day
Mid April	Juan Santamaria (Anniversary of the Battle of Rivas)
Holy Thursday	Variable
Good Friday	Variable
Easter Sunday	Variable
May 1	Labor Day
Corpus Christi	Variable
June 29	St. Peter and St. Paul
Late July	Annexation of Guanacaste
August 2	Our Lady of Los Angeles
August 15	Assumption Day/Mother's Day
September 15	Independence Day
October 12	Columbus Day/Dia de la Raza
December 8	Immaculate Conception
December 24	Christmas Eve
December 25	Christmas Day
December 28-31	Christmas Holiday

Industries

The main industries are microprocessors, food processing, medical equipment, textiles and clothing, construction materials, fertilizer, and plastic products.

The main exports are bananas, pineapples, coffee, melons, ornamental plants, sugar, beef, seafood, electronic components, and medical equipment. The main export-trading partners are the United States, the Netherlands, China, and Mexico.

The main imports are raw commodities, consumer goods, capital equipment, petroleum, and construction equipment. The main import-trading partners are the United States, Mexico, Venezuela, China, and Japan.

Languages

Spanish is the official language. English is spoken in the area of Puerto Limon.

Navigational Information

Enroute Volumes

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2.

Pub. 153, Sailing Directions (Enroute) West Coasts of Mexico and Central America.

Maritime Claims

The maritime territorial claims of Costa Rica are, as follows:

Territorial Sea	12 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles.

* Claims straight baselines.

Maritime Boundary Disputes

Legal dispute with Nicaragua over navigational rights on the San Juan River.

Regulations

No vessel is allowed to enter a Costa Rican port until visited by a Health Inspector, the Captain of the Port, and a Customs Officer.

Vessels should send their ETA at their first Coast Rican port as soon as possible after leaving its previous port and at least 72 hours in advance. Any changes of at least 1 hour in the ETA should be reported at least 24 hours in advance. The initial message should include the following information:

1. Vessel draft.
2. Cargo.
3. Cargo consignees.
4. Vessel requirements.

Search and Rescue

Puntarenas Coast Radio Station (TEC) maintains a continuous listening watch on VHF channel 16 for distress traffic.

Maritime Rescue Coordination Center Costa Rica can be contacted by telephone (506-286-4418 or 506-286-6880).

Costa Rica is part of the Corporacion Centroamericana de Servicios de Navegacion Aerea (COCESNA), the Central American aeronautical search and rescue network. Rescue Sub-Center (RSC) Costa Rica works with RCC Centro America and can be contacted, as follows:

1. Telephone: 506-372-2043
   506-368-3702
2. Facsimile: 506-443-8961

Further information on COCESNA can be found in **Honduras—Search and Rescue**.

Time Zone

The Time Zone description is SIERRA (+6). Daylight Savings Time is not observed.

U.S. Embassy

The embassy is situated on Calle 120, Avenida 0, Pavas, San Jose.

The mailing addresses are, as follows:

1. Costa Rica address—
   920-1200
   San Jose
2. U.S. address—
   U. S. Embassy San Jose
   APO AA (34020)

U. S. Embassy Costa Rica Home Page
http://sanjose.usembassy.gov

CROATIA

General	**137**
Buoyage System	**137**
Cautions	**137**
Currency	**137**
Firing Areas	**138**
Government	**138**
Holidays	**138**
Industries	**139**
Languages	**139**
Meteorology	**139**
Navigational Information	**139**
Pilotage	**139**
Pollution	**139**
Prohibited Areas	**139**
Regulations	**140**
Search and Rescue	**141**
Ship Reporting System	**141**
Time Zone	**141**
Traffic Separation Schemes	**141**
U.S. Embassy	**141**

General

Croatia is located in southeastern Europe, bordering the Adriatic Sea between Bosnia and Herzegovina and Slovenia.

The climate is Mediterranean, and more predominately, continental, with hot summers and cold winters. Mild winters with dry summers prevail along the coast.

The terrain is geographically diverse. There are flat plains along the Hungarian border, low mountains, and highlands near the Adriatic coast. The W coast is fringed by off-lying islands.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Vessels engaged in seismic surveys and other research projects may be encountered in the Adriatic Sea, normally inside the 200m depth curve.

Currency

The official unit of currency is the kuna, consisting of 100 lipa.

Firing Areas

P-1 (SW of Rt Marlera)—Area bound by line joining the following positions:
a. 44°48'N, 14°00'E.
b. 44°42'N, 14°14'E.
c. 44°22'N, 14°06'E.
d. 44°39'N, 13°40'E.

P-2 (SW of Otok Losinj)—Area bound by line joining the following positions:
a. 44°34'N, 14°22'E.
b. 44°25'N, 14°34'E.
c. 44°17'N, 14°22'E.
d. 44°24'N, 14°15'E.

P-3 (SW of Otok Premuda)—Area bound by line joining the following positions:
a. 44°22'N, 14°35'E.
b. 44°12'N, 14°50'E.
c. 44°04'N, 14°35'E.
d. 44°15'N, 14°24'E.

P-4 (SW of Otok Vir)—Area bound by line joining the following positions:
a. 44°18'N, 15°02'E.
b. 44°10'N, 15°10'E.
c. 44°11'N, 15°02'E.
d. 44°15'N, 14°56'E.

P-5 (SW of Otok Zirje)—Area bound by line joining the following positions:
a. 43°41'N, 15°36'E.
b. 43°38'N, 15°45'E.
c. 43°35'N, 15°55'E.
d. 43°30'N, 15°59'E.
e. 43°23'N, 15°44'E.
f. 43°34'N, 15°18'E.

P-6 (Korculanski Kanal)—Area bound by line joining the following positions:
a. 43°07'N, 16°49'E.
b. 43°06'N, 16°59'E.
c. 42°59'N, 16°59'E.
d. 42°59'N, 16°49'E.

P-7 (Lastovski Kanal)—Area bound by line joining the following positions:
a. 42°55'N, 17°06'E.
b. 42°55'N, 17°12'E.
c. 42°47'N, 17°19'E.
d. 42°43'N, 17°23'E.
e. 42°43'N, 17°10'E.

P-8 (S of Otok Mljet)—Area bound by line joining the following positions:
a. 42°47'N, 17°l9'E.
b. 42°41'N, 17°45'E.
c. 42°32'N, 17°42'E.
d. 42°37'N, 17°16'E.

P-9 (S of Boka Kotorska)—Area bound by line joining the following positions:
a. 42°24'N, 18°31'E.
b. 42°21'N, 18°42'E.
c. 42°09'N, 18°42'E.
d. 42°21'N, 18°22'E.

P-10 (S of Luka Budva)—Area bound by line joining the following positions:
a. 42°16'N, 18°49'E.
b. 42°08'N, 19°02'E.
c. 42°00'N, 19°00'E.
d. 42°07'N, 18°46'E.

Government

Flag of Croatia

Croatia is a presidential/parliamentary democracy. The country is divided into 20 counties and one city.

Croatia is governed by a directly-elected President who serves a renewable 5-year term. The Prime Minister is appointed by the President. The unicameral Parliament is composed of 153 directly-elected members serving 4-year terms.

The legal system is based on civil law.

The capital is Zagreb.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 6	Epiphany
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
Corpus Christi	Variable
June 22	Croatian Uprising Day
June 25	Croatian State Day
August 5	Patriotic Gratitude Day
August 15	Assumption Day
October 8	Independence Day
November 1	All Saints' Day
December 25	Christmas Day
December 26	St. Stephen's Day

The ports of Rovenj, Sibenik, Split, and Zadar observe a holiday on May 30.

The ports of Hvar, Pula, Ploce-Kordeljevo, Rijeka, and Senj observe a holiday on July 27.

The port of Dubrovnik observes a holiday on August 15.

Industries

The main industries are chemicals and plastics, machine tools, fabricated metal, electronics, pig iron and rolled steel products, aluminum, paper, wood products, construction materials, textiles, shipbuilding, petroleum and petroleum refining, food and beverage products, and tourism.

The main exports are transport equipment, textiles, chemicals, foodstuffs, and fuels. The main export-trading partners are Italy, Bosnia-Herzegovina, Germany, Slovenia, and Austria.

The main imports are machinery, transport and electrical equipment, chemicals, fuels and lubricants, and foodstuffs. The main import-trading partners are Italy, Germany, Russia, Slovenia, and Austria.

Languages

Serbo-Croatian is the official language, which is spoken by 96 per cent of the population.

Meteorology

Marine forecasts for the Adriatic Sea are available in Croatian and English from the Croatian Meteorological and Hydrographic Service (http://www.meteo.hr).

Navigational Information

Enroute Volume

Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

Maritime Claims

The maritime territorial claims of Croatia are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone **	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines. Requires advance permission or notification for innocent passage of warships in the territorial sea.

** Established as an "ecological and fisheries protection zone."

Maritime Boundary Disputes

A Croatia-Slovenia land and maritime boundary agreement, which would have ceded most of Piranski Zaliv (Pirin Bay) (45°30'N., 13°34'E.) and maritime access to Slovenia and several village to Croatia, remains controversial, has not been ratified, and has been complicated by Croatia's declaration of an ecological fisheries zone in the Adriatic Sea.

Discussions continue with Bosnia-Herzogovina over several small disputed sections of the boundary related to maritime access that hinder final ratification of the 1999 border agreement.

Pilotage

Pilotage is compulsory for all foreign vessels exceeding 500 grt. Pilotage is also compulsory for vessels carrying hazardous cargo proceeding between Croatian ports and while in Croatian waters. Certain vessels under 500 grt may be subject to pilotage should the Harbormaster's office consider this necessary.

The harbor authorities may be contacted 24 hours on VHF channel 9. The pilot associations may be contacted 24 hours on VHF channel 12.

Coastal pilotage is compulsory for all vessels carrying dangerous liquid chemicals or bulk flammable liquid gas. Vessels bound for ports open to international traffic should use coastal pilotage. Coastal pilotage should be requested 6 hours in advance.

Pollution

Any discharge of harmful waste material overboard in Croatian waters should be reported to the nearest harbormaster's office.

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Prohibited Areas

The following prohibited areas have been established in Croatian waters:

1. A sea belt, 100m wide, along the N shore of Poluotok Lustica peninsula, between Spiljice and Donji Krasici and between Rose and Rt Dobrac.
2. A sea belt, 300m wide, along the N shore of Malo More from Uvala Vodice to Rt Meded, delimited by the following shore points: 42°59.4'N, 17°28.5'E and 42°56.4'N, 17°32.8'E.
3. The sea area in the Stonski Kanal, within a line joining Rt Blaca and Zuronja.
4. In two areas within 300m of that part of the coast of Otok Lastovo from 42°45.3'N, 16°48.6'E, on the shore, to 42°45.8'N, 16°49.4'E, on the shore, including the area within 300m of the coast of Otok Mrara; and within 300m of that part of the coast of Otok Lastovo from 42°43.8'N, 16°50.2'E, on the shore, to 42°44.0'N, 16°52.1'E, on the shore.
5. A sea belt, 300m wide, along the shore of Poluotok Prevlaka peninsula, bounded by the following points on the shore:
   a. 42°24.5'N, 18°30.6'E.
   b. 42°24.5'N, 18°30.7'E.

6. A sea belt in front of Sava Kovacevic ship repair yard of Tivat, bounded by lines joining the following positions:
   a. 42°25.9'N, 18°41.8'E.
   b. 42°25.8'N, 18°41.4'E.
   c. 42°26.2'N, 18°41.3'E.
   d. 42°26.4'N, 18°41.5'E.
7. A sea belt, 300m wide, offshore of Otok Palagruza.
8. A sea belt, 300m wide, along the S coast Otok Brac from Rt Zastup to Uvala Farska, delimited by the following points:
   a. 43°17.9'N, 16°27.5'E.
   b. 43°16.2'N, 16°32.4'E.
9. A sea area in the bay of Luka Budava, SW of a line, the outermost points of which on the shore are marked by two pyramidal structures.
10. A sea area, 500m wide, offshore of Otok Goli.
11. The sea area around Brionski Otoci, bounded by lines joining the following positions:
   a. 44°56.8'N, 13°42.6'E.
   b. 44°54.9'N, 13°42.8'E.
   c. 44°53.1'N, 13°45.1'E.
   d. 44°53.9'N, 13°46.7'E.
   e. 44°54.5'N, 13°47.2'E.
   f. 44°55.5'N, 13°46.8'E.
   g. 44°56.9'N, 13°44.7'E.

The following navigation prohibited areas have been established in Croatian waters:

1. Within 300m of three sections of the coast of Otok Vis:
   a. Between 43°03.5'N, 16°03.8'E, on the shore, and 43°02.8'N, 16°03.8'E, on the shore, in the vicinity of Rt Barjak and including Otocici Barjak.
   b. Between 43°00.6'N, 16°04.6'E, on the shore, and 43°00.4'N, 16°05.0'E, on the shore, in the vicinity of Rt Stupisce.
   c. Between 43°02.4'N, 16°14.4'E, on the shore, and 43°03.9'N, 16°15.7'E, on the shore.
2. Uvala Stupica Mala and the channel between Rt Rasohe and Otocic Mazirina.
3. A sea area, 500m wide, surrounding Rt Zecevo.
4. Uvala Zagracina (44°08.2'N., 14°53.8'E.), Uvala Dumboka (44°07.2'N., 14°16.0'E.), and Uvala Bukasin (44°06.6'N., 14°56.7'E.), on the NE coast of Dugi Otok.
5. Within a 500m radius of Marinca Rat
6. Within a radius of 500m of Rt Gruj, Goli Rat, Rt Raznjic, and from position 42°43.2'N, 17°52.1'E.
7. Through Novsko Zdrilo.

Prohibited areas for vessels greater than 500 grt, and for vessels carrying dangerous substances, or which have not been certified gas-free, have been established in the following areas:

1. In Pamanski Kanal S of Rt Podvara (44°03'N., 15°18'E.).
2. In Kolocepski Kanal between Otok Kolocep (42°40'N., 18°01'E.) and Veliki Vratnik (42°45'N., 17°47'E.).
3. In Peljeski Kanal between Rt Raznjic (42°55'N., 17°12'E.) and Rt Osicac (43°01'N., 17°01'E.).
4. In the channels between Otok Kornat and Dugi Otok on the W, and Otok Pasman and Otok Ugljan on the E, from Otok Zirje (43°39'N., 15°40'E.) to Otok Molat (44°15'N., 14°49'E.).

In exceptional circumstances and with a pilot embarked, vessels carrying oil may navigate in each of the prohibited areas listed above between October 1 and March 31.

Regulations

Navigational warnings and weather messages are broadcast in English from Bar, Dubrovnik, Split, and Rijeka.

Vessels calling at Croatian harbors must give 24 hours notice of ETA through any Croatian coast radio station.

At most of the major ports in Croatia, vessels are subject to regulations, a copy of which should be obtained on arrival.

Special rules are in force for all foreign naval and surveying vessels visiting Croatian coastal waters.

Vessels transiting this area should obtain a copy of The International Convention for the Prevention of Pollution from Ships, 1973, of which Annexes I, II, and V are mandatory, and III and IV are voluntary.

The Mediterranean Sea is defined as a Special Area for the purposes of the Convention.

Annex I prohibits the discharge of any oil or oil mixtures into the Special Area.

Annex II is related to Noxious Liquid Substances in bulk.

Annex V regulates the disposal of garbage from ships and contains special provisions for the applicable area. Any discharge of harmful waste material overboard, in Croatian waters, should be reported to the closest port authority.

Dredges and other craft engaged in works in harbors, or in much-frequented waters on the coasts of Croatia, where they are liable to be affected by the wash of passing vessels, carry the International Code signal signifying reduce speed.

All vessels in the vicinity must reduce their speed, so as to avoid damage or disturbance of the work. Infringements of this order are punishable with fines or arrest and payment of any damage occasioned.

The following Croatian ports are open to international traffic:

1. Umag.
2. Porec.
3. Rovinj.
4. Pula.
5. Rasa-Brsica.
6. Rijeka.
7. Mali Losinj.
8. Senj.
9. Maslenica.
10. Zadar.
11. Sibenik.
12. Split.
13. Ploce.
14. Metkovic.
15. Korcula.
16. Dubrovnik.

The following Croatian ports are open to international traffic on a seasonal basis (April 1 to October 31) only:

1. Umag (ACI Marina).
2. Novigrad (Istria).
3. Plominska Luka.
4. Kanegra.
5. Sali.
6. Bozava.
7. Primosten.
8. Hvar.

9. Stari Grad.
10. Vela Luka.
11. Ubli (Lastovo).
12. Vis.
13. Komiza.
14. Cavtat.

Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR)

The NIR of the PMoU has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the Paris MoU region.

The report should be sent, as follows:

a. 72-hour report—the designated Port State Control authority.

b. 24-hour report—the port authority.

For further information, see **North Atlantic Ocean—Regulations—Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR).**

Search and Rescue

The Maritime Rescue Coordination Center (MRCC) is located in Rijeka and can be contacted, as follows:

1. Telephone: 385-51-9155
   385-51-312253
   385-51-312255
   385-51-312303
   385-51-312304
2. Facsimile: 385-51-312254
3. E-mail: mrcc@pomorstvo.hr

Infromation concerning Maritime Rescue Coordination Subcenters (MRSC) is given in the table titled **Croatia—MRSC Contact Information**.

A network of coast radio stations maintains a continuous listening watch on international distress frequencies. MRCC Rijeka also maintains a continuous listening watch on 2187.5 kHz.

Ship Reporting System

The Adriatic Ship Reporting System (ADRIREP), a mandatory system for certain vessels, is in effect for the Adriatic Sea N of latitude 40°25'N. For further information, see **Italy—Ship Reporting System**.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is maintained from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Croatia are, as follows:

1. Off Otok Palagruza. (Government of Croatia)
2. In Vela Vrata. (Government of Croatia)

U.S. Embassy

The U.S. Embassy is situated at 2 Thomas Jefferson Street, Zagreb.

The mailing address is 2 Thomas Jefferson Street, 10010 Zagreb.

U. S. Embassy Croatia Home Page
http://zagreb.usembassy.gov

Croatia—MRSC Contact Information

	Telephone	Facsimile	E-mail
MRSC Rijeka	385-51-214031	385-51-313265	
MRSC Dubrovnic	385-20-418989	385-20-419211	—
MRSC Ploce	385-20-679008	385-20-670206	—
MRSC Pula	385-52-535870 385-52-222037	385-52-222037	pula,pomorskipromet@pomorstvo.hr
MRSC Senj	385-53-881301	385-53-884128	—
MRSC Sibenik	385-22-217214	385-22-212626	—
MRSC Split	385-21-362436	385-21-346555	—
MRSC Zadar	385-23-254880	385-23-254876	zadar.pomorskipromet@pomorstvo.hr

CUBA

General	**143**
Areas to be Avoided	**143**
Buoyage System	**143**
Cautions	**143**
Currency	**144**
Firing Areas	**144**
Government	**144**
Holidays	**144**
Industries	**144**
Languages	**144**
Navigational Information	**144**
Pilotage	**145**
Pollution	**145**
Regulations	**145**
Search and Rescue	**145**
Signals	**145**
Time Zone	**146**
Traffic Separation Schemes	**146**
U.S. Embassy	**146**
Appendix—Daytime Port Signals	**147**

General

Cuba is an island lying about 85 miles S of Florida, with the Caribbean Sea bordering its S coast and the North Atlantic Ocean bordering its N coast.

The climate is tropical and is moderated by trade winds. The dry season is from November to April while the rainy season is from May to October.

The terrain is mostly flat to rolling plains, with rugged hills and mountains in the SE. Rivers are numerous, but unsuitable for navigation.

Areas to be Avoided

An Area to be Avoided, located on the N coast of Cuba, is bounded by the coast and lines joining the following positions:

a. 23°05.6'N, 81°28.5'W. (Punta Maya Light)
b. 23°10.6'N, 81°28.5'W.
c. 23°19.5'N, 81°11.5'W.
d. 23°14.6'N, 81°07.2'W. (Cayo Piedras del Norte)
e. 23°11.5'N, 81°07.2'W. (Punta Morales)

All vessels greater than 150 grt, except tour vessels, shall not enter this area.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation along the coasts of Cuba have occasionally been reported to be unreliable.

Cautions

Special Warning 29 (Issued 1 March 1962; updated 1 January, 1982; reviewed 9 November 1994)

1. Mariners are advised to use extreme caution in transiting the waters surrounding Cuba. Within distances extending in some cases up to 20 miles from the Cuban coast, vessels have been stopped and boarded by Cuban authorities. Cuba vigorously enforces a 12-mile territorial sea extending from straight baselines drawn from Cuban coastal points. The effect is that Cuba's claimed territorial sea extends in many cases beyond 12 miles from Cuba's physical coastline.

2. The publication of this notice is solely for the purpose of advising U.S. mariners of information relevant to navigational safety and in no way constitutes a legal recognition of the validity of any foreign rule, regulation, or proclamation so published.

Guantanamo Bay Naval Defensive Sea Area

At no time shall any ship or other craft, other than public ships of the United States, be navigated into Guantanamo Bay Naval Defensive Sea Area, unless authorized by the Secretary of the Navy. Commander, U.S. Naval Base, Guantanamo Bay, Cuba, has been authorized to act on requests from vessels whose normal legitimate business requires entry into Guantanamo Bay.

U.S. Naval Base Guantanamo maintains a communications guard (call sign Guantanamo Bay Port Control) on VHF channels 12 and 16.

The Guantanamo Bay Naval Defensive Sea Area is the area between the high and low water marks and the sea and in and about the entrance channel within the following lines:

1. A line bearing 180° and extending 3 miles from the shoreline of the E boundary of the U.S. Naval Base Guantanamo (longitude 75°05'1502"W).
2. A line bearing 180° and extending 3 miles from the shoreline of the W boundary of the U.S. Naval Base Guantanamo (longitude 75°14'02"W).
3. A line joining the outer extremities of the bearing lines described above in paragraph 1 and paragraph 2.

All vessels are directed to stand clear of the Guantanamo Bay Naval Defensive Sea Area.

Currency

The official unit of currency is the Cuban peso, consisting of 100 centavos.

Firing Areas

U.S. military exercise areas are established in the waters S of the Florida Keys and off Guantanamo Bay.

Local Notice to Mariners are promulgated giving the limits of the area, nature of exercise, time and duration, and applicable navigational rules.

Government

Flag of Cuba

Cuba is a communist state comprised of 14 provinces and one special municipality.

Cuba is governed by a President appointed by the National Assembly for a 5-year term. The unicameral National Assembly is composed of 614 members serving 5-year terms. They are directly elected from slates approved by special candidate commissions; no other political candidates are allowed to stand for office.

The legal system is based on Spanish law and American law, with large elements of Communist legal theory.

The capital is Havana.

Holidays

The following holidays are observed:

January 1	New Year's Day/Liberation Day
January 2	Public Holiday
May 1	Labor Day
May 20	Independence Day (from Spain)
July 25-27	Revolution Days
October 10	Commemoration of Wars of Independence (Grito de Yara)
December 25	Public Holiday
December 31	Public Holiday

Industries

The main industries are sugar milling and refining, petroleum refining, food and tobacco processing, nickel, steel, cement, pharmaceuticals, and agricultural machinery.

The main exports are sugar, nickel, tobacco, fish, medical products, citrus, and coffee. The main export-trading partners are the Netherlands, Canada, China, and Spain.

The main imports are petroleum, food, machinery and equipment, and chemicals. The main import-trading partners are China, Spain, Canada, the United States, Germany, Italy, and Brazil.

Languages

Spanish is the official language.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Cuba are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.

Continental Shelf Depth of 200m.

* Cuba claims straight baselines enclosing varying distances of water between Cabo Frances, Isla de la Juventad, Cayo Breton, and Cabo Cruz as internal waters.

Pilotage

Pilotage is compulsory for all foreign vessels for entry, departure, berthing, casting off, and towing. Pilotage is provided by Practicos de Cuba, who can be contacted, as follows:

1. Telephone: 53-7-8608516
   53-7-8621840
   53-7-8641037
2. Facsimile: 53-7-8668756
3. E-mail: onp@ceniai.inf.cu
4. Web site: http://www.practicosdecuba.transnet.cu

The port operations of Guantanamo Bay (19°54'N., 75°10'W.) are controlled by U.S. Naval authorities.

Pollution

Discharging hydrocarbons, pollutants, or garbage is prohibited within the territorial waters of Cuba or its Exclusive Economic Zone.

Pollution reports should be forwarded to the Ministry of Transport, Maritime Safety and Survey Division (CENTRO AVISO NACIONAL), through the nearest coast radio station and should include the following information:

1. Date and time of discovery
2. Position, direction of drift, approximate size, and description of type of substance.
3. Proximity to the nearest Cuban coastal zone, mentioning the port and provincial authority.
4. Name and nationality of vessels found close to the substance.
5. Any other relevant information

The Maritime Safety and Survey Division can also be contacted, as follows:

1. Telephone: 53-7-8816607
   53-7-8819498
2. Facsimile: 53-7-8811514
3. Telex: 28-511229 MITRANS CU
4. E-mail: dsim@mitrans.transnet.cu

Regulations

Vessels should send their ETA to Mambisas Habana. If another port other than Habana is the vessel's first port of call, the ETA should also be sent to Mambisas (name of port).

All vessels approaching Cuban ports should contact the Port Signal Station on VHF channel 16, or by light signals, to announce their presence, nationality, and characteristics.

The maximum permitted vessel speed in inner Cuban waters is 6 knots, unless otherwise directed.

Particularly Sensitive Sea Areas (PSSA)

The waters surrounding the Sabena-Carmaguey Archipelago have been declared a PSSA by the International Maritime Organization.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

Prohibited Areas

North coast.—Vessels are prohibited from anchoring or remaining in the area of the territorial sea of Cuba between the beacon in the vicinity of the mouth of the Rio Jaimanitas (23°05.6'N., 82°29.4'W.) and Arrecife de Nicolao (23°14.2'N., 80°21.8'W.). This prohibition does not impede the passage of vessels through this area to or from Cuban ports or the right of innocent passage.

South coast.—Vessels are prohibited from anchoring or remaining in the area of the territorial sea of Cuba between longitude 75°14'W and longitude 76°30'W. This prohibition does not impede the passage of vessels through this area to or from Cuban ports or the right of innocent passage.

Navigation is prohibited in the area bounded by lines joining the following positions:

a. 22°02'45"N, 80°29'00"W.
b. 22°50'00"N, 80°35'00"W.
c. 22°40'00"N, 81°03'00"W.
d. 22°45'00"N, 81°20'00"W.
e. 22°05'47"N, 81°17'00"W.

Search and Rescue

The Maritime Safety and Survey Directorate of the Cuban Ministry of Transport is responsible for coordinating search and rescue operations and can be contacted by e-mail, as follows:

dsim@mitrans.transnet.cu

The Maritime Rescue Coordination Center (MRCC) Cuba can be contacted be telephone at 53-7-330364.

A network of coast radio stations maintains a continuous listening watch on international distress frequencies.

Signals

Cuba has adopted the storm and hurricane signal system of the United States, as described in the table titled **Cuba—Storm Warning Signals**.

Cuba—Storm Warning Signals

Day signal	Night signal	Meaning
One triangular red flag	One red light over one white light, vertically disposed.	Small craft advisory. Winds over 18 knots expected.

Cuba—Storm Warning Signals		
Day signal	**Night signal**	**Meaning**
Two triangular red flags, vertically disposed	One white light over one red light, vertically disposed.	Gale warning. Winds of 34 to 47 knots expected.
One square red flag, with a centered black square	Two red lights, vertically disposed.	Storm warning. Winds of 48 to 63 knots expected.
Two square red flags, with a centered black square, vertically disposed	One white light between two red lights, vertically disposed.	Hurricane warning. Winds over 63 knots expected.

For Cuban port signal purposes, vessels are classified by length, as follows:

1. Long—More than 170m in length.
2. Average—130 to 170m in length.
3. Short—Less than 130m in length.

Cuban port signals consist of a code of flags by day, or lights at night, to indicate the presence of approaching vessels, and for traffic control. Day signals are shown in the accompanying graphic in the Appendix. Night signals, shown from lights on a mast, are, as follows:

Cuba—Port Signals	
Signal	**Meaning**
R G R W R G	This is the position of the various lights on the mast. There are six lamps arranged vertically which combine to make the appropriate signal. The distance between the lights as seen from the vessel will vary dependent upon the signal being displayed and the lamps in use. G = Green light. R = Red light. W = White light
G	One or more vessels approaching port.
G G	Vessel(s) 1 or 2 miles off maneuvering to enter port with clear approach to the channel.
G R	Vessel(s) 1 or 2 miles off has requested pilot. Do not enter. Wait there for pilot.
W	Pilot launch returning to station.
R R	Channel not clear.
R R R	Entry and exit prohibited for all types of vessels.
R G W	Vessel close to the entrance of the channel is to keep well clear

Cuba—Port Signals	
Signal	**Meaning**
R R W	Works in progress in the channel; small craft may enter or leave with extreme caution.
R G G	Entry prohibited due to rough seas.
G W G	VHF out of service. Communicate directly with the pilots on VHF channel 13.

Time Zone

The Time Zone description is ROMEO (+5). Daylight Savings Time (QUEBEC (+4)) is observed from the middle of March until the last Sunday in October. The exact changeover date should be obtained from local authorities.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Cuba are, as follows:

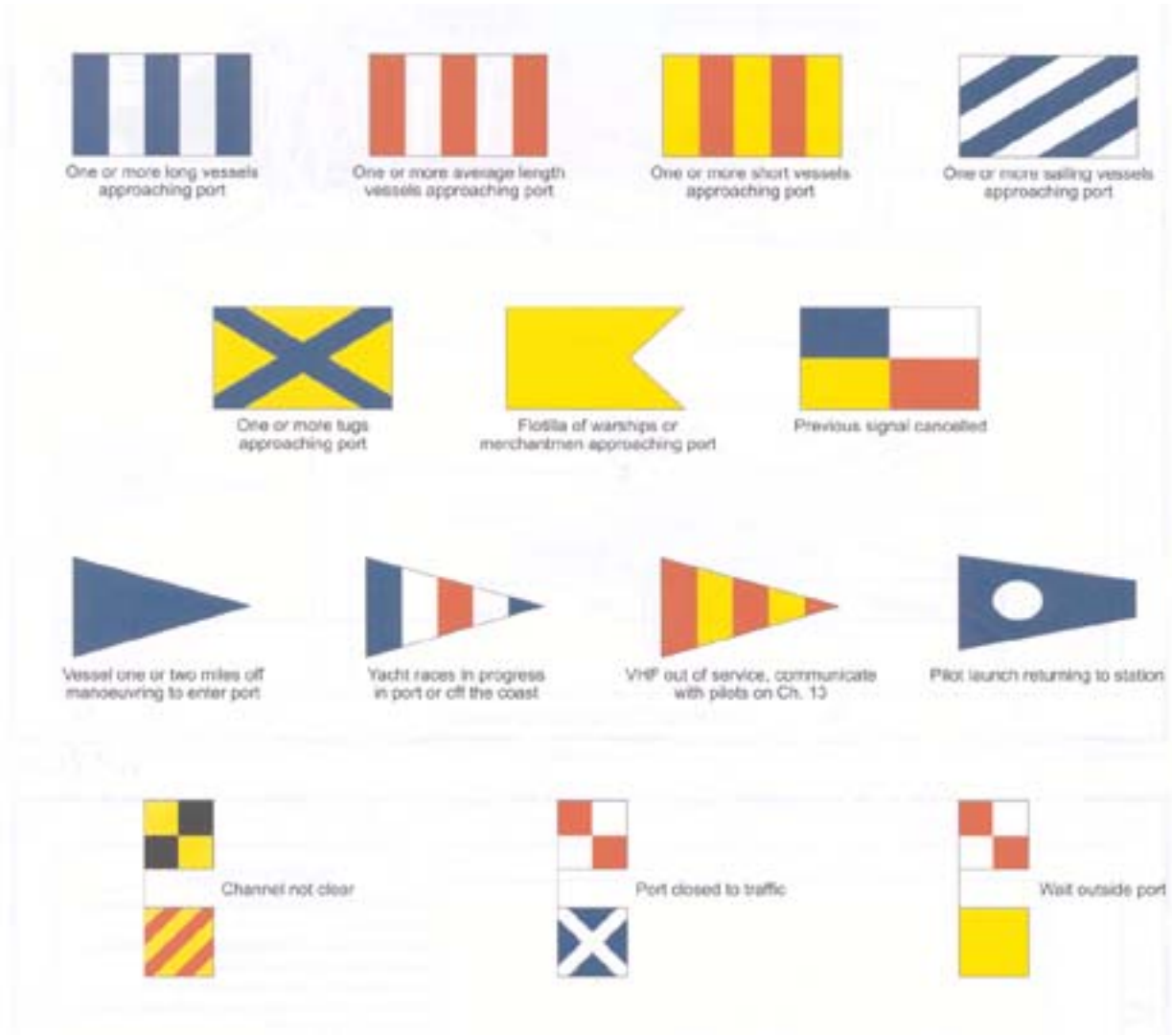
1. Off Cabo San Antonio. (IMO adopted)
2. Off La Tabla. (IMO adopted)
3. Off the coast of Matanzas. (IMO adopted)
4. In Old Bahama Channel. (IMO adopted)
5. Off Punta Maternillos. (IMO adopted)
6. Off Punta Lucretia. (IMO adopted)
7. Off Cabo Maisi. (IMO adopted)

U.S. Embassy

The United States does not maintain diplomatic relations with Cuba. The U.S. Interests Section is situated at the Swiss Embassy, Calzada between Calle L and Calle M, Vedado Seccion, Havana.

U. S. Interests Section Cuba Home Page
http://havana.usint.gov

Appendix—Daytime Port Signals



Cuba—Port Signals (Day)

CURACAO

General	**149**
Buoyage System	**149**
Currency	**149**
Firing Areas	**149**
Government	**150**
Holidays	**150**
Industries	**150**
Languages	**150**
Meteorology	**150**
Navigational Information	**150**
Pilotage	**150**
Regulations	**150**
Search and Rescue	**150**
Time Zone	**151**
U.S. Embassy	**151**

General

Curacao is an island in the Caribbean Sea located about 35 miles off the coast of Venezuela.

The tropical climate of the island is eased by the Northeast Trade winds, resulting in mild temperatures. It is semi-arid, with an average yearly rainfall of about 60 cm.

The terrain is generally low and hilly.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Many small fishing vessels may be found anchored up to 3 miles off the coasts of Bonaire and Curacao. It is very common for these vessels not to show any lights.

Currency

The official unit of currency is the Netherlands Antilles guilder (also known as the gulden or the florin), consisting of 100 cents.

Firing Areas

Air and surface firing exercise areas are located from 8 to 26 miles SW of Curacao.

Government

Curacao is an integral part of the Kingdom of the Netherlands. The island is fully autonomous concerning internal affairs. The Dutch government is responsible for defense and foreign affairs.

Curacao is governed by a Governor-General, appointed by the Queen following legislative elections. The Prime Misiter is elected by the Staten (parliament). The unicameral Staten is composed of 21 directly-elected members serving 4-year terms.

The legal system is based on Dutch civil law, with some English common law influence.

The capital is Willemstad.

Flag of Curacao

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
April 30	Queen's Birthday
May 1	Labor Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
July 1	Emancipation Day
July 2	Flag Day
Last Monday in July	Carnival Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries include tourism, petroleum refining and transshipment, and offshore banking.

The main export is petroleum products. The main exporttrading partners are the United States, Guatemala, Singapore, the Dominican Republic, and Haiti.

The main imports are crude oil, food, and manufactured goods. The main import-trading partners are Venezuela, the United States, and Brazil.

Languages

Dutch is the official language, although Papiamento, a Spanish-Portuguese-Dutch-English dialect, predominates. English is also widely understood.

Meteorology

Marine weather forecasts are available in English from the Meteorological Service (http://www.weather.an).

Navigational Information

Enroute Volumes

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2.

Maritime Claims

The maritime territorial claims of Curacao are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	To median lines.

* Claims straight baselines. Requires advance permission or notification for innocent passage of warships in the territorial sea.

Pilotage

Pilotage is essential at all ports for anchoring and berthing alongside.

Regulations

Vessels carrying dangerous cargo must obtain special permission before entering any port. Cargo in transit must be stored in a sealed hold while in port.

It is prohibited to dump oily wastes overboard within 50 miles of the coast.

Search and Rescue

The Netherlands Coastguard is responsible for coordinating search and rescue operations. The Joint Rescue Coordination Center (JRCC) Curacao can be contacted, as follows:

1. Telephone: 599-9-4637700
2. Facsimile: 599-9-4637950
3. E-mail: rcc.curacao@mindef.nl
   rcc.curacao@gmail.com

Curacao Coast Radio Station (PJC) maintains a continuous

listening watch for distress traffic on international distress frequencies.

A major search and rescue center for the southern Caribbean Sea is located in Curacao. The Royal Netherlands Naval Air Service provides fixed wing aircraft only for search purposes. The is a communications link with the U.S. Coast Guard Rescue Coordination Center in San Juan, Puerto Rico.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Consulate is situated at J. B. Gorsiraweg #1, Willemstad.

The mailing address is P.O. Box 158, Willemstad, Curacao.

U. S. Consulate Curacao Home Page
http://curacao.usconsulate.gov

CYPRUS

General	**153**
Buoyage System	**153**
Cautions	**153**
Currency	**153**
Firing Areas	**153**
Government	**153**
Holidays	**154**
Industries	**154**
Languages	**155**
Navigational Information	**155**
Pollution	**155**
Regulations	**155**
Search and Rescue	**155**
Submarine Operating Areas	**155**
Time Zone	**155**
U.S. Embassy	**155**
Vessel Traffic Service	**155**

General

Cyprus is located in the Mediterranean Sea S of Turkey.

The climate is temperate Mediterranean, with hot dry summers and cool wet winters.

The terrain is a central plain with mountains to the N and S. There are scattered, but significant plains along the S coast.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Locust Reports

See **Egypt—Cautions** for further information.

Currency

The official unit of currency is the Cypriot pound, consisting of 100 cents. Also in use is the new Turkish lira, consisting of 100 kurus.

Firing Areas

In Episkopi Bay, a firing practice target is anchored about 6 miles E of Cape Aspro.

Government

Flag of Cyprus

Cyprus is an independent republic. The country is divided into six districts. Great Britain retains sovereignty over the areas containing its military bases on the island at Akrotiri and Dhekelia.

Cyprus is governed by directly-elected President who serves a 5-year term. The unicameral House of Representatives is composed of 80 directly-elected members (56 from the Greek Cypriot community and 24 from the Turkish Cypriot community) serving 5-year terms. The Turkish Cypriot members have not attended legislative sessions since 1963.

The legal system is based on common law with civil modifications.

The capital is Nicosia.

Since 1974, the Republic of Cyprus has been divided de facto into two autonomous areas. The Greek Cypriots control the only internationally-recognized government of the republic, although their effective authority is limited to the Greek Cypriot communities.

In 1983, Turkish Cypriots declared independence and formed the "Turkish Republic of Northern Cyprus," with its capital at Lefkosa. The Turkish Republic has been recognized only by Turkey. The Greek and Turkish nations are separated by a United Nations buffer zone.

Holidays

The following holidays are observed:

January 1	New Year's Day
March 25	Greek Independence Day
April 1	EOKA Day
May 1	Labor Day
October 1	Independence Day

The following additional holidays are observed by the Greek Orthodox Cypriot community:

January 6	Epiphany
May 6	Green Monday
Good Friday	Variable
Holy Saturday	Variable
Easter Monday	Variable
August 15	Assumption Day
October 28	OHI Day
December 25	Christmas Day
December 26	Boxing Day

The following additional holidays are observed by the Armenian, Catholic, and Protestant Cypriot community:

January 6	Epiphany
Good Friday	Variable
Easter Monday	Variable
December 25	Christmas Day
December 26	Boxing Day

The following holidays are observed by the Turkish Cypriot community:

January 1	New Year's Day
February 13	Founding of the Turkish Federated State of Cyprus
April 23	Opening of the Turkish Grand National Assembly
May 19	Turkish Youth Day
August 30	Turkish Victory Day
October 29	Turkish Republic Day

Islamic holidays, which are subject to the appearance of the moon, include Ramazan Bairam (End of Ramadan), Kurban Bairam (End of Pilgrimage), and the Prophet's Birthday.

Industries

The main industries are tourism, food and beverage processing, cement and gypsum production, ship repair, textiles, chemicals, metal products, wood, paper, stone, and clay products.

Information on imports and exports can be found in the accompanying table.

Area	Main exports	Main export-trading partners	Main imports	Main import-trading partners
Republic of Cyprus	Citrus Potatoes Pharmaceuticals Cement Clothing Cigarettes	France United Kingdom Greece Germany	Consumer goods Petroleum and lubricants Machinery Intermediate goods Transport equipment	Greece Italy United Kingdom Germany Israel
North Cyprus	Citrus Dairy products Potatoes Textiles	France United Kingdom Greece Germany	Vehicles Fuels Cigarettes Food Minerals Chemicals Machinery	Greece Italy United Kingdom Germany Israel

Languages

Greek and Turkish are the official languages. English is widely spoken.

Navigational Information

Enroute Volume
Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

Maritime Claims
The maritime territorial claims of Cyprus are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines.

Pollution

MARPOL Special Area
The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.
Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

The Republic of Cyprus has designated the sea ports of Limassol, Larnaca, and Paphos as the only legal ports of entry into and exit from Cyprus. All of these ports are in the S Greek Cypriot-controlled part of the island.
Entry or exit through any other seaport is not authorized by the government of the Republic of Cyprus.
Vessels may cross from Turkey to any arrival port in Cyprus and may travel from the N part of Cyprus to Turkey, but may not cross from the N part of Cyprus to any S Cypriot port. A passage from a S Cypriot port to a N Cypriot port is inadvisable.
Normal international courtesies, such as flying the flag of Cyprus at the foremast, should be carefully adhered to by vessels while in the waters and ports of Cyprus.

European Union Expanded Inspection (EI) Notification
Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.
The reports should be sent as listed in the table titled **Cyprus—EI Contact Information**.
For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

Cyprus—EI Contact Information	
Mail	Department of Merchant Shipping
	9 Kyllinis Street
	Mesa Geitonia
	CY-4007 Lemesos Cyprus
Telephone	357-25-848100
Facsimile	357-25-848200
E-mail	psc@dms.mcw.gov.cy

European Union Dangerous and Polluting Cargo Notification
Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Search and Rescue

The Joint Rescue Coordination Center (JRCC) Larnaca is responsible for search and rescue operations in Cypriot waters and can be contacted, as follows:

1. Telephone: 357-24-304723
   357-24-304737
   357-24-643005
2. Facsimile: 357-24-643254
3. E-mail: jrcc_cyp@cytanet.com.cy
   rescuecy@gmail.com

Cyprus operates a maritime radio service which maintains a continuous listening watch on international distress frequencies.

Submarine Operating Areas

Submarines frequently exercise in an area centered about 23 miles NNW of Cape Kormakiti (35°24'N., 32°55'E.).

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time (CHARLIE (-3)) is observed from the last Sunday in March until the last Sunday in October.

U.S. Embassy

The U.S. Embassy is situated at the corner of Metochiou Street and Ploutarchou Street, Engomi 2407, Nicosia.
The mailing addresses is P.O. Box 24536, 1385 Nicosia.

U. S. Embassy Cyprus Home Page
http://cyprus.usembassy.gov

Vessel Traffic Service

A Vessel Traffic Service operates in the approaches to Li-

massol (34°39'N., 33°02'E.). For further information, see Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

DENMARK

General	**157**
Buoyage System	**157**
Cautions	**158**
Currency	**158**
Firing Areas	**158**
Fishing Areas	**159**
Government	**162**
Holidays	**162**
Ice	**162**
Industries	**163**
Languages	**163**
Meteorology	**163**
Mined Areas	**163**
Navigational Information	**166**
Pilotage	**166**
Pollution	**169**
Regulations	**170**
Search and Rescue	**171**
Ship Reporting System	**171**
Signals	**171**
Submarine Operating Areas	**172**
Time Zone	**172**
Traffic Separation Schemes	**172**
U.S. Embassy	**173**

General

Denmark is located in Northern Europe, bordering the Baltic Sea and the North Sea, on a peninsula N of Germany.

The climate is temperate, humid and overcast with mild, windy winters and cool summers.

The terrain is low and flat, rising to gently rolling plains.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Owing to local circumstances, the marks for a dredged channel are often placed slightly outside the limits of the channel. Such marks should be passed at a safe distance.

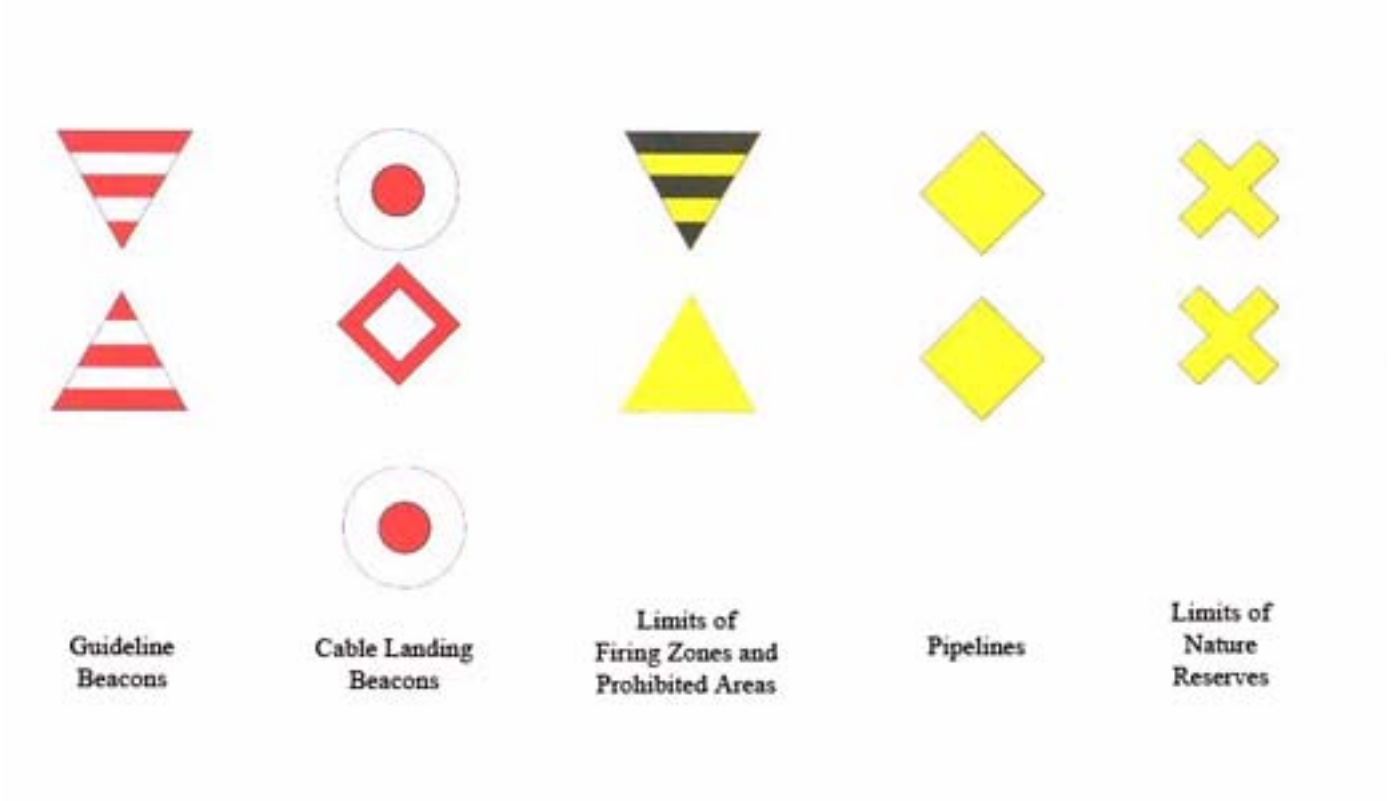
Daybeacon paint schemes are chosen, based on the surroundings or background, to enhance the visibility of the beacon.

Red and yellow horizontally-striped top marks do not indicate channels.

In waterways which can be entered from more than one direction, the conventional direction of buoyage changes, as follows:

1. Limfjordem—at Egholm (57°03'N., 9°53'E.).
2. Als Sund—at Christian X Bridge, Sonderborg (54°55'N., 9°45'E.).
3. Waters S of Fyn—at Svendborg Havn (55°04'N., 10°37'E.) and S of Strymo (54°53'N., 10°36'E.).
4. Smalandsfarvandet—at Dronning Alexandrine Bridge (54°59'N., 12°10'E.).

In inshore waters, some aids may be withdrawn or altered during the winter, or when ice is forming or breaking up. Lighted buoys may be replaced by unlighted buoys; unlighted buoys may be replaced by spar buoys or floating beacons. The replacements have the same charactaristics at the original buoyage but may be without topmarks. changes may be announced by Notice to Mariners. Buoyage may be damaged,



Denmark—Daybeacon Topmarks

displaced, or sunk if subject to heavy ice movement.

Lighted buoys marking transit routes, including Route T; traffic separation schemes are maintained as long as possible and are only withdrawn or replaced in severe ice conditions.

Ice may also wear the color off buoys; topmarks or reflectors may be lost or damaged.

Submarine cables and pipelines are marked by pairs of beacons, as follows:

1. Front beacon—A white circular mark with a red center. If lighted, a fixed red light will be displayed.
2. Rear beacon—A white circular mark above a white diamond-shaped mark with a red border. If lighted, a fixed red light over a fixed white light will be displaysd.

Lighted buoys with the word “Kabel” in black letters may be laid along the line of the cable.

Cautions

In conjunction with the establishment of GMDSS (Global Maritime Distress and Safety System), numerous medium frequency radiobeacons situated around the coast of Denmark are reported (1999) to have been discontinued.

Air Cushion Vehicles operate between Malmo and Kobenhavn, on the same route as hydrofoils. They have a maximum speed of 35 knots and operate in accordance with the International Rules of the Road. When airborne, they carry a rotating yellow warning light. The vehicle makes difficult leeway with the wind abeam. Signals made on a ship's bell are difficult to hear aboard the air cushion vehicle.

After heavy storms sands erodes from the W and NW coasts of Jutland and is deposited in the harbor entrances on the W coast of Denmark. These deposits cause changes to the sea bed and may result in unpredicatable current and wave conditions. Vessels should contact the port authorities for the latest information prior to entering these harbors.

Many Danish lighthouses, particulary those in Kattegat and Storebaelt, are built on reefs and have foundations not visible below the surface. Shoal water may exist within 30m of the base of each lighthouse.

Currency

The official unit of currency is the Danish krone, consisting of 100 ore.

Firing Areas

Information on Danish Firing Practice Areas is given in the table titled **Denmark—Firing Practice Areas**. While every effort has been made to ensure the information is up-to-date and accurate, mariners should be advised that these firing areas are subject to change.

Information relative to the times of firing practice in these areas is disseminated, as follows:

1. Monthly via the Danish Notice to Mariners.
2. Daily through the Waterways Notices broadcast by Danmarks Radio Programme 1 immediately following the scheduled weather bulletin at 1645 UTC.

3. Through the VHF channel and/or telephone number of each designated safety office. The VHF radio is operation from 1 hour before commencemnt of firing until the termination of firing.

Generally, there are two types of restrictions placed on firing areas in Danish waters, in conjunction with firing practices, as follows:

1. A temporary danger area is established and vessel traffic is urged to show consideration.
2. All navigating anchoring, and fishing is prohibited within that part of the area in Danish territorial waters and navigation is dangerous during firing in the entire area.

Danish authorities advise that violators will be subject to punishment.

Fishing Areas

General

Bottom net fishing in Danish waters takes place in inshore areas in depths of 7 to 10m. Bottom nets are normally attached to poles sunk in the sea bed, but they may also be secured with anchors in waters with strong currents or a rocky sea bed. Bottom net poles are mainly constructed of timber and are at risk of damage by marine organisms or ice. Broken net posts can pose a danger to small craft because they often break off below the surface.

Danish fishing vessels may be anchored by a long scope of cable to which a large anchor buoy may be attached about 150m from the vessel. Other vessels should pass astern of the fishing vessel.

For further information, see **Baltic Sea—Fishing Areas**.

Marking of Fixed Fishing Gear

In Danish waters, fixed fishing gear is marked in accordance with the direction of navigation for inbound vessels. In general, when the outermost pile in a series of nets stands in a depth of over 2m, the pile is marked by two black flags and two light reflectors. The outermost main pile of fixed fishing gear should also be marked, as follows:

1. Inbound vessels required to pass gear to starboard—Quick flashing green light.
2. Inbound vessels required to pass gear to port—Quick flashing red light.

At prescribed navigational openings, the main pile must display a black flag and a yellow reflector.

Denmark—Firing Practice Areas

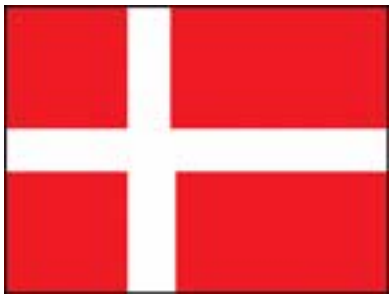
Area Name	VHF Channels	Area Authority/Telephone Number	Position
West Coast			
EK D 373 Romo W [1]	—	Flyvestation Skydstrup Telephone: 45-74-54-13-40	55°10'N, 8°17'E
EK R 38 Romo E [1, 3]	11 and 16 Call sign: Fly Romo	Romo Safety Office Telephone: 45-73-75-52-19 Mobile: 45-21-48-72-90	55°12'N, 8°31'E
[3] When firing is to take place, signals are shown from masts located in the following position: a. 55°10'15.6"N, 8°30'32.4'E. b. 55°10'29.4"N, 8°32'17.4'E. c. 55°11'00.0"N, 8°33'37.2'E. d. 55°11'32.4"N, 8°33'37.2'E. e. 55°11'27.0"N, 8°33'34.8'E. (control tower) During daylight hours, one ball is displayed from each signal mast; a white flashing light (60 flashes per minute) is also displayed from the signal mast at the control tower. During the hours of darkness, the signal masts will display a fixed red light. These signals are displayed from 1 hour prior to the beginning of the firing until the termination of the firing.			
EK D 381 Kallesmaersk W [1, 2, 4]	6, 8, and 16 Call sign: Oksbol Lyngby Radio broadcasts firing warnings at 0705 and 1705	Oksbol Safety Office Telephone: 45-76-54-12-13 Web: http://www.forsvaret.dk/oksbl	55°35'N, 8°06'E
EK D 380 Kallesmaersk E [1, 2, 4]			
EK R 33 Vejers [1, 2, 4]			
[4] During daylight hours, the N signal mast (55°37'14.4"N., 8°07'02.4"E.) and the S signal mast (55°33'31.8"N., 8°04'40.2"E.) will display one white flashing light (60 flashes per minute). During the hours of darkness, the signal masts will display red and white quick flashing lights (30 flashes per minute). These signals are displayed from 1 hour prior to the beginning of the firing until the termination of the firing.			

Denmark—Firing Practice Areas			
Area Name	**VHF Channels**	**Area Authority/Telephone Number**	**Position**
15 Nymindegab [1, 2, 5]	6, 8, and 16 Call sign: Nymindegab	Lokalstotteelement Nymindegab Telephone: 45-76-52-33-34	55°50'N, 8°10'E
[5] During daylight hours, the N signal mast (55°50'17.4"N., 8°09'32.4"E.) will display one ball and the S signal mast (55°49'19.8"N., 8°10'04.2"E.) will display will display red and white quick flashing lights (30 flashes per minute). During the hours of darkness or bad visibility, the S signal mast will display red and white quick flashing lights (30 flashes per minute). These signals are displayed from 1 hour prior to the beginning of the firing until the termination of the firing.			
EK R 48 Tranum S [1, 2, 6]	9, 12, 13, and 16 Call sign: Tranum	Tranum Safety Office Telephone: 45-98-23-50-88	57°12'N, 9°29'E
EK D 370 Blokhus [1, 2, 6]			
[6] During daylight hours, Signal Mast 1 (57°10'48.0"N., 9°26'36.0"E.) and Signal Mast 2 (57°12'24.0"N., 9°30'06.0"E.) will display a white flashing light (60 flashes per minute). During the hours of darkness the signal masts will display a red and white quick flashing lights (30 flashes per minute). These signals are displayed from 1 hour prior to the beginning of the firing until the termination of the firing.			
EK D 389 Skagen N [1]	—	ADF Telephone: 45-89-43-30-99	58°15'N, 10°30'E
East Coast			
EK R 45 Hevring [1, 2, 7]	—	Camp Hevring Telephone: 45-86-48-80-69	56°32'N, 10°26'E
[7] During daylight hours, the following signals are displayed: 1. East signal mast (56°31'18.6"N., 10°26'28.2'E.)—One ball and a white flashing light (60 flashes per second). 2. West signal mast (56°31'52.8"N., 10°24'21.0'E.)—One ball. From April 1 until November 15, supplementary markings, consisting of posts with restriction signs, will be displayed along the E boundary from the coast out to a distance of about 300m. During the hours of darkness the E signal mast will display red and white quick flashing lights (30 flashes per minute). These signals are displayed from 1 hour prior to the beginning of the firing until the termination of the firing.			
EK D 352 Lysegrund N [1]	—	ADF Telephone: 45-89-43-30-99	56°17'N, 11°50'E
EK D 353 Lysegrund S [1]			
Sjaelland—North Coast			
EK R 11 Sjaellands Odde W [1, 2, 8]	6 and 16 Call sign: Gniben Radio	VBK Telephone: 45-59-32-30-00	56°00'N, 11°16'E
EK R 12 Gniben [1, 2, 8]			
EK R 13 Sjaellands Rev [1, 2, 8]			
EK R 14 Sjaellands Odde E [1, 2, 8]			
EK D 350 Yderflak [1, 2, 8]			
EK D 351 Schultz Grund [1, 2, 8]			
[8] During daylight hours, the signal mast at position 56°00'32.4"N, 11°16'45.6"E will display one red flag and a white flashing light (60 flashes per minute). During the hours of darkness the signal mast will display a fixed red light. These signals are displayed from 1 hour prior to the beginning of the firing until the termination of the firing.			
EK R 15 Sejero E [1, 9]	6 and 16 Call sign: Stold	Superintendent, Stold Telephone: 45-59-26-93-02 and 45-21-24-03-93	55°45'N, 11°17'E
EK R 16 Sejero W [1, 9]			
[9] When firing is taking place, the signal mast Stold (55°45'17.4"N., 11°17'12.6"E.) will display one ball and a flashing white light (60 flashes per minute). These signals are displayed from 1 hour prior to the beginning of the firing until the termination of the firing.			

Denmark—Firing Practice Areas			
Area Name	**VHF Channels**	**Area Authority/Telephone Number**	**Position**
EK R 18 Jaegerspris [1, 2, 10]	6, 8, 16, and 67 Call sign: Jaegerspris	JPL Telephone: 45-47-56-73-73, ext. 311 and 312	55°52'N, 11°57'E
EK R 17 Isefjord [1, 2, 10]			
[10] When firing takes place, the following signals are displayed: 1. Signal Mast 1 (55°50'30.3"N., 11°57'30.0"E.), on the shore by Sdr Strandhuse: a. Day signal—One ball and a white flashing light (60 flashes per second). b. Night signal—Red and white quick flashing lights (30 flashes per minute) and a fixed green light. 2. Signal Mast 2 (55°50'34.8"N., 11°58'54.0"E.), on Karolinehjo—a day signal consisting of one ball and a flashing white light (60 flashes per minute). 3. Signal Mast 3 (55°54'00.6"N., 11°55'35.4'E.), on the shore W of Storehoj:—One ball. a. Day signal—One ball and a white flashing light (60 flashes per second). b. Night signal—Red and white quick flashing lights (30 flashes per minute) and a fixed red light. These signals are displayed from 1 hour prior to the beginning of the firing until the termination of the firing.			
11 Bredetved [11]	—	VKB Telephone 45-59-48-81-00	55°42'N, 11°48'E
[11] When firing is taking place, the signal mast about 500m ENE of Bredetved (55°41'49.2"N., 11°47'33.0"E.) will display one ball and a flashing white light (60 flashes per minute). These signals are displayed from 1 hour prior to the beginning of the firing until the termination of the firing.			
Vicinity of Fyn			
13 Seden [2, 12]	—	Defense district NM Funen Telephone: 45-64-43-22-40 E-mail: hhdnvf@hjv.dk	55°26'N, 10°26'E
[12] When firing is taking place, the signal mast at the observation tower in position 55°26'16.2"N., 10°26'01.2"E. will display a flashing white light (60 flashes per minute). These signals are displayed from 1 hour prior to the beginning of the firing until the termination of the firing.			
14 Hyby Faelled [2, 13]	—	Ryse Kaserne Frederica Telephone: 45-76-22-80-10 Web: http://www.forsvaret.dk/tgr	55°35'N, 9°48'E
[13] When firing is taking place, the N signal mast (55°35'22.8"N., 9°47'21.0"E.) and the S signal mast (55°34'58.8"N., 9°47'18.0"E.) will display one ball and a white flashing light (60 flashes per minute). From April 15 until November 15, supplementary markings, consisting of yellow floats, will be displayed along the coast between the coast and Buoy B and the coast and Buoy D. These signals are displayed from 1 hour prior to the beginning of the firing until the termination of the firing.			
EK R 44 Halk [14]	—	Haderslev Telephone: 45-74-22-47-45 and 45-74-57-11-37 Halk Safety Office Telephone: 45-74-57-11-37	55°11'N, 9°38'E
[14] When firing is taking place, the signal mast in position 55°10'44.4"N, 9°38'40.2"E will display the following signals: 1. Area I (small closure)—one ball and a flashing white light (60 flashes per minute). 2. Area II (large closure)—two balls and a flashing white light (60 flashes per minute). These signals are displayed from 1 hour prior to the beginning of the firing until the termination of the firing.			
EK D 371 Marstal Bugt [1]	—	AOF Telephone: 45-89-43-30-99	54°42'N, 10°27'E
Vicinity of Bornholm			
ES D 140 Bornholm W [1]	—	BHM Telephone: 45-56-95-24-00	55°00'N, 13°55'E
ES D 139 Bornholm E [1]			55°05'N, 15°40'E
ES D 138 Bornholm N [1]			55°20'N, 15°30'E

Denmark—Firing Practice Areas			
Area Name	**VHF Channels**	**Area Authority/Telephone Number**	**Position**
EK D 395 Raghammer Odde [1, 2, 16]	6, 8, 16, and 77 Call sign: Raghammer	BHM Telephone: 45-56-97-81-06	55°01'N, 14°55'E
EK D 396 Hullebaek [1, 2, 16]			
[16] During daylight hours, the signal masts at position 55°01'22.8"N, 14°54'28.8"E and position 55°00'23.4"N, 14°57'18.6"E will display one ball and a white flashing light (60 flashes per minute). During the hours of darkness each mast will display red and white quick flashing lights (30 flashes per minute). These signals are displayed from 1 hour prior to the beginning of the firing until the termination of the firing.			
[1] Advance notification of when these areas are in use is given through the monthly edition of the Danish Notice to Mariners or daily through the Waterways Notice, broadcast by Danmarks Radio Programme 1 following the scheduled weather bulletin at 1645 UTC. [2] Radar-equipped area. Firing may continue during bad visibility or darkness.			

Government



Flag of Denmark

Denmark is a constitutional monarchy. The country is divided into five regions.

Queen Margrethe II is the Chief of State and appoints the Prime Minister. The unicameral Parliament is composed of 179 members (including two from Greenland and two from the Faroe Islands) serving 4-year terms; all members are directly-elected under a system of proportional representation.

The legislative system is based on civil law.

The capital is Kobnhavn (Copenhagen).

Holidays

The following holidays are observed:

January 1	New Year's Day
Holy Thursday	Variable
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
Prayer Day	Fourth Friday after Easter
May 1	Labor Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
June 5	Constitution Day
Third Monday in October	National Heroes' Day
December 24	Christmas Eve
December 25	Christmas Day
December 26	Second Day of Christmas
December 31	New Year's Eve

Ice

The Danish State Ice Service, which includes the Ice Breaking Service and the Ice Reporting Service, assists vessels in Danish waters during ice conditions.

Requests for ice breaking assistance will normally be directed to the state ice breakers or the State Ice Service. The ice breakers can be contacted on VHF channel 16 or through Lyngby Coast Radio Station.

Danish ice breakers are the Danbjorn (call sign: OUDN), the Isbjorn (call sign: OUDO), and the Thorbjorn (call sign: OUDP).

The State Ice Service decides, based on prevailing and predicted ice conditions, when compulsory reporting for vessels bound for harbors within a certain area is introduced. This information will be given in the daily ice reports.

During a compulsory reporting period, vessels should send their report to the State Ice Service well in advance of arriving in iced Danish waters and include the following information in the report:

1. Vessel name.
2. Flag.
3. Call sign.
4. Vessel size.
5. Engine power.
6. Year built.
7. Gear limit.
8. Amount of cargo.
9. Port of destination.
10. ETA in iced Danish waters.

During the reported voyage, vessels should obey the instructions given by the State Ice Service. Vessels should report to the ice breaker or the State Ice Service no later than when arriving in iced Danish waters. After initial contact with the ice breaker, vessels should maintain a continuous listening watch, unless otherwise directed.

Any vessel delaying or cancel its voyage after submitting the above-described report shall immediately notify the State Ice Service.

Contact details are, as follows:

1. VHF: VHF channel 16
2. Radiotelephone: 2187.5 kHz (ice breakers)
3. Telephone: 45-89-433099 (24-hour switchboard)
   45-89-433204 (reports)
   45-89-433253 (reports)
4. Facsimile: 45-89-433244 (on demand)
   45-89-433427
5. E-mail: opsstaff@sok.dk
6. Internet: http://www.forsvaret.dk/sok

For information on obtaining general ice information for the Baltic Sea, see **Baltic Sea—Ice**.

The Ice Reporting Service provides daily ice reports at 1100 from December 15 until March 31. A free facsimile-on-demand service is available by calling 45-89-433244.

Industries

The main industries are iron, steel, non-ferrous metals, chemicals, food-processing, machinery and transportation equipment, textiles and clothing, electronics, construction, furniture and other wood products, shipbuilding and repair, windmills, pharmaceuticals, and medical equipment.

The main exports are machinery and instruments, meat and meat products, dairy products, fish, chemicals, furniture, ships, and windmills. The main export-trading partners are Germany, Sweden, the United Kingdom, the United States, the Netherlands, and Norway.

The main imports are machinery and equipment, raw materials for industry, chemicals, grain, foodstuffs, and consumer goods. The main import-trading partners are Germany, Sweden, Norway, the Netherlands, the United Kingdom, and China.

Languages

Danish is the official language. Faroese is also spoken.

Meteorology

Marine weather forecasts in Danish are available from the Danmarks Meteorologiske Institut (http://www.dmi.dk).

Mined Areas

General

Mariners should consult Notice to Mariners and the latest best scale chart for any additional danger areas.

A risk does still exist with regard to anchoring, fishing or any form of submarine activity close to the sea bed.

Former NEMEDRI Danger Area No. 9 is an area in which danger due to mines laid between 1939 and 1945 still exist. For further information, see **North Sea and English Channel—Mined Areas**.

Residual Dangers from Surface Mines

Residual dangers are still considered to exist in the following areas due to the existence of mines and other objects containing explosives. Navigation, anchoring, fishing and/or other subsurface activities are prohibited in the areas listed below.

North Sea.—Navigation is prohibited in the area between the W coast of Denmark and lines joining the following positions:

a. 55°27.8'N, 8°18.7'E.
b. 55°28.2'N, 8°15.2'E.

as well as the area which extends from position b, 1 mile from the coast, to 55°49'N. The harbor approaches in the area are exempt from the prohibition.

Sild.—Anchoring, fishing with bottom equipment, and seabed activity are prohibited in the following areas:

1. A circle with a radius of 1 mile centered on position 55°05'N, 8°16'E.
2. A circle with a radius of 1 mile centered on position 55°02'N, 7°58'E.

Romo and Mano.—Anchoring, fishing with bottom equipment, and seabed activity are prohibited in the area between the W coast of Romo and Mano and a line joining the following positions:

a. 55°03.9'N, 8°29.3'E.
b. 55°05.0'N, 8°19.9'E.
c. 55°17.0'N, 8°19.9'E.
d. 55°17.0'N, 8°33.1'E.

Kattegat.—Navigation is prohibited in the following areas:

1. **Stensnaes.—**An area with a width of 1 mile along the coast from 57°15.0'N to Vorsa Bro at position 57°12.5'N, 10°30.2'E. The approach to Vorsa Bridge is exempt from the prohibition.
2. **Rageleje.—**An area bounded by a line joining the following positions:
   a. 56°09.6'N, 12°07.7'E.
   b. 56°09.4'N, 12°05.8'E.
   c. 56°10.4'N, 12°05.5'E.
   d. 56°10.3'N, 12°07.5'E.
3. **Entrance of Kalo Vig.—**An area bounded by a line joining the following positions:
   a. 56°11.9'N, 10°19.3'E.
   b. 56°12.4'N, 10°18.0'E.
   c. 56°13.3'N, 10°19.0'E.
   d. 56°13.4'N, 10°19.6'E.
   e. 56°13.0'N, 10°20.7'E.

Albaek Bugt.—Anchoring, fishing with bottom equipment, and seabed activity are prohibited in an area bounded by a line joining the following positions:

a. 57°35.5'N, 10°25.7'E. (Albaek Harbor)
b. 57°35.5'N, 10°39.7'E.
c. 57°30.3'N, 10°39.7'E.
d. 57°26.9'N, 10°35.8'E.
e. 57°26.9'N, 10°32.7'E.

Baltic Sea—Bornholm.—Navigation is prohibited in the

following areas:

1. A circle with a radius of 0.5 mile centered on position 55°02.4'N, 14°38.0'E.
2. A circle with a radius of 0.3 mile centered on position 55°04.7'N, 15°14.3'E.
3. A circle with a radius of 0.3 mile centered on position 55°21.1'N, 15°07.6'E.

Residual Danger from Bottom Mines

Due to the residual dangers of bottom mines or other objects containing explosives, vessels are cautioned against anchoring, fishing with bottom equipment, and seabed activity in the following danger areas listed below.

Baltic Sea

1. **South of Aero.—**The area bounded by a line joining the following positions:
   a. 54°46.5'N, 10°26.9'E.
   b. 54°46.5'N, 10°31.3'E.
   c. 54°45.0'N, 10°31.3'E.
   d. 54°45.0'N, 10°26.9'E.
2. **Keldsnor.—**The area bounded by a line joining the following positions:
   a. 54°43.0'N, 10°34.2'E.
   b. 54°41.6'N, 10°32.7'E.
   c. 54°39.2'N, 10°39.2'E.
   d. 54°41.0'N, 10°40.7'E.
3. **Keldsnor.—**The circular area with a radius of 0.5 mile centered on position 54°38.3'N, 10°40.1'E.
4. **Keldsnor.—**The circular area with a radius of 0.5 mile centered on position 54°41.0'N, 10°48.1'E.
5. **Langeland-Lolland.—**The area bounded by a line joining the following positions:
   a. 54°40.0'N, 11°13.6'E.
   b. 54°38.0'N, 11°13.6'E.
   c. 54°44.8'N, 10°53.7'E.
   d. 54°45.0'N, 10°49.6'E.
   e. 54°43.0'N, 10°48.4'E.
6. **Zingst.—**The circular area with a radius of 1 mile centered on position 54°41.0'N, 12°46.9'E.
7. **Mon-Falsterbo.—**The area bounded by a line joining the following positions:
   a. 55°05.8'N, 12°20.7'E.
   b. 55°18.7'N, 12°46.8'E.
   c. 55°20.4'N, 12°53.2'E.
   d. 55°19.4'N, 12°56.5'E.
   e. 55°16.5'N, 12°56.5'E.
   f. 55°09.5'N, 12°41.1'E.
   g. 55°04.8'N, 12°27.5'E.
   h. 55°05.4'N, 12°21.2'E.
8. **West of Bornholn.—**The area bounded by the line joining the following positions:
   a. 55°09.2'N, 13°04.7'E.
   b. 55°06.3'N, 13°20.2'E.
   c. 55°05.3'N, 13°19.7'E.
   d. 55°08.3'N, 13°04.1'E.
9. **West of Bornholm.—**The area bounded by the line joining the following positions:
   a. 54°59.0'N, 13°19.1'E.
   b. 54°57.8'N, 13°26.9'E.
   c. 54°56.9'N, 13°26.3'E.
   d. 54°58.1'N, 13°18.7'E.
10. **West of Bornholm.—**The area bounded by the line joining the following positions:
   a. 54°49.1'N, 13°31.9'E.
   b. 54°49.1'N, 13°35.4'E.
   c. 54°48.1'N, 13°35.4'E.
   d. 54°48.1'N, 13°31.9'E.
11. **Southsouthwest of Ronne.—**The circular area with a radius of 0.5 mile centered on position 55°02.9'N, 14°39.8'E.
12. **North of Bornholm.—**The circular area with a radius of 1 mile centered on position 55°33.0'N, 15°01.9'E.
13. **North of Bornholm.—**The circular area with a radius of 0.3 mile centered on position 55°34.4'N, 15°13.1'E.
14. **East of Bornholm**.—The area bounded by a line joining the following positions:
   a. 55°03.8'N, 15°10.1'E.
   b. 55°03.8'N, 15°11.4'E.
   c. 55°02.1'N, 15°11.4'E.
   d. 55°02.1'N, 15°10.1'E.
15. **East of Bornholm.—**The area bounded by a line joining the following positions:
   a. 55°25.0'N, 15°31.9'E.
   b. 55°25.0'N, 15°41.9'E.
   c. 55°23.0'N, 15°41.9'E.
   d. 55°23.0'N, 15°54.9'E.
   e. 55°07.0'N, 15°54.9'E.
   f. 55°07.0'N, 15°29.9'E.
   g. 55°05.0'N, 15°29.9'E.
   h. 55°05.0'N, 15°24.9'E.
   i. 55°10.0'N, 15°24.9'E.
   j. 55°10.0'N, 15°27.9'E.
   k. 55°23.0'N, 15°27.9'E.
   l. 55°23.0'N, 15°31.9'E.
16. **East of Bornholm.—**The circular area with a radius of 3 miles centered on position 55°21.0'N, 15°37.1'E.
17. **East of Bornholm.—**The circular area with a radius of 1 mile centered on position 55°16.0'N, 16°12.3'E.
18. **East of Bornholm.—**The circular area with a radius of 1 mile centered on position 55°08.0'N, 16°10.5'E.
19. **East of Bornholm.—**At approximate position 52°12.3'N, 15°16.2'E (about 6 miles NE of Svaneke).
20. **East of Bornholm.—**The area bounded by a line joining the following positions:
   a. 55°03.1'N, 15°08.3'E.
   b. 55°03.1'N, 15°09.4'E.
   c. 55°02.5'N, 15°09.3'E.
   d. 55°02.5'N, 15°08.2'E.
21. **East of Bornholm.—**The circular area with a radius of 0.5 mile centered on position 55°02.2'N, 15°09.5'E.
22. **East of Bornholm.—**The circular area with a radius of 0.5 mile centered on position 54°51.9'N, 16°00.8'E.
23. **South of Bornholm.—**The circular area with a radius of 0.5 mile centered on position 54°37.0'N, 15°38.9'E.
24. **South of Bornholm.—**The circular area with a radius of 0.5 mile centered on position 54°41.8'N, 15°02.4'E.

Kattegat

1. **Northwest of Gillege.—**The circular area with a radius of 1 mile centered on position 56°13.5'N, 12°09.0'E.
2. **Northeast of Gniben.—**The area bounded by a line joining the following positions:

a. 56°02.7'N, 11°17.2'E.
b. 56°02.7'N, 10°20.4'E.
c. 56°00.9'N, 10°20.4'E.
d. 56°00.9'N, 11°17.2'E.

3. **Hjelm to Sjaellands Rev.—**The area bounded by a line joining the following positions:
a. 56°04.3'N, 11°05.9'E.
b. 56°04.8'N, 10°47.5'E.
c. 56°05.8'N, 10°47.5'E.
d. 56°05.3'N, 11°05.9'E.

4. **Southwest of Anholt.—**The circular area with a radius of 2 miles centered on position 56°36.5'N, 11°28.7'E.

5. **Jegens Bugt.—**The circular area with a radius of 150m centered on position 57°19.8'N, 11°06.6'E.

6. **Albaek Bugt.—**The area bounded by a line joining the following positions:
a. 57°35.5'N, 10°25.6'E. (Albaek Havn)
b. 57°35.5'N, 10°39.6'E.
c. 57°30.3'N, 10°39.6'E.
d. 57°26.9'N, 10°35.7'E.
e. 57°26.9'N, 10°33.6'E. (Frederikshavn Havn)

7. **Skagen to St. Polsan (Sweden).—**The area bounded by a line joining the following positions:
a. 57°44.5'N, 11°08.9'E. (Skagen Havn SE)
b. 57°47.7'N, 11°25.6'E.
c. 57°50.9'N, 11°24.8'E.
d. 57°50.9'N, 11°31.2'E.
e. 57°46.5'N, 11°31.4'E.
f. 57°44.2'N, 11°34.9'E.
g. 57°42.6'N, 11°29.9'E.
h. 57°44.1'N, 11°27.9'E.
i. 57°39.0'N, 11°02.4'E.
j. 57°42.5'N, 10°37.9'E.

8. The areas listed below are bounded by a circle, with a radius of 0.5 mile, with their centers on the following positions:
a. 57°45.5'N, 10°42.4'E.
b. 57°36.8'N, 10°26.7'E.
c. 57°34.6'N, 10°40.7'E.
d. 57°32.7'N, 11°26.4'E.
e. 57°31.2'N, 11°26.9'E.
f. 57°30.5'N, 10°46.6'E.
g. 57°28.2'N, 11°19.3'E.
h. 57°24.0'N, 11°32.2'E.
i. 57°22.2'N, 11°25.8'E.
j. 56°49.9'N, 10°34.7'E.
k. 56°45.0'N, 11°29.7'E.
l. 56°42.3'N, 10°24.8'E.
m. 56°40.9'N, 11°29.5'E.
n. 56°40.0'N, 11°19.7'E.
o. 56°39.4'N, 11°25.4'E.
p. 56°36.5'N, 11°39.9'E.
q. 56°28.6'N, 11°19.7'E.
r. 56°43.2'N, 11°38.2'E.
s. 56°19.7'N, 11°09.1'E.
t. 56°18.0'N, 11°13.9'E.
u. 56°15.9'N, 11°28.2'E.
v. 56°13.0'N, 11°28.9'E.
w. 56°09.9'N, 10°21.2'E.
x. 56°09.0'N, 10°26.7'E.
y. 56°03.5'N, 10°39.7'E.
z. 56°00.0'N, 11°02.7'E.
aa. 55°57.5'N, 11°21.1'E.
ab. 55°51.0'N, 11°12.3'E.
ac. 55°46.1'N, 10°33.1'E.
ad. 55°25.8'N, 10°46.5'E.
ae. 56°00.7'N, 11°14.2'E.

Sundet

1. **Drogden.—**The circular area with a radius of 0.5 mile centered on position 55°36.4'N, 12°42.9'E.

2. **Koge Bugt.—**The circular area with a radius of 0.5 mile centered on position 55°30.8'N, 12°33.0'E.

Storebaelt

Northeast of Albuen.—The circular area with a radius of 0.5 mile centered on position 54°52.5'N, 11°00.1'E.

Lillebaelt

1. **Sandvig.—**The circular area with a radius of 0.5 mile centered on position 55°10.0'N, 9°36.3'E.

2. **Between Aero and Als.—**The area bounded by a line joining the following positions:
a. 54°50.0'N, 10°07.9'E.
b. 54°50.0'N, 10°14.9'E.
c. 54°47.0'N, 10°14.9'E.
d. 54°47.0'N, 10°07.9'E.

Limfjorden

1. **North of Egholm.—**The circular area with a radius of 250m centered on position 57°05.4'N, 9°49.6'E.

2. **East of Fur.—**The circular area with a radius of 0.5 mile centered on position 56°49.0'N, 9°08.7'E.

3. **Lovns Bredning.—**The circular area with a radius of 0.5 mile centered on position 56°3.05'N, 9°03.9'E.

Skagerrak

1. **Between Denmark and Norway.—**The area bounded by a line joining the following positions:
a. Lodbjerg Light.
b. 57°00.0'N, 7°44.9'E.
c. 57°35.0'N, 6°59.9'E.
d. Lista Light.

and to the E by a line joining the following positions:
e. Bragerna (57°0.08'N, 8°54.9'E).
f. Lillesand (Saltholmen Light).
g. 57°40.0'N, 8°54.9'E.

2. **Southeast of Arendal.—**The area bounded by a line joining the following positions:
a. 58°14.0'N, 9°26.9'E.
b. 58°16.0'N, 9°26.9'E.
c. 58°19.1'N, 9°40.2'E.
d. 58°17.0'N, 9°40.2'E.

3. The areas listed below are bounded by a circle, with a radius of 0.5 mile, with their centers on the following positions:
a. 57°57.0'N, 11°17.9'E.
b. 57°54.0'N, 11°13.7'E.
c. 57°45.5'N, 10°42.4'E.
d. 57°46.0'N, 10°10.6'E.
e. 57°44.6'N, 9°51.7'E.

f. 57°26.1'N, 9°03.7'E.
g. 57°45'.0N, 8°59.0'E.

North Sea

1. **West coast of Jylland.—**The area along the W coast of Denmark at a distance of 1 mile from the coast between the parallels of 55°49.0'N and 56°52.9'N.
2. **East of Horns Rev.—**The circular area with a radius of 0.1 mile centered on position 55°34.4'N, 7°59.59'E.
3. **Horns Rev.—**The area bounded by a line joining the following positions:
   a. 55°45.5'N, 7°43.6'E.
   b. 55°44.6'N, 7°48.4'E.
   c. 55°32.8'N, 7°43.0'E.
   d. 55°34.1'N, 7°36.2'E.
4. **Southwest of Horns Rev.—**The area bounded by a line joining the following positions:
   a. 55°25.0'N, 6°51.4'E.
   b. 55°30.1'N, 7°28.6'E.
   c. 55°29.1'N, 7°29.1'E.
   d. 55°23.8'N, 6°51.9'E.
5. **Southwest of Horns Rev.—**The area bounded by a line joining the following positions:
   a. 55°22.0'N, 7°12.0'E.
   b. 55°22.0'N, 7°16.2'E.
   c. 55°19.5'N, 7°16.2'E.
   d. 55°19.5'N, 7°12.0'E.
6. **Northwest of Knudedyb.—**The circular area with a radius of 0.5 mile centered on position 55°20.7'N, 8°14.6'E.
7. **West coast of Fano.—**An area with a width of 1 mile, limited to the N and S by the parallels 55°27.8'N, and 55°16.9'N, respectively, and towards the E by the W coast of Fano and by a line joining the following positions:
   a. 55°20.2'N, 8°28.1'E.
   b. 55°17.3'N, 8°32.6'E.

Navigational Information

Enroute Volumes

Pub. 192, Sailing Directions (Enroute) North Sea.

Pub. 193, Sailing Directions (Enroute) Skagerrak and Kattegat.

Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

Maritime Claims

The maritime territorial claims of Denmark are, as follows:

Territorial Sea *	12 miles. **
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the limit of Exploitation.

* Claims straight baselines. Advance permission or notification for innocent passage of warships in the territorial sea only required for more than three warships at once.

** Territorial sea limits reduced in the following areas to retain a high seas corridor:
1. Kattegat.
2. Northern and southern approaches to The Sound.
3. Samso Baelt.
4. Kadet Renden.
5. Fehmarn Belt.
6. Kieler Bucht.
7. Bornholmsgat.

The territorial sea of Denmark is claimed by using strait baselines. The area outside the baselines is known as the Outer Territorial Sea; the area inside the baselines is known as the Inner Territorial Sea. Foreign vessels may enter the Inner Territorial Sea only with permission after giving advanced notice.

Maritime Boundary Disputes

It has been reported (2008) that Canada, Denmark, Greenland, Norway, Russia, and the United States have agreed to let the United Nations rule on their overlapping territorial claims in the coastal waters of the Arctic Ocean. Coastal states may claim the sea bed beyond the normal 200-mile limit if the sea bed is part of a continental shelf of shallower waters. For further information, see Pub. 180, Sailing Directions (Planning Guide) Arctic Ocean (Arctic Ocean—Navigational Information—Maritime Boundary Disputes.)

It has been reported (2009) that the United Nations has concurred with Norway's Arctic claim, which will eventually lead to an expansion of Norwegian territory in the Arctic region.

Dispute with Iceland over the Faroe Islands' fisheries median boundary with 200 miles.

Dispute with Iceland, the United Kingdom, and Ireland over the Faroe Islands' continental shelf boundary outside 200 miles.

Pilotage

Deep Sea (Transit) Pilotage

Deep Sea (Transit) Pilotage is strongly recommended for infrequent visitors to the area and for all vessels constrained by their draft. Vessels requiring Deep Sea (Transit) Pilotage should request this service through DanPilot following the instructions given below using the contact information given in the table titled **Denmark—Pilotage Ordering Offices**.

Recommended Pilotage

Pilotage is recommended through Route T by IMO Resolution MSC 138(76) for the following vessels:
1. Vessels with a draft of 11m or greater.
2. All vessels carrying irradiated nuclear fuel, plutonium, or highly radioactive waste as defined in the INF Code, regardless of size.

Pilotage is also recommended by IMO Resolution MSC 138(76) for the following vessels when transiting Sundet (The Sound):
1. Loaded oil tankers with a draft of 7m and over.
2. Loaded chemical tankers and gas carriers, regardless of size.

3. Vessels carrying shipments of irradiated nuclear fuel, plutonium, or high level radioactive waste (INF cargo).

The limits of the area where this pilotage is recommended is, as follows:

1. North limit—A line connecting Svinbaden Light (56°09'N., 12°33'E.) in Sweden and Hornbaek Harbor (56°06'N., 12°28'E.) in Denmark.
2. South limit—A line connecting Skanor Harbor (55°25'N., 12°50'E.) in Sweden and Alfandshage (55°33'N., 12°36'E.), the southernmost point of Amager Island in Denmark.

Pilots for Route T board in the following positions:

a. 57°47.0'N, 10°38.0'E or 57°44.0'N, 10°45.0'E (Skagen).
b. 56°24.0'N, 11°05.0'E (Grenaa).
c. 55°23.5'N, 11°00.0'E (Sprogo NE).
d. 54°46.0'N, 10°49.0'E or 54°47.5'N, 10°52.5'E (Storebaelt (Great Belt)).
e. 54°37.0'N, 12°16.0'E (Gedser).
f. 55°22.0'N, 14°47.0'E (Bornholm).

Pilots for Sundet (The Sound) board in the following positions:

a. 57°47.0'N, 10°38.0'E or 57°44.0'N, 10°45.0'E (Skagen).
b. 56°07.5'N, 12°31.0'E (Helsingor).
c. 55°45.0'N, 12°41.0'E (Kobenhavn).
d. 55°31.0'N, 12°43.0'E (Drogden).
e. 55°22.0'N, 14°47.0'E (Bornholm).

Vessels on a non-stop transit (Bornolm-Skagen or Gedser-sakgen and vice versa) with a draft of 11m and over should employ two pilots.

Vessels should use the pilotage service established by the governments of Denmark and Sweden. However, Danish pilots may not conduct pilotage E of the island of Ven; Swedish pilots may not use the Drogden traffic lane.

Swedish pilots (Sound Pilots) are ordered 5 hours in advance via VTS Malmo and can be contacted, as follows:

1. Telephone: 46-40204352 (for ports between Gamleby and Simrishamn)
   46-40-204351 (for ports between Ystad and Hoganas)
2. Facsimile: 46-40-301868
3. E-mail: vtsmalmo@sjofartsverket.se

Danish pilots are ordered through DanPilot (The Sound) Kobenhavn and can be contacted through the information contained in the table titled **Denmark—Pilotage Ordering Offices**.

General

Pilotage is compulsory for the following vessels entering Danish internal and external waters and destined for a Danish port, loading to or from another vessel in Danish territorial waters (ship-to-ship transfers), or requiring to anchor in Danish territorial waters:

1. Vessels carrying oil or having uncleaned cargo tanks that have not been inerted.
2. Vessels carrying chemicals.
3. Vessels carrying gases.
4. Vessels with more than 5,000 tons of bunker fuel oil.
5. Vessels carrying highly radioactive cargo.
6. Towed vessels 150 gross tons and over or with an loa of 28m or greater in dredged or marked channels when entering or leaving the harbor. When the towed vessel is not manned or cannot be propelled by its engines, the tugs shall use a pilot.

Pilotage is not compulsory for the following vessels:

1. Danish vessels flying a foreign flag which are entitled to navigate without a pilot.
2. Vessels designed exclusively to carry liquid carbon dioxide in bulk.
3. Offshore support vessels carrying (in bulk) acetic acid, hydrochloric acid, hydrofluoric acid, liquid carbon dioxide, or liquid nitrogen.

Compulsory pilotage does not apply in the following areas:

1. Fano Bugt (55°20'N., 8°00'E.)—The waters S of latitude 55°25.0'N and W of a line extending NNE/SSW through position 55°25.0'N, 8°12.5'E.
2. The North Sea and Skagerrak—In the Outer Territorial Waters N of latitude 55°25.0'N and W of longitude 10°39.0'E, provided that the vessel is more than 3 miles from the baseline.
3. Kattegat—
   a. Waters N of latitude 57°39.0'N provided that the vessel is more than 3 miles from the baseline.
   b. Route A.
   c. Route T—N of latitude 56°29.0'N when the vessel's draft is less than 11m.
4. Langelandsbaelt—
   a. Route H—S of latitude 54°48.0'N.
   b. Route T—S of latitude 54°48.0'N when the vessel's draft is less than 11m.
5. Baltic Sea—Waters surrounding Bornholm and Ertholmene, provided that the vessel is more than 3 miles from the baseline.

Denmark—Pilotage Ordering Offices

	DanPilot	DanPilot (Limfjorden)	Danish Pilot Services A/S
Call sign	(name of station) Pilot	Limfjorden Pilot	—
VHF frequency	VHF channels 12, 13, 14, and 16	VHF channels 9, 12, 13, and 16	VHF channels 12 and 16
Telephone	45-63-256666	45-63-256670	45-75-914496
Facsimile	45-62-501528	45-98-251477	45-75-914493
E-mail	danpilot@danpilot.dk	limfjorden@pilotage.dk	info@danishpilotservice.dk
Website	http://www.danpilot.dk	—	http://www.danishpilotservice.dk

In the Outer Territorial Sea N of latitude 55°25.0'N and W of longitude 10°39.0'E, the requirement for compulsory pilotage does not apply to vessels in the first four categories listed above, provided that these vessels are more than 3 miles from the baseline. Additionally, the pilotage requirements do not apply in Fano Bugt (55°20'N., 8°00'E.) S of latitude 55°22'N and W of a line extending NNE/SSW through position 55°25.0'N, 8°12.5'E.). For information on the Outer Territorial Sea, see **Navigational Information**.

Ordering Deep Sea (Transit) Pilots or Harbor Pilots can be carried out directly with the State Pilot Service or with a private pilot. Contact infromation for the ordering offices which accept pilot bookings are given in the accompanying table titled **Denmark—Pilotage Ordering Offices.**

DanPilot provides pilotage for:

1. Aabenraa (55°02'N., 9°26'E.).
2. Aeroskobing (54°54'N., 10°25'E.).
3. Allinge (55°17'N., 14°48'E.).
4. Asnaesverkets (55°40'N., 11°04'E.).
5. Assens (55°16'N., 9°53'E.).
6. Bandholm (54°50'N., 11°30'E.).
7. Dragor (55°36'N., 12°41'E.).
8. Drogden (55°36'N., 12°42'E.).
9. Enstedsvaerket (55°01'N., 9°26'E.).
10. Esbjerg (55°29'N., 8°25'E.).
11. Fredericia (55°33'N., 9°45'E.).
12. Fredrikshavn (57°26'N., 10°33'E.).
13. Fredrikssund (55°51'N., 12°03'E.).
14. Frederiksvaerk (Stalvalsvaerks Havn) (55°58'N., 12°01'E.).
15. Faaborg (55°06'N., 10°14'E.).
16. Gedser (54°34'N., 11°56'E.).
17. Grenaa (56°25'N., 10°56'E.).
18. Helsingor (Elsinore) (56°02'N., 12°37'E.).
19. Horsens (55°51'N., 9°52'E.).
20. Hundested (55°58'N., 11°51'E.).
21. Kalundborg (55°40'N., 11°05'E.).
22. Kobenhavn (55°42'N., 12°37'E.).
23. Koge (55°27'N., 12°12'E.).
24. Kolding (55°30'N., 9°30'E.).
25. Korsor (55°20'N., 11°07'E.).
26. Mariager Fjord (56°42'N., 10°20'E.), including Hadsund (56°43'N., 10°07'E.), Hobro (56°38'N., 9°48'E.), and Kongsdal (56°41'N., 10°04'E.).
27. Marstal (54°51'N., 10°31'E.).
28. Middelfart (55°30'N., 9°44'E.).
29. Nakskov (54°50'N., 11°07'E.).
30. Nyborg (55°18'N., 10°48'E.).
31. Nykobing (54°46'N., 11°52'E.).
32. Naestved (55°14'N., 11°45'E.).
33. Odense (55°25'N., 10°23'E.).
34. Orehoved (54°58'N., 11°51'E.).
35. Randers Fjord (56°36'N., 10°18'E.), including Randers (56°28'N., 10°04'E.).
36. Rodby Havn (54°39'N., 11°4210'E.).
37. Skagen (The Skaw) (57°43'N., 10°36'E.).
38. Stevns Pier (55°19'N., 12°27'E.).
39. Stigsnaes (55°12'N., 11°15'E.), including Gulfhavn.
40. Storebaelt (Great Belt) (55°20'N., 11°02'E.).
41. Studstrupvaerket (56°15'N., 10°21'E.).
42. Svendborg (55°03'N., 10°37'E.).
43. Soby (54°57'N., 10°16'E.).
44. Sonderborg (54°55'N., 9°47'E.).
45. Tuborg (55°54'N., 12°35'E.).
46. Vejle (55°42'N., 9°34'E.).
47. Vordingborg (55°00'N., 11°55'E.).

DanPilot (Limfjorden) provides pilotage for:

1. Aalborg (57°03'N., 9°56'E.).
2. Aggersund (57°00'N., 9°18'E.).
3. Fur Havn (56°48'N., 9°01'E.).
4. Holstebro-Struer (56°30'N., 8°35'E.).
5. Lemvig (56°33'N., 8°18'E.).
6. Logstor (56°58'N., 9°15'E.).
7. Nordjyllandsvaerket (57°04'N., 10°02'E.).
8. Nykobing (56°48'N., 8°52'E.).
9. Oddesund (56°35'N., 8°34'E.).
10. Skive (56°34'N., 9°03'E.).
11. Thisted (56°57'N., 8°42'E.).
12. Thyboron (56°42'N., 8°14'E.).
13. Vilsund (56°53., 8°38.).

The following ports utilize pilots not provided by DanPilot, but pilots may still be ordered using the above procedures:

1. Arhus (55°10'N., 10°14'E.).
2. Bogense (55°34'N., 10°05'E.).
3. Ebeltoft (56°12'N., 10°40'E.).
4. Egernsund (54°55'N., 9°36'E.).
5. Grasten (54°55'N., 9°36'E.).
6. Hantsholm Havn (57°08'N., 8°36'E.).
7. Hirstshals Havn (57°36'N., 9°58'E.).
8. Hvide Sande (56°00'N., 8°07'E.).
9. Kerteminde (55°27'N., 10°40'E.).
10. Nexo (55°04'N., 15°08'E.).
11. Romo Havn (55°05'N., 8°34'E.).
12. Ronne (55°06'N., 14°41'E.).
13. Saeby (57°20'N., 10°32'E.).
14. Skagen (57°43'N., 10°36'E.).
15. Thorsminde (56°22'N., 8°07'E.).

Vessels should also see the appropriate Sailing Directions (Enroute) for further details of these pilotage areas.

Danish Pilot Service A/S provides pilotage service for:

1. Aabenraa (55°02'N., 9°26'E.)—Sea and harbor pilotage.
2. Arhus (55°10'N., 10°14'E.)—Sea pilotage.
3. Enstedsvaerket (55°01'N., 9°26'E.)—Sea and harbor pilotage.
4. Frederica (55°33'N., 9°45'E.)—Sea and harbor pilotage
5. Kalundborg (55°40'N., 11°05'E.)—Sea and harbor pilotage.
6. Stignaes (55°12'N., 11°15'E.)—Sea pilotage.
7. Gulfhavn (55°12'N., 11°15'E.)—Sea pilotage.

Danish Pilot Service A/S can be contacted through the information contained in the table titled **Denmark—Pilotage Ordering Offices**.

Pilot Ordering

DanPilot.—Inbound vessels should send a request for pilotage 18 hours in advance, with confirmation or correction sent 4 hours in advance.

Outbound vessels should send a request for pilotage 4 hours in advance and confirmed or corrected 1 hour prior to departure.

Danish Pilot Service A/S.—Pilot are ordered, as follows:

1. Skagen, Storebaelt, and Gedser—ordered 24 hours and 12 hours in advance by e-mail or telephone, with confirmation send 6 hours prior to ETA by telephone.
2. Pols Rev, Route T Lighted Buoy No. 21, Route T Lighted Buoy No. 23, Frederica Roads, Kaludborg Roads, and Aabenraa Roads—ordered at least 6 hours in advance by telephone.

The following information should be supplied with the request for pilotage:

1. Vessel's name, call sign, and IMO number.
2. Gross tonnage, loa, beam, draft, and speed.
3. Name of cargo under IBC codes.
4. ETA at pilot boarding position.
5. Destination for pilotage.
6. Any faults affecting the vessel's maneuverability.
7. Contact and payment information.
8. Payer's information.

Pollution

All incidents, including maritime casualties, which involve a discharge or dumping of oil or other harmful substances, shall be reported to the Joint Resuce Coordination Center (JRCC) Arhus or Lyngby Radio, which can be contacted, as follows:

1. **JRCC Arhus**
   a. Telephone: 45-89-433099
   b. Facsimile: 45-89-433230
   c. E-mail: jrcc@sok.dk
2. **Lyngby Radio**
   a. Telephone: 45-66-634800
   b. Facsimile: 45-45-882485
   c. E-mail: lyngbyradio@tdc.dk

Dangerous or Polluting Cargo

In order to prevent and reduce the damage to the environment in case of an incident involving vessels carrying dangerous or polluting cargo, the Danish authorities require that such vessels provide certain information, as contained in Danish Statutory Order No. 258 of May 1, 1999 on the Provision of Information on Dangerous or Polluting Goods on Board Vessels (Ministry for the Environment and Energy).

Vessels passing through Danish waters, not bound to or coming from a Danish port, and anchoring in Danish waters, are required to report to the Danish authorities, as follows:

1. Naval District Kattegat:
   - Telephone: 45-99-222809
   - Fax: 45-99-222838
   - E-mail: kgm-orum@mil.dk
2. Naval District Bornholm (in the Baltic Sea S and E of Sjaelland and Funen):
   - Telephone: 45-56-972115
   - Fax: 45-56-910444
   - E-mail: bhm-orum@mil.dk

Monitoring Single Hull Tankers

The transport of heavy grado oils is not allowed on single hull tankers of certain sizes and ages. Denmark, Estonia, Finland, Latvia, Norway, and Sweden have adopted measures to monitor the observance of theses regulations.

Vessels may be contaced by shore stations and requested to give the following information:

1. Type of cargo on board.
2. Density of oil cargo at a temperature of 15°C.
3. Kinematic viscosity of oil cargo at a temperature of 50°C.
4. Destination.

The following shore stations may initiate these requests:

1. Denmark—Naval District Bornholm or Naval District Kattegat.
2. Estonia—Tallinn Traffic.
3. Finland—Helsinki Traffic.
4. Latvia—MRCC Riga.
5. Norway—Brevik VTS or Fedje VTS.
6. Sweden—Sound VTS.

Further information can be obtained at the European Maritime Safety Agency (EMSA) Home Page.

EMSA Home Page
http://www.emsa.europa.eu or http://www.emsa.eu.int

MARPOL Special Area

The Baltic Sea, including the Gulf of Bothnia and the Gulf of Finland, has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

This Special Area is under intensive surveillance for pollution and violations of traffic rules. Further information on pollution reporting can be found in **Baltic Sea—Pollution—Pollution Reporting**.

Places of Refuge—North Sea

In accordance with European Union directives and IMO guidelines, the following areas have been designated as places of refuge for vessels in distress and which pose a high risk of pollution:

1. Esbjerg (55°28'N., 8°26'E.).
2. Hantsholm (57°08'N., 8°36'E.).
3. Hirtshals (57°36'N., 9°58'E.).
4. Thyboron (56°42'N., 8°14'E.).

Other locations may be designated by the Danish Maritime Assistance Service as necessary.

Places of Refuge—Baltic Sea

In accordance with European Union directives and IMO guidelines, the following areas have been designated as places of refuge for vessels in distress and which pose a high risk of pollution:

1. Frederickshavn (57°26'N., 10°33'E.).
2. Albaek Bugt (57°36'N., 10°26'E.).
3. Gremaa Havn (56°25'N., 10°56'E.).
4. Kobrnhavens Red anchorages (55°42'N., 12°36'E.).
5. Kalmundborg (55°40'N., 11°05'E.).
6. Knudshoved Havn (55°18'N., 10°51'E.).
7. Lindholm Terminal (55°18'N., 10°48'E.).

8. Langelandsbaelt South.
9. Boto Ost (54°37'N., 12°00'E.).

Tthe following areas have been designated as places of refuge for vessels in distress and which pose a low risk of pollution:

1. Pakhusbugt (56°43'N., 11°38'E.).
2. Koge Flak East.
3. Romso South.
4. Kalundborg Fjord (55°43N., 11°00'E.).
5. Tragten.
6. Agerso Sund North.

Other locations may be designated by the Danish Maritime Assistance Service as necessary.

Regulations

During maneuvers, regular exercises, or for other reasons, vessels may be prohibited from entering or leaving Kobenhavn and certain Danish inner waters, or to make such navigation subject to special regulations. At such times a warning signal consisting of three red balls by day, and three red lights, vertically disposed, at night will be displayed from conspicuous positions. Similar signals will be displayed by patrol vessels.

Vessels desiring to enter or leave Danish waters and having observed the warning signals should display the pilot flag and await the arrival of the patrol or pilot vessel.

Vessels in Danish territorial waters must display their national flag both by day and at night.

Patrol and pilot vessels will give further information as necessary to incoming vessels. Vessels leaving Danish harbors should obtain the necessary information beforehand.

Danish law requires all vessels within Danish waters to carry updated charts and navigational publications appropriate to the intended voyage and imposes the duty upon masters to be properly informed of all relevant regulations and navigational information.

With the object of ensuring the safety of navigation of large ships passing through Danish waters, and also of reducing the risk of oil pollution resulting from the grounding and collision of tankers, the Danish government has established a transit route between Skagen and the area NE of Gedser with a minimum depth of water 17m. The route, named Route T, is recommended in Danish waters for those vessels over 40,000 dwt or with a draft of 13m.

The route is marked by lights and lighted buoys. Danish pilotage assistance is available.

Under ice conditions Danish icebreakers, as far as possible, render free assistance to shipping.

In spite of the good buoyage, navigation through Danish waters presents, however, in certain areas difficulties to large ships on account of narrow waters, sharp bends and shallow depths. Furthermore, there is intensive eastbound and westbound ferry traffic in Store Baelt, particularly in the area immediately S of Sprogo.

Therefore, a radio reporting service (SHIPPOS) has been established in the Danish waters of the Baltic Sea, including the transit route known as Route T.

Vessels over 50m long passing S of German Bight Lightfloat (54°11'N., 7°28'E.) must report to German Bight Traffic. Further information may be found in Sector 8 of Pub. 192, Sailing Directions (Enroute) North Sea.

Danish Harbor Regulations

Extracts are, as follows:

Article 2. Vessels lying at anchor in a harbor or roadstead, or in pilotage waters in the vicinity of the same, must display in the fore part of the vessel, where it can best be seen, a black ball 0.6m in diameter.

Article 5.. Before entering a harbor or proceeding to a pier, vessels must display their national flag.

Article 6.. No vessel may anchor in a harbor or proceed alongside a pier, except in a case of necessity, until permission has been obtained from the harbor authority.

Article 8.. The master of a vessel, or agent, must report to the harbor authority and furnish all information required before a vessel can be allotted a berth.

No vessel carrying inflammable liquids or explosive goods as cargo may enter a harbor or approach a pier until the harbor authority has been informed of all details concerning such cargo.

Article 13.. Vessels with inflammable liquids or explosive goods as cargo shall on entering a harbor and during her stay in the harbor with such cargo on board, exhibit flag B, of the International Code of Signals by day, or a red light at night, at the foremast head, or, if the vessel has no mast, on a staff erected for the purpose at least 3m in height.

Articles 20, 21, and 33. Vessels loading and unloading inflammable liquids may only do so from approved berths and legitimate storage tanks.

Loading and unloading directly from or to railway tankers, tanker lorries or similar transportable containers may be allowed in exceptional cases by permission of the Fire Service, after prior declaration to the Ministry of Justice consultant for inflammable substances. The address is Kobenhavn Fire Service, Vester Voldgade 80, Kobenhavn K.

These regulations do not affect vessels bunkering.

Quarantine

Quarantine messages must be sent between 12 hours and 4 hours prior to the vessel's ETA and should reach quarantine authorities between 0700 and 2100. The messages should be addressed "Quarantine (name of port)." The ports accepting these messages are Alborg, Arhus, Esbjerg, Frederikshavn, Kobenhavn, and Odense.

Recommendation on Baltic Sea Navigation

The IMO has issued recommendations regarding vessel transits of the entrances to the Baltic Sea. For further information, see **Baltic Sea—Regulations**.

Particularly Sensitive Sea Areas (PSSA)

The Wadden Sea and adjacent parts of the North Sea in the common Wadden Sea area of Denmark, Germany, and the Netherlands were granted (2002) the status of PSSA by the International Maritime Organization. For further information, see **North Sea and English Channel Sea—Regulations**.

The Baltic Sea area of Sweden, Denmark, Finland, Estonia, Lithuania, Latvia, Poland, and Germany (except for waters under Russian jurisdiction) has been declared by the IMO to be a PSSA.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost

care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

Navigation Through Danish Waters

The English-language publication "Navigation Through Danish Waters" can be accessed through the Danish Maritime Authority, as follows:

Navigation Through Danish Waters
http://www.frv.dk/en/ifm/navigation/navigation_ntdw.htm

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The report should be sent to the port authorities,

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Search and Rescue

The Joint Rescue Coordination Center (JRCC) Arhus coordinates all search and rescue operations. However, JRCC Arhus has no direct radio communication with vessels in distress.

All communication is through the Maritime Rescue Coordination Subcenter (MRSC) Bornholm, MRSC Kattegat, and coast radio stations, which all maintain a continuous listening watch on all international distress frequencies.

Contact information is, as follows:

1. **JRCC Denmark (Arhus)**
   a. Telephone: 45-89-433099 (switchboard)
      45-89-433203 (operations center)
   b. Facsimile: 45-89-433230
   c. E-mail: jrcc@sok.dk
2. **Maritime Assistance Center—JRCC Denmark**
   a. Telephone: 45-89-433231
   b. Facsimile: 45-89-433230
   c. E-mail: mas@sok.dk
3. **MRSC Kattegat**
   a. Telephone: 45-99-221520
   b. Facsimile: 45-99-221538
   c. E-mail: kgm-orum@mil.dk
4. **MRSC Bornholm**
   a. Telephone: 45-56-942416
   b. Facsimile: 45-56-910444
   c. E-mail: bhm-orum@mil.dk

Rescue craft on the Baltic Sea coast are maintained at the following locations:

1. Ronne (55°06'N., 14°42'E.).
2. Nexo (55°04'N., 15°09'E.).
3. Skagen (57°43'N., 10°36'E.).
4. Saeby (57°20'N., 10°32'E.).
5. Osterby (57°19'N., 11°08'E.).
6. Anholt (57°43'N., 10°31'E.).
7. Grenaa (56°25'N., 10°56'E.).
8. Klintholm (56°57'N., 10°28'E.).
9. Gedser (54°34'N., 10°56'E.).

Rescue craft on the North Sea coast are maintained at the following locations:

1. Romo Havn (55°05'N., 8°34'E.).
2. Sonderho (55°21'N., 8°28'E.).
3. Esbjerg (55°28'N., 8°6'E.).
4. Hvide Sande (56°00'N., 8°07'E.).
5. Thorsminde Havn (56°22'N., 8°3074'E.).
6. Thyboron Havn (56°43'N., 8°14'E.).
7. Vester Agger (56°47'N., 8°14'E.).
8. Norre Vorupor (56°58'N., 8°22'E.).
9. Hanstholm Havn (57°08'N., 8°36'E.).
10. Torup Strand (57°08'N., 9°07'E.).
11. Lonstrup (57°28'N., 9°48'E.).
12. Hirtshals Havn (57°36'N., 9°58'E.).

Ship Reporting System

BELTREP

BELTREP, a mandatory ship reporting system, operates in the N and central parts of Store Baelt and is operated by Great Belt VTS. For further information, see Sector 2 in Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

SOUNDREP

SOUNDREP, a voluntary ship reporting system, has been established between Denmark and Sweden in the central and southern parts of The Sound in order to improve safety and protect the marine environment. This reporting system, which is operated by Sound VTS, includes a Reporting Area and an inner Operational Area.

On 1 September, 2011 the operational area of SOUNDREP increases to cover the entire area of The Sound, as well as the N and S approaches to The Sound. On this date, participation in SOUNDREP also becomes mandatory for all vessels of 300 gross tons and over proceeding to or from ports or anchorages in The Sound or when passing through the reporting area.

For further information, see Sector 1 in Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part.)

Signals

Dredge signals

Dredge signals, in addition to those prescribed by the International Regulations for Preventing Collisions at Sea, are given below. Either the signal permitting passage or the signal prohibiting it may, if necessary, be shown from both sides of the dredge simultaneously.

Vessels may pass on the side on which the following signals are shown:

1. By day.—A black diamond.
2. By night—Two green lights, vertically disposed.

Vessels may not pass on the side on which the following signals are shown:

1. By day.—A black ball.
2. By night.—Two red lights, vertically disposed.

Diving signals

Flag "A" of the International Code, illuminated at night, denotes that a diver is at work. Vessels must pass with great caution and, as far as possible, with their engines stopped.

Restricted Maneuvering Signals

A vessel which, because of its length or draft when navigating in a narrow channel, is obliged to keep to the deeper part of the channel, may display the following signals as a warning to other shipping that it is unable to maneuver freely:

1. By day.—A black cylinder at least 3m in length and 1m in diameter.
2. By night.—Three red lights, vertically disposed, at least 2m apart and visible all round the horizon at a range of at least 2 miles, in addition to normal navigational lights.

The sound signal D in Morse code may be also made by day or night.

When towing, the signals are shown by the vessel being towed.

In certain channels within the territorial waters of Denmark, a vessel displaying the above signals has undisputed right of way, and all other vessels are obliged to keep clear.

Cable or Chain Ferries

Cable or chain ferries display three red all-around lights positioned in a triangle with its apex at the top.

Warning Signals for Fishing Vessels

Warning signals for fishing vessels, maintained by the Danish fishing association, are shown from a number of locastions along the W coast of Jylland. The signals are shown from a mast, about 12m high, with a yard. In poor visibility, sound signals are given by horn. In hazy weather signal No. 1 may be accompanied by the firing of a gun by day or that of a rocket at night.

The landing place is marked by the alignment of the following signals:

1. By day—a red and white flag.
2. At night—Two red lights.

In reduced visibility a sound signal of three long blasts is made, similar to signal No. 1.

These signals are shown at the following locations:

1. About 0.7 mile N of Stenbjerg Beacon (56°55'N., 8°21'E.).
2. Norre Vorupor (56°58'N., 8°22'E.).
3. Lild Strand (57°09'N., 8°58'E.).
4. Torup Strand.
5. Lonstrup.

Submarine Operating Areas

Danish naval vessels escorting exercising submarines display the Answering Pennant and the signal HP from the International Code of Signals.

Danish submarines underway on the surface display, in addition to the required navigation lights, a quick flashing blue light, positioned 1m above the masthead light, visible for a distance of 5 miles.

Danish submarines are equipped with telephone buoys, used only in distress, which can be released from a submerged submarine. The buoys are fitted with a flashing light and a green triangular flag. A plate on the upper side gives instructions for use.

Vessels sighting this buoy should contact the submarine by means of the telephone. Do not moor to the buoy, as this may damage the attached cable. A report, which should include all relevant information, should be sent immediately to the Danish naval authorities.

Submarines, both surfaced and dived, exercise frequently in the areas WSW and NNW of Helgoland (54°11'N., 7°53'E.).

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is observed from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Denmark are, as follows:

1. In Bornholmsgat. (IMO adopted)
2. South of Gedser. (IMO adopted)
3. Between Korsoer and Sprogoe (Korsor and Sprogo). (IMO adopted)
4. Hatter Barn. (IMO adopted)
5. In The Sound. (IMO adopted)

Denmark—Warning Signals for Fishing Vessels

Signal	Day	Night	Sound signal	Meaning
No. 1	One black ball at the masthead	One white lightl at the masthead	— — —	Sea is rising but landing here is still possible.
No. 2 and No. 3	One black ball at the masthead with a second black ball at one or the other yardarm	One white lightl at the masthead with a second white light at one or the other yardarm	.— **or** —. **respectively**	There is danger. Seek landing along the coast in the direction of the lower ball/lower light.
No. 4	One black ball at the masthead with a black ball at each yard-arm (forms a triangle, point up)	One white lightl at the masthead with a white lightl at each yard-arm (forms a triangle, point up)	—..—	Await the lifeboat.

U.S. Embassy

The U.S. Embassy is situated at Dag Hammarskjolds Alle 24, Copenhagen.

The mailing addresses are, as follows:

1. Denmark address—
   Dag Hammarskjolds Alle 24
   2100 Copenhagen
2. U. S. address—
   PSC 73
   APO AE (09716)

U. S. Embassy Denmark Home Page
http://denmark.usembassy.dk

DOMINICA

General	**175**
Buoyage System	**175**
Currency	**175**
Government	**175**
Holidays	**176**
Industries	**176**
Languages	**176**
Navigational Information	**176**
Search and Rescue	**176**
Ship Reporting System	**176**
Time Zone	**176**
U.S. Embassy	**176**

General

Dominica lies at the N end of the Windward Islands. It is located between Guadeloupe and Martinique.

The island, the highest island of the Lesser Antilles, is of volcanic origin and is very mountainous, with fertile soil. The highest peaks are usually obscured by clouds.

The tropical climate of the island is modified by the Northeast Trade Wind.

Rain is very heavy in the mountains and averages about 1,400mm along the coast. The heaviest rainfall occurs during the rainy season (May to August), although a considerable amount of rain also falls during the dry season (January to April).

Heavy squalls can have considerable force when the trade wind is strong, may come off the high land and through the deep valleys of the island, especially off the W coast of the island.

Dominica lies within the hurricane belt of the Caribbean Sea.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the East Caribbean dollar. The U.S. dollar is also legal tender.

Government

Flag of Dominica

Dominica is a parliamentary democracy in the British Commonwealth of Nations. The country is divided into ten parishes.

Dominica is governed by a President elected by the House of Assembly to a 5-year renewable term. The Prime Minister is appointed by the President. The unicameral House of Assembly is composed of 30 members who serve 5-year terms; 21 members are directly elected, while the remaining nine members are appointed.

The legal system is based on English common law.
The capital is Roseau.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 2	Merchant's Holiday
Carnival	Variable
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
First Monday in May	May Day
Whitsunday	Variable
Whitmonday	Variable
First Monday in August	August Monday
November 3	Independence Day
November 4	Community Service Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries include agriculture (especially banana production), soap, coconut oil, tourism, copra, furniture, cement blocks, and footwear.

The main exports are bananas, soap, bay oil, vegetables, grapefruit, and oranges. The main export-trading partners are the United Kingdom, Jamaica, South Korea, Antigua and Barbuda, Guyana, and China.

The main imports are manufactured goods, machinery and equipment, food, and chemicals. The main import-trading partners are the United States, China, Trinidad and Tobago, and South Korea.

Languages

English is the official language. A French patois is also spoken

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Dominica are, as follows:

Territorial Sea	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.

Maritime Boundary Disputes

Disputes Venezuela's sovereignty claim over Isla Aves (15°42'N., 63°38'W.). Joined other Caribbean states to counter Venezuela's claim that Isla Aves sustains human habitation, which would permit Venezuela to extend its Exclusive Economic Zone over a large portion of the Caribbean Sea.

Search and Rescue

The Dominica Marine Police Unit is responsible for coordinating search and rescue operations in association with MRCC Fort de France (Martinique).

MRCC Fort-de-France can be contacted, as follows:

1. Telephone: 596-596-709292
   596-596-731616
2. Facsimile: 596-596-632450
   596-596-735730
3. Telex: 298-912008 COMSA A
4. E-mail: antilles@mrccfr.au

The Dominica Coast Guard maintains a continuous listening watch for distress traffic on 7850 kHz and VHF channel 16.

Ship Reporting System

CARICOM (Caribbean Community) Advance Passenger Information System (APIS)

CARICOM APIS is a mandatory reporting system providing Advance Passenger Information (API) about passengers and crew to the Joint Regional Communications Center (JRCC) Barbados for vessels bound for or departing from a port in the CARICOM area. Further information can be found in **Caribbean Sea—Ship Reporting System**.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Ambassador to Barbados is accredited to Dominica. The embassy is situated in Wildey Business Park, Wildey, St. Michael, Bridgetown.

The mailing addresses are, as follows:

1. Barbados address—
   P.O. Box 302
   Bridgetown 11000
2. U. S. address—
   CMR 1014
   APO AA (34055)

U. S. Embassy Barbados Home Page
http://barbados.usembassy.gov

DOMINICAN REPUBLIC

General	177
Buoyage System	177
Cautions	177
Currency	177
Government	177
Holidays	178
Industries	178
Languages	178
Navigational Information	178
Regulations	178
Search and Rescue	178
Time Zone	178
U.S. Embassy	178

General

The Dominican Republic, which occupies the eastern two-thirds of the island of Hispaniola, consists of large mountainous areas interspersed with relatively low flat fertile valleys and plains, generally in the N and E regions. The irregular coastline provides numerous bays and coves, and the many streams provide only limited local small craft navigation.

The climate is tropical and the annual extremes along the coast range from a low of 18°C to a high of about 36°C. Temperatures moderate with altitude in the mountains. Rainfall is quite variable and ranges from 432mm in the W to 2,083mm in the NE.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation along the coasts of the Dominican Republic have occasionally been reported to be unreliable.

Cautions

Acts of piracy have occurred off ports in the Dominican Republic.

Currency

The unit of currency is the Dominican peso, consisting of 100 centavos.

Government

The Dominican Republic is a representative democracy. The country consists of 31 provinces and one district.

The Dominican Republic is governed by a directly-elected President who serves a 4-year term. The bicameral Congress consists of a directly-elected 32-member Senate, serving 4-year terms, and a directly-elected 178-member Chamber of Deputies, serving 4-year terms.

The legal system is based on French civil law.

The capital is Santo Domingo.

Flag of the Dominican Republic

Holidays

The following holidays are observed:

January 1	New Year's Day
January 6	Epiphany
January 21	Our Lady of Altagracia
January 26	Dia de Duarte
February 27	Independence Day
Good Friday	Variable
Easter Sunday	Variable
May 1	Labor Day
Corpus Christi	Variable
August 16	Restoration Day
September 24	Our Lady of Mercedes
November 6	Constitution Day
December 25	Christmas Day

Industries

The main industries are agriculture, tourism, sugar processing, mining (ferronickel and gold), textiles, cement, and tobacco.

The main exports are ferronickel, sugar, gold, silver, coffee, cocoa, tobacco, meat, and consumer goods. The main export-trading partner is the United States.

The main imports are foodstuffs, petroleum, cotton and fabrics, chemicals, and pharmacueticals. The main import-trading partners are the United States, Colombia, and Mexico.

Languages

Spanish is the official language.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of the Dominican Republic are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Claims archipelagic status. Claims Samana Bay, Ocoa Bay, Neiba Bay, Escocesa Bay, and Santo Domingo Bay as historic bays.

Pilotage

Pilotage is compulsory for all vessels over 50 gross tons unless otherwise stated for each port.

Regulations

Anchorage for foreign vessels in the territorial waters of the Dominican Republic is only authorized in charted anchorage areas. Vessels can request authorization to anchor elsewhere from the Dominican Republic Navy or the Dominican Republic Port Authority. Foreign vessels anchoring or adrift without proper authorization may be subject to fines. Vessels claiming force majeure will have that claim verified by a Dominican Authorities boarding party.

Search and Rescue

The Operations Center of the Dominican Republic navy is responsible for the coordination of search and rescue efforts and can be contacted by telephone (1-809-592-0707).

A continuous listening watch is maintained for distress traffic on 2182 kHz and VHF channel 16.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at Calle Cesar Nicolas Penson and Calle Leopoldo Navarro, Santo Domingo.

The mailing address is Unit 5500, APO AA (34041-5500).

U. S. Embassy Dominican Republic Home Page
http://santodomingo.usembassy.gov

EGYPT

General	**179**
Buoyage System	**179**
Cautions	**179**
Currency	**179**
Government	**180**
Holidays	**180**
Industries	**180**
Languages	**180**
Navigational Information	**180**
Pollution	**180**
Regulations	**180**
Routes	**181**
Search and Rescue	**181**
Signals	**181**
Time Zone	**181**
Traffic Separation Schemes	**181**
U.S. Embassy	**181**
Vessel Traffic Service	**182**

General

Egypt is located in Northern Africa, bordering the Mediterranean Sea, between Libya and Israel.

The climate is arid, with hot dry summers and moderate winters.

The terrain is a vast desert plateau by the Nile valley and delta.

The Suez Canal, a sea-level waterway, connects Port Said (Bur Said) on the Mediterranean Sea with Suez (As Suways) on the Red Sea. Regulations, restrictions, and other operational details concerning transit of the Suez Canal are fully described in Pub. 172, Sailing Directions (Enroute) Red Sea and the Persian Gulf.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

General

Areas prohibited to navigation may extend up to 25 miles off the Egyptian coast. Vessels navigating off the Egyptian coast or bound for Egyptian ports should obtain the latest information from their agents.

Oil rigs and drilling platforms may be encountered off the coast.

Special Warning 121 (Issued 20 March 2003)

Information on Special Warning 121 can be found in **North Atlantic Ocean—Cautions**.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

Currency

The official unit of currency is the Egyptian pound, consisting of 100 piastres.

Government

Flag of Egypt

Egypt is a republic. The country is divided into 29 governorates.

Egypt is governed by a directly-elected President serving a 6-year term. The unicameral 518-member People's Assembly, which is the principal legislative body, consists of 508 directly-elected members and ten appointed members, all serving 5-year terms. There is also a 264-member Advisory Council, which functions only in a consultive capacity; it is composed of 176 directly-elected members and 88 appointed members who serve 6-year terms.

The legal system is based on English common law, Islamic law, and the Napoleonic code.

The capital is Cairo.

Holidays

The following holidays are observed:

January 7	Coptic Christmas
April 25	Sinai Liberation Day
Easter Monday	Variable
May 1	Labor Day
June 18	Evacuation Day
July 23	Revolution Day
October 6	Armed Forces Day
October 24	Suez Victory Day
December 23	Victory Day

Islamic holidays, which are subject to the appearance of the moon, include Eid Al-Fitr (End of Ramadan), Eid Al-Adha (End of Pilgrimage), Hijrah (Islamic New Year), Sham El Nessim (Spring Holiday), and the Prophet's Birthday.

Industries

The main industries are textiles, food processing, tourism, chemicals, pharmaceuticals, petroleum, construction, cement, metals, and light manufacturing.

The main exports are crude oil and petroleum products, cotton, textiles, metal products, and chemicals. The main export-trading partners are Italy, the United States, Spain, the United Kingdom, France, and Syria.

The main imports are machinery and equipment, foodstuffs, chemicls, wood products, and fuels. The main import-trading partners are the United States, Germany, China, Italy, and Saudi Arabia.

Languages

Arabic is the official language. English and French are widely understood.

Navigational Information

Enroute Volumes

Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

Pub. 172, Sailing Directions (Enroute) Red Sea and the Persian Gulf.

Maritime Claims

The maritime territorial claims of Egypt are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone **	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines. Requires advance permission or notification for innocent passage of warships in the territorial sea.

** Also considered a security zone. Egypt claims the right to prior permission for entry of nuclear-powered vessels, vessels carrying nuclear materials, and foreign vessels carrying hazardous or other wastes.

Pollution

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas.**

Regulations

Navigation

Entry permission must be requested from the Egyptian authorities 48 hours prior to arrival. The ETA should be confirmed at least 24 hours in advance, giving the last port of call, position, course, and speed.

Vessels approaching the Egyptian coast should keep at least 12 miles off during daylight hours and at least 24 miles off at night. Port authorities must be contacted by radio when within 24 miles of the coast in order to receive entry instructions.

The normal international courtesies, such as flying the flag

of Egypt at the foremast, should be carefully adhered to while in the waters and ports of Egypt.

Quarantine (Pre-arrival Reporting)

Pratique for El Iskandariya (Alexandria), Bur Said (Port Said), and El Suweis (Port Suez) may be granted prior to the vessel's arrival provided the following conditions are met:

1. The vessel must be a regular liner known to the Quarantine Authorities and have a doctor on board.
2. Details shown on the Quarantine Statement should be sent to the Quarantine Authorities 24 hours prior to ETA.
3. Prior to arrival, vessels must declare any accidents which may have taken place on boasrd prior to arrival.
4. The vessel must not have called on any infected port.

The message address is "Quarantine (name of port)."

For Ain Sukhna and Sidi Kerir, a notification of a healthy crew holding vaccination certificates should be sent with the vessel's ETA message to SUMED Operations, El Iskandariya (Alexandria).

Routes

The Suez Canal

The Suez Canal, a sea-level waterway, connects Port Said (Bur Said) on the Mediterranean Sea with Suez (As Suways) on the Red Sea. It has a total length of 193.5km (including approaches); it has been reported (2003) that the Suez Canal has been dredged to a depth of 18.9m, with further plans to dredge the canal to a depth of 20.1m by 2006. The canal was originally opened for traffic on November 17, 1869 and nationalized in 1956. It was closed in June 1967 due to military conflict and reopened in June 1975. Regulations, restrictions, and other operational details concerning transit of the Suez Canal are fully described in Pub. 172, Sailing Directions (Enroute) Red Sea and the Persian Gulf.

Search and Rescue

The Middle East Search and Rescue Center at the Joint Rescue Coordination Center (JRCC) Cairo is responsible for coordinating search and rescue operations and can be contacted, as follows:

1. Telephone: 20-2-24184537
2. Facsimile: 20-2-24184531
3. Telex: 91-21095 RCCCR UN
4. E-mail: jrcc136@afmic.gov.eg

A Maritime Rescue Coordination Center (MRCC) for the Mediterranean coast of Egypt is located in El Iskandariya (Alexandria) and can be contacted, as follows:

1. Telephone: 20-3-4842058
   20-3-4842119
   20-3-4878983
2. Facsimile: 20-3-4832240

A network of coast radio stations maintains a continuous listening watch on international distress frequencies.

Signals

A naval surveillance tower standing on the W breakwater is used for securing Bur Said and challenging approaching warships and suspicious merchant ships. Only visual signals in plain language are used (English-Arabic) and international signals. The call sign is SSL 2. All ships are to exercise caution when approaching the area.

Visual storm warning signals used in Egypt are given in the accompanying table titled **Egypt—Storm Signals**.

Egypt—Storm Signals

Day	Night	Meaning
One black triangle, point up	—	Gale from NW quadrant
One black triangle, point down	—	Gale from SW quadrant
Two black triangle, points up, vertically disposed	—	Gale from NE quadrant
Two black triangles, points down, vertically disposed	—	Gale from SE quadrant
Two black triangle, bases together, vertically disposed	—	Storm
White flag with yellow anchors	Four red lights, vertically disposed	Sea too rough. Pilots cannot go out.

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time is not observed.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) on the Mediterranean coast of Egypt are, as follows:

1. Western Approaches to Mina Dumyat. (IMO adopted)
2. Eastern Approaches to Mina Dumyat. (IMO adopted)
3. Western Approaches to Bur Said. (IMO adopted)
4. Eastern Approaches to Bur Said. (IMO adopted)

Traffic Separation Schemes (TSS) on the Red Sea coast of Egypt are, as follows:

1. In the Gulf of Suez. (IMO adopted)
2. In the Strait of Tiran. (IMO adopted)

U.S. Embassy

The U.S. Embassy is situated at 8 Kamal El Din Salah Street, Garden City, Cairo.

The mailing addresses are, as follows:

1. Egypt address—
   5 Tawfik Diab Street
   Garden City, Cairo
2. U.S. address—
   Unit 64900
   Box 15

APO AE (09839-4900).

U. S. Embassy Egypt Home Page:
http://egypt.usembassy.gov

Vessel Traffic Service

A Vessel Traffic Service operates in the approaches to Dumyat (Damietta) (31°29'N., 31°46'E.). For further information, see Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

ESTONIA

General	**183**
Buoyage System	**183**
Currency	**183**
Government	**183**
Holidays	**184**
Ice	**184**
Industries	**184**
Languages	**184**
Meteorology	**184**
Navigational Information	**184**
Pilotage	**184**
Pollution	**185**
Regulations	**185**
Search and Rescue	**186**
Ship Reporting System	**186**
Time Zone	**186**
Traffic Separation Schemes	**186**
U.S. Embassy	**186**
Vessel Traffic Service	**186**

General

Estonia is located in Eastern Europe, bordering the Baltic Sea and Finland, between Latvia and Russia.

The climate is maritime and wet, with moderate winters and cool summers.

The terrain consists mostly of marshy lowlands.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Many buoys and lighted buoys are withdrawn or replaced for the winter. Information on intended changes and dates is promulgated in Estonian Notices to Mariners as necessary.

It has been reported (2006) that all navigational aids in the S and E part of the Gulf of Finland may be unreliable. Mariners should exercise caution when using these aids.

Currency

The official unit of currency is the Estonian kroon, consisting of 100 sents.

Government

Flag of Estonia

Estonia is a parliamentary republic. The country is divided into 15 counties.

Estonia is governed by a President, elected by the National Assembly, serving a 5-year term. The Prime Minister is appointed by the President. The unicameral National Assembly consists of 101 directly-elected members serving 4-year terms.

The legal system is based on civil law.
The capital is Tallinn.

Holidays

The following holidays are observed:

January 1	New Year's Day
February 24	Independence Day
Good Friday	Variable
Easter Sunday	Variable
May 1	Spring Day
Whitsunday	Variable
June 23	Victory Day
June 24	St. John's Day (Midsummer's Day)
August 20	Restoration of Independence Day
December 25	Christmas Day
December 26	Second Day of Christmas

Ice

The following ports are serviced by state icebreakers:
1. Muuga Harbor.
2. Tallinn.
3. Kopli Bay.
4. Paldiski North Harbor.
5. Paldiski South Harbor.
6. Kunda Harbor.
7. Pamu Harbor. Serviced from the open sea up to position 58°21.4'N, 24°27.0'E.

The Estonian Maritime Administration is responsible for the icebreaking service and can be contacted, as follows:
1. Telephone: 372-6-205707 (Monday through Friday from 0800 to 1700)
   372-6-205769 (24 hours)
2. Facsimile: 372-6-205666
3. E-mail: winternavigation@vta.ee
4. Web site: http://www.vta.ee

For information on obtaining general ice information for the Baltic Sea, see **Baltic Sea—Ice**.

Industries

The main industries include engineering, electronics, wood and wood products, textiles, information technology, and telecommunications.

The main exports are machinery and equipment, wood and paper, textiles, food products, furniture, metals, and chemical products. The main export-trading partners are Finland, Sweden, Latvia, Russia, the United States, and Germany.

The main imports are machinery and equipment, chemical products, textiles, foodstuffs, and transportation equipment. The main import-trading partners are Finland, Germant, Russia, Sweden, Latvia, and Lithuania.

Languages

Estonian is official language. Latvian, Lithuanian, and Russian are also spoken.

Meteorology

Marine weather forecasts in Estonian and English are available from the Estonian Meteorological and Hydrological Institute (http://www.emhi.ee).

Navigational Information

Enroute Volumes

Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

Maritime Claims

The maritime territorial claim of Estonia is, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	200 miles **

* Claims straight baselines. Nuclear-powered vessels must apply for permission to enter the territorial sea 30 days in advance. Innocent passage is prohibited to ships carrying radioactive materials, explosives and marine pollutants defined as hazardous, and certain oil and fertilizer products unless the cargo is loaded or unloaded in an Estonian port.

** To defined coordinates.

Maritime Boundary Disputes

The maritime boundary between Estonia and Russia is subject to negotiations.

Pilotage

The Estonian Vessel Traffic Service is part of the administrative area of the Estonian National Maritime Board. The activities of the VTS are to provide pilot service, deep sea pilotage, icebreaker service, radar traffic control, and VTS service.

Pilotage is compulsory for all foreign vessels passing through the straits and entering/leaving harbors in the inner water areas of Estonia; such vessels may only proceed along established shipping routes or channels. However, within the Gulf of Riga, the use of established shipping routes or channels is permissible without a pilot.

Estonia Pilots Home Page

http://www.loots.ee

Requests for a pilot should be made 24 hours in advance of ETA at the pilot boarding station; the request should be con-

firmed 6 hours and 2 hours prior to arrival at the pilot boarding position. Vessels are required to request permission to berth 24 hours in advance of arrival in port. Departing vessels must request pilotage 4 hours and 1 hour prior to departure.

Pilots can be ordered via e-mail through an agent licensed to operate in Estonia from a company providing pilotage services.

The pilots station may be contacted, as follows:

1. Telephone: 372-6-053888 (information only)
2. Facsimile: 372-6-053881 (pilot ordering)
3. E-mail: tellimus@loots.ee (pilot ordering)
4. Facsimile: 372-6-053881

Information on the Electronic Pilot Ordering System can be found at http://www.loots.ee.

Pollution

All vessels navigating off the coasts of Estonia are requested to report pollution and accidents which may lead to pollution. Reports are to be made to JRCC Tallinn and should contain the following information:

1. Details of observer (name and address, name or identity of the vessel or aircraft, and destination).
2. Date and time of the observation.
3. Position of the pollution.
4. Type of pollution.
5. Extent and description of the pollution.
6. Cause.
7. Details of the vessel causing the pollution (name; nationality, port of registry, or home port; type, and size of vessels in the vicinity).
8. Sea state conditions.

JRCC Tallinn can be contacted, as follows:

1. Telephone: 372-6-191224
   372-6-191226
   372-6-922500
   372-5-260511
2. Facsimile: 372-6-922501
3. E-mail jrcc@politsei.ee

Monitoring Single Hull Tankers

The transport of heavy grade oils is not allowed on single hull tankers of certain sizes and ages. Denmark, Estonia, Finland, Latvia, Norway, and Sweden have adopted measures to monitor the observance of theses regulations. For further information, see **Denmark—Pollution**.

MARPOL Special Area

The Baltic Sea, including the Gulf of Bothnia and the Gulf of Finland, has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

This Special Area is under intensive surveillance for pollution and violations of traffic rules. Further information on pollution reporting can be found in **Baltic Sea—Pollution—Pollution Reporting**.

Regulations

Vessels navigating in Estonian waters are obliged to observe the requirements of MARPOL 73/78 and the Helsinki Convention of 1974, wherein the Baltic Sea is defined as a Special Area.

Vessels causing any form of marine pollution or damage to the environment may be arrested and detained by Estonian authorities.

Estonia prohibits the transport of certain hazardous substances through its territorial waters unless bound for Estonia. This list includes radioactive materials, explosives, infectious substances, hazardous marine pollutants, some MARPOL categories of chemicals, certain crude or persistent oil products, and some fertilizers.

Quarantine

Vessels bound for an Estonian port from a foreign port are required to report to the Port Health Authority 24 hours before the vessel's ETA and not less than 4 hours prior to the vessel's arrival. The master of the vessel, the agent, or, in the absence of the agent, the vessel's owner shall submit an application to the Estonian Border Guard station at the port. The report should include details of any sickness on board, as well as the number of passengers and number of crew members. The following information should be included when there is sickness on board:

1. Patient's name.
2. Patient's age and sex.
3. Patient's nationlity.
4. Date of sickness.
5. Specify the type of illness.
6. Where the patient resided the past 4 weeks.
7. Medicines and type of assistance given to the patient.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The report should be sent, as follows:

Estonia—EI Contact Information	
Mail	Estonian Maritime Authority
	Valge 4
	11413 Tallinn Estonia
Telephone	372-6-205770
Facsimile	372-6-205766
E-mail	portnotice@dvta.ee
Web site	https://gd.vta.ee

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Recommendation on Baltic Sea Navigation

The IMO has issued recommendations regarding vessel transits of the entrances to the Baltic Sea. For further information, see **Baltic Sea—Regulations**.

Particularly Sensitive Sea Areas (PSSA)

The Baltic Sea area of Sweden, Denmark, Finland, Estonia, Lithuania, Latvia, Poland, and Germany (except for waters under Russian jurisdiction) has been declared by the IMO to be a PSSA.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

Search and Rescue

The Joint Rescue Coordination Center (JRCC) Tallinn is responsible for coordinating search and rescue operations and can be contacted, as follows:

1. Telephone: 372-6-191224
   372-6-191226
   372-6-922500
   372-5-5260511
2. Facsimile: 372-6-922501
3. E-mail jrcc@politsei.ee

A Maritime Rescue Coordination Subcenter (MRSC) is located at MRSC Kuressaare and can be contacted, as follows:

1. Telephone: 372-45-33322
2. Facsimile: 372-45-33320
3. E-mail kord@laane.pv.ee
   merevalveskus@pv.ee

JRCC Tallinn, in addition to Tallinn Radio (ESA), maintains a continuous listening watch for distress traffic on 2182 kHz, 2187.5 kHz, VHF channel 16, and VHF channel 70.

Tallinn Radio (ESA) can be contacted by e-mail, as follows:

tallinnradio@riks.ee

Rescue craft are located at Estonian Coastguard Stations, as follows:

1. Undva (58°31'N., 21°55'E.).
2. Soru (58°42'N., 22°31'E.).
3. Kopu (58°55'N., 22°15'E.).
4. Tahkuna (59°06'N., 22°35'E.).
5. Dirhami (59°13'N., 23°30'E.).
6. Haapsalu (58°57'N., 23°30'E.).
7. Parnu (58°23'N., 24°29'E.).
8. Sorve Saar (57°55'N., 22°02'E.).
9. Kuressaare (58°15'N., 22°29'E.).
10. Ruhnu (57°48'N., 23°14'E.).

Ship Reporting System

GOFREP.—The Gulf of Finland Reporting System (GOFREP) is a mandatory ship reporting system. It covers the international waters in the Gulf of Finland E of the Western Reporting Line and Russian territorial waters W of longitude 26°30.0'E. In addition, Estonia and Finland have implemented mandatory ship reporting systems to their national water areas outside VTS areas. These reporting systems provide the same services and make the same requirements of shipping as the system operating in international waters; further information on these systems can be found in Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

The mandatory ship reporting system in the international waters of the Gulf of Finland, including the national mandatory ship reporting systems of Estonia and Finland, are collectively referred to as GOFREP; the area of coverage is referred to as the GOFREP area. Further information on GOFREP can be found in **Baltic Sea—Appendix II**.

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time (CHARLIE (-3)) is maintained from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Estonia are, as follows:

1. Approaches to Tallinn. (Government of Estonia)
2. Off Kopu Peninsula (Hiiumaa Island) (Kopu Poolsaar). (IMO adopted)

U.S. Embassy

The U.S. Embassy is situated at Kentmanni 20, 15099 Tallinn. The mailing address is the same.

U. S. Embassy Estonia Home Page
http://estonia.usembassy.gov

Vessel Traffic Service

A Vessel Traffic Service is in operation in Tallin (59°29'N., 24°45'E.). For further information, see Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

FAROE ISLANDS

General	**187**
Buoyage System	**187**
Currency	**187**
Fishing Areas	**187**
Government	**187**
Holidays	**188**
Industries	**188**
Languages	**188**
Meteorology	**188**
Navigational Information	**188**
Regulations	**188**
Search and Rescue	**189**
Time Zone	**189**
U.S. Embassy	**189**

General

The Faroe Islands is an archipelago of 17 inhabited islands, one uninhabited island, and several small islets strategically located along important sea lanes in the North Atlantic Ocean.

The climate consists of mild winters and cool summers; it is usually foggy, windy, and overcast.

The terrain is rugged and rocky, with some low peaks; cliffs line most of the coasts. The islands are indented by numerous fjords. The steep terrain limits the population to small coastal lowlands.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Faroese krona, which is freely interchangeable with the Danish krone.

Fishing Areas

Trawling occurs around the islands year round. The heaviest concentration of trawlers occurs from February to April, mainly on Faroe Bank (60°55'N., 8°30'W.) and off the W and E sides of the main group of islands. Long line fishing occurs year round, mainly on Faroe Bank.

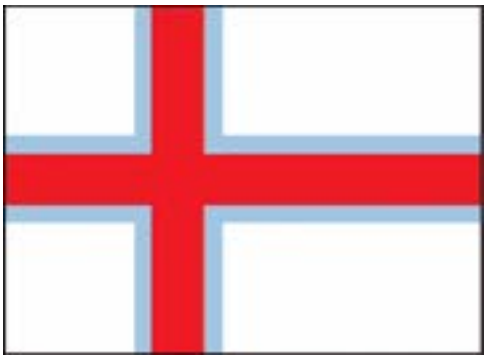
Government

The Faroe Islands is a self-governing overseas administrative division of the Kingdom of Denmark. The country is divided into 34 municipalities.

Queen Margrethe II is the Head of State. The High Commissioner, who represents the islands in the Danish Parliament, is appointed by the Queen. The unicameral Logting (Parliament) is composed of 33 directly-elected members, under a system of proportional representation, serving 4-year terms. The Prime Minister is elected by the Logting.

The legal system is based on Danish law.

The capital is Torshavn.



Flag of the Faroe Islands

Holidays

The following holidays are observed:

January 1	New Year's Day
Maundy Thursday	Variable
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
April 25	Flag Day
Common Prayer Day	Variable
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
June 5 (from midday only)	Constitution Day
July 28	St. Olav's Day Eve
July 29	St. Olav's Day
December 24	Christmas Eve
December 25	Christmas Day
December 26	Boxing Day
December 31	New Year's Eve

Industries

The main industries are fishing, fish processing, shiprepair, and handicrafts.

The main exports are fish, fish products, and stamps. The main export-trading partners are Denmark, the United Kingdom, Nigeria, Norway, and the Netherlands.

The main imports are consumer goods, raw materials, machinery and transport equipment, fuels, fish, and salt. The main import-trading partners are Denmark, Norway, and Iceland.

Languages

Danish and Faroese, a derivative of Old Norse, are the main languages.

Meteorology

Marine weather forecasts in Danish are available from the Danmarks Meteorologiske Institut (http://www.dmi.dk).

Navigational Information

Enroute Volume

Pub. 141, Sailing Directions (Enroute) Scotland.

Maritime Claims

The maritime territorial claims of the Faroe Islands are, as follows:

Territorial Sea *	12 miles. **
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Advance permission or notification for innocent passage of warships in the territorial sea only required for more than three warships at once.

** Straight baselines have the effect of enclosing the waters of the Faroe Islands. Drogden and Hollaenderdyb are claimed as internal waters.

Maritime Boundary Disputes

Dispute with Iceland, the United Kingdom, and Ireland over the Faroe Islands' continental shelf boundary outside 200 miles.

Pilotage

There are no licensed pilots in the Faroe Islands. Arrangements can be made with the local harbor authorities of the larger ports to obtain a person with suitable local knowledge to assist vessels.

Regulations

All vessels arriving in the Faroe Islands must obtain clearance at one of the following ports before entering any other harbor in the islands:

1. Sandur.
2. Vagur.
3. Tvoroyri.
4. Sorvagur.
5. Midvagur.
6. Vestmanna.

7. Torshavn.
8. Runavik.
9. Fuglafjordur.
10. Klaksvik.

Search and Rescue

Maritime search and rescue operations are conducted under the operational control of MRCC Torshavn, which can be contacted, as follows:

1. Telephone: 298-351300
2. Facsimile: 298-351301
3. E-mail: mrcc@mrcc.fo

Torshavn Coast Radio Station (OXJ) maintains a continuous listening watch for distress traffic on 2182 kHz and VHF channel 16, and can be contacted, as follows:

1. Telephone: 298-312965
2. Facsimile: 298-315546
3. E-mail: telegramm@mrcc.fo

Time Zone

The Faroe Islands maintains ZULU (UTC). Daylight Savngs Time (ALFA (-1)) is observed from the last Sunday in March until the last Sunday in October.

U.S. Embassy

The Faroe Islands is a self-governing overseas administrative division of the Kingdom of Denmark. There is no U.S. diplomatic representation.

FINLAND

General	**191**
Buoyage System	**191**
Cautions	**191**
Currency	**192**
Fishing Areas	**192**
Government	**192**
Holidays	**192**
Ice	**192**
Industries	**194**
Languages	**194**
Meteorology	**194**
Mined Areas	**194**
Navigational Information	**194**
Pilotage	**195**
Pollution	**195**
Regulations	**196**
Restricted Areas	**197**
Search and Rescue	**198**
Ship Reporting System	**199**
Time Zone	**200**
Traffic Separation Schemes	**200**
U.S. Embassy	**200**
Vessel Traffic Service	**200**

General

Finland is located in Northern Europe, bordering the Baltic Sea, the Gulf of Bothnia, and the Gulf of Finland between Sweden and Russia.

The climate is cold and potentially subarctic, but comparatively mild due to the moderating influence of the North Atlantic Current, the Baltic Sea, and many lakes.

The terrain is mostly low, having flat to rolling plains interspersed with lakes and low hills.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Caution should be exercised in relying upon floating aids, particularly during periods of ice, in stormy weather, and when summer markings are being changed to winter ones.

Although, ordinary buoys are routinely withdrawn or replaced by spar and ice buoys, any floating aid may become submerged by ice or moved off station.

Only certain buoys are fitted with color reflectors. Those reflectors in use conform to the IALA buoyage system. Radar reflectors are usually painted yellow.

Beacons and lighted beacons, known as border marks, are sometimes used to mark sections of a main fairway. They may be up to 12m high, fitted with radar reflectors, and paint in accordance with the IALA system.

Submarine cable landing places are marked by a notice board with the word “Kaapali.”

Cautions

In conjunction with the establishment of GMDSS (Global Maritime Distress and Safety System), it is reported (2000) that numerous medium frequency radiobeacons situated around the coasts of Finland have been discontinued.

In the coastal waters and inlets of Finland, numerous logs are

always found adrift, particularly after storms and spring freshets. These logs constitute a serious hazard to small and moderate-size vessels.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Fishing Areas

Fish traps may be 1 mile or more in length and may be found in or outside a public channel. The traps are marked at both ends and at intervals of about 0.8 mile with a flag by day or a light by night. Unless forced to do so by the narrowness of the channel, vessels should not approach within 50m of a trap.

Government

Flag of Finland

Finland is a republic. The country is divided into 20 regions.

Finland is governed by a directly-elected President who serves a term of 6 years. The Prime Minister is appointed by the President with the approval of the Parliament. The unicameral Parliament consists of 200 directly-elected members, based on proportional representation, serving 4-year terms.

The legal system is based on a civil law system.

The capital is Helsinki.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 6	Epiphany
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Vappu (May Day)
Ascension Day	Variable
Whitsunday	Variable
First Friday after June 18	Juhannusaatto (Midsummer's Eve)
Saturday after Juhannusaatto (Midsummer's Eve)	Juhannuspaiva (Midsummer's Day)
First Saturday after October 30	All Saints' Day
December 6	Independence Day
December 24	Christmas Eve
December 25	Christmas Day
December 26	Second Day of Christmas

Ice

Ice Information

The Ice Service of the Finnish Institute of Marine Research is responsible for supplying mariners with ice and weather information in Finland. The Ice Service monitors ice conditions and developments on a daily basis and issues ice charts, ice reports, and ice forecasts, for a fee, based on the data it collects and analyzes.

The daily ice chart and ice report include description of current ice conditions and information about the operational areas of Finnish icebreakers, as well as information concerning traffic restrictions, ship routes, advance notification requirements, and other information.

Ice reports are read daily by Finnish radio stations, as follows:

1. Radio Suomi—in Finnish.
2. Radio Vega—in Swedish.
3. Turku Radio—in English, twice daily. Also reports the positions of Finnish icebreakers three times daily.

For information on obtaining general ice information for the Baltic Sea, see **Baltic Sea—Ice**.

Icebreaking Information

The Finnish Icebreaking Service comprises 23 winter ports and other locations specified separately by the Finnish Maritime Administration. Icebreaking services include the assistance of vessels and related towing in Finnish sea areas. In port areas, the respective ports are responsible for icebreaking services.

The icebreaking fleet consists of eight icebreakers operated under a charter arrangement by Fintaship, the Finnish state shipping agency. Contact information can be found in the table titled **Finland—Icebreakers**.

When underway, icebreakers maintain a continuous listening watch on VHF channel 16 and 2332 kHz. When icebreakers are in port and connected to the public telephone systems, these listening watches are not maintained.

Winter navigation assistance is free of charge.

Vessels bound for Finnish ports and requiring icebreaker assistance shall, well in advance of entering ice-covered waters, report to an icebreaker in accordance with the instructions given in the daily ice report. In addition, vessels bound for harbors in the Gulf of Bothnia which have traffic restrictions due to ice are requested to report the following information, in Swedish or English, on VHF channel 84 (call sign: Ice Info) or directly by telephone (46-31-699100) when passing Svenska Bjorn Light (59°33'N., 20°01'E.):

1. Name and call sign.
2. Nationality.
3. Destination.
4. Speed.
5. ETA.

A reporting point further S of Svenska Bjorn may be required based on ice conditions.

Ice breaker assistance is given to ships that meet the requirements concerning ice class and size. An icebreaker has the right to refuse assistance to a ship if it is known that the arrangements of the ship are not functional before the assistance, or if the ship, with regard to hull, engine power, equipment, or crew is in such condition that operation in ice can be presumed to endanger the safety of the ship, or if there is good reason to suspect that the ship is less suitable for operation in ice than what is generally expected for ships belonging to the same ice class.

A vessel stuck in the ice must notify the icebreaker of its position without delay.

All instructions given from the icebreaker shall be followed. Vessels which do not follow the traffic regulations and traffic instructions which have been issued or the orders given by the icebreaker can be refused assistance. Particular attention shall be paid to the following:

1. A careful watch shall be kept for signals from the icebreaker or from other ships in convoy. The VHF channel specified shall be monitored continuously.
2. The propulsion machinery of the ship shall be constantly ready for rapid maneuvers. Any problems arising in the assisted vessel relating to engine power or maneuvering capabilities must be reported to the icebreaker without delay.
3. In order to avoid collisions, a vessel in the convoy shall inform the icebreaker without delay on the specified VHF channel if it stops or slows its speed substantially.
4. Finnish icebreakers are equipped with two rotating red lights, one placed above the other, which are switched on when the icebreaker makes an unexpected stop or a sharp reduction in speed. The assisted ship(s) must then immediately take whatever measures are necessary to promptly execute full astern.
5. To be eligible for icebreaker assistance, vessels navigating in ice-covered waters must be equipped with a powerful searchlight. Ships which form part of a convoy and which have stuck in the ice shall keep their searchlights extinguished.
6. If the vessel sustains or is suspected to have sustained damage, this must be communicasted to the icebreaker immediately. The incident will be recorded in the icebreakers logbook, along with the prevailing ice, weather conditions, and other relevant information. Having reporte to the icebreaker does not relieve the vessel from further reporting to the authorities or the vessel's owner.

Finland—Icebreakers

Name	Call sign	Direct telephone	Mobile telephone
Urho	OHMS	358-30-6207500	358-400-219681
Sisu	OHMW	358-30-6207400	358-400-219682
Voima	OHLW	358-30-6207650	358-400-318156
Fennica	OJAD	358-30-6207700	358-400-107157
Nordica	OJAE	358-30-6207800	358-400-246551
Otso	OIRT	358-30-6207300	358-400-219680
Kontio	OIRV	358-30-6207200	358-400-592747
Botnica	OJAK	358-30-6207900	358-400-203876

Finland—Ice Information

Entity	Contact information		Remarks
Baltic Sea Icebreaking Web (BIMWeb)	Telephone	358-9-6857659	An online service which provides a daily ice chart and ice report covering the entire Baltic Sea area, the positions of icebreakers, traffic restrictions in force.
	Facsimile	358-9-6857638	
		358-9-6857639	
	Web site	http://www.baltice.org	
Finnish Transport Agency Winter Navigation Unit	Telephone	358-206-37373 (0800-1615)	Inquiries concerning traffic restrictions, dispensations, vessel suitability for winter navigation, etc.
		358-206-373323	
	Facsimile	358-204-484360	
	E-mail	winternavigation@fta.fi	
	Web site	http://www.fma.fi	

Finland—Ice Information			
Entity	**Contact information**		**Remarks**
Arctia Shipping	Telephone	358-30-6207000	Information on icebreakers, crew exchange schedules, assistance areas, etc.
	E-mail	icebreakers@fta.fi	
	Web site	http://www.arctia.fi/english	
Ice Service of the Finnish Meteorological Institute	Telephone	358-9-1929-3464	Inquiries concerning the ice situation, ice forecasts, or other issues.
	Facsimile	358-9-1929-3413	
	E-mail	ice@fmi.fi	
	Web site	http://www.ilmatieteenlaitos.fi	

In difficult conditions, such as strong ice pressure or passage through heavy ice ridges,towing may be the only means of ensuring safe and effective navigation. Particular attention should be paid, as follows:

1. The icebreaker shall determine when the ship is to be towed.
2. Towing usually takes place by taking the vessel's stem into the towing fork of the icebreaker.
3. The ship shall be prepared to make fast or let go the towing cable at any time.
4. A ship, which is towed by an icebreaker, may only use its propulsion machinery in accordance with instructions given from the icebreaker. The vessel's propulsion machinery shall be ready for rapid maneuvering at all times.
5. During towage, the vessel being towed must use manual steering/navigation. By manual steering, the vessel should try to stay in line with the icebreaker.

State icebreakers show a blue light visible around the horizon at their masthead during the hours of darkness.

The FMA does not accept any responsibility for delay, damage, or other loss caused to a ship, its crew, passengers, or cargo as a result of ice conditions. Every ship is responsible for its own safety.

Industries

The main industries are metals and metal products, electronics, machinery and scientific instruments, shipbuilding, pulp and paper, foodstuffs, chemicals, textiles, and clothing.

The main exports are machinery and equipment, chemicals, metals, timber, paper, and pulp. The main export-trading partners are Russia, Sweden, Germany, the United Kingdom, the United States, and the Netherlands.

The main imports are foodstuffs, petroleum and petroleum products, chemicals, transport equipment, iron and steel, machinery, textile yarn and fabrics, and grains. The main import trading partners are Germany, Sweden, Russia, the Netherlands, and China.

Languages

Finnish and Swedish are the official languages.

Meteorology

Marine weather forecasts in Finnish, English, and Swedish are available from the Finnish Meteorological Institute (http://www.fmi.fi).

Mined Areas

Former Mine Danger Area No. 147 (Gulf of Finland and Vainameri).—The area includes all of the Gulf of Finland and Vainameri and is bounded by the coastline and lines joining the following positions:

a. 58°20.0'N, 23°45.7'E.
b. 58°17.0'N, 23°18.0'E.
c. 58°25.8'N, 23°18.0'E then counterclockwise around the coast of Saaremaa to
d. 59°00.0'N, 21°53.0'E.
e. 59°08.0'N, 22°00.0'E then along longitude 22°00.0'E to Finnish territorial waters.

Former Mine Danger Area No. 146 (S of Uto).—An area bounded by lines joining the following positions:

a. 59°37.5'N, 21°05.5'E.
b. 59°44.5'N, 21°14.5'E.
c. 59°42.0'N, 21°27.7'E.
d. 59°34.5'N, 21°23.5'E.

Navigational Information

Enroute Volume

Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

Maritime Claims

The maritime territorial claims of Finland are, as follows:

Territorial Sea *	12 miles (3 miles in the Gulf of Finland).
Contiguous Zone	14 miles.
Fisheries or Economic Zone	Defined by coordinates.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines. Requires advance permission or notification for innocent passage of warships in the territorial sea.

Pilotage

Pilotage is generally compulsory. All ordering of local pilots in all pilotage areas is carried out by the Finnpilot Order Center, Helsinki. Finnish waters are divided into three pilotage zones, as follows:

1. Southern Pilotage Zone:
   a. Helsinki Pilotage Area—Helsinki, Porkkala, and Emasalo.
   b. Hanko Pilotage Area.
2. Eastern Pilotage Zone:
   a. Kotka Pilotage Area—Orrengrund, Haaspasaari, and Santio.
   b. Saimaa Canal and Lake Saimaa.
3. Western Pilotage Zone:
   a. Archipelago Pilotage Area—Uto, Isokari, and Mariehamn.
   b. Rauma Sea Pilotage Area—Rauma and Pori.
   c. Vaasa Pilotage Area—Kristiinankaupunki, Kaskinen, and Vaasa.
   d. Kokkola Pilotage Area—Pietarsaari, Kokkola, and vessels coming and going S from Kalajoki.
   e. Gulf of Bothnia Pilotage Area—Tornio, Kemi, Oulu, Raahe, and vessels coming and going N from Rahja.

The easiest way to provide preliminary information about pilotage requirements or to order pilotage is by using the Pilot Order Form, which can be found on the Internet, as follows:

Pilot Order Form
http://www.pilotorder.fi

Pilots can also be ordered by telephone, facsimile, or e-mail. For contact information, see the accompanying table titled **Finnpilot Order Center Contact Information**. Pilots cannot be ordered by VHF.

The Finnpilot main office can also be contacted, as follows:

1. Telephone: 358-20-754611
2. Facsimile: 358-20-7546100
3. E-mail: luotsausliikelaitos@finnpilot.fi
4. Web site: http://www.finnpilot.fi

Inbound vessels must provide 24-hour and 6-hour advance notice of their ETA at the pilot boarding position. Vessels must then place a binding pilotage order 3 hours prior to arrival. Pilots will contact inbound vessels on VHF when they are less than 1 hour from the pilot boarding position.

Departing vessels must provide 24-hour and 6-hour advance notice of their departure. Vessels must then place a binding pilotage order 2 hours prior to departure.

The Finnpilot Order Center will confirm receipt of the order using the same method as used to make the order. Orders using the Pilot Order Form on the Internet service can also be confirmed by e-mail, if requested, providing an e-mail address is included. Orders placed by telephone are not confirmed separately after the call.

Vessels shifting their berth must provide a 6-hour advance notice to the Finnpilot Order Center, with an additional 2 hour confirmation.

During the winter months, pilot boarding positions are subject to change according to the weather conditions.

Vessels requiring a licensed Deep Sea Pilot in the Baltic Sea area should send request at least 24 hours in advance to any Coastal Pilot Station.

Radar stations are equipped with VHF channels 18, 20, and 22.

A continuous listening watch is maintained on VHF channel 71 for the archipelago area between the Aland Islands and Turku.

Pollution

Monitoring Single Hull Tankers

The transport of heavy grade oils is not allowed on single hull tankers of certain sizes and ages. Denmark, Estonia, Finland, Latvia, Norway, and Sweden have adopted measures to monitor the observance of theses regulations. For further information, see **Denmark—Pollution**.

Pollution Reporting

All vessels navigating in Finnish territorial waters or the Finnish Economic Zone are requested to report pollution or accidents which could lead to such pollution to MRCC Turku, as follows:

1. Call sign: Rescue Center Turku
2. Telephone: 358-20-41001
   358-718-727010
3. Facsimile: 358-718-720109
4. E-mail: mrcc@raja.fi

MARPOL Special Area

The Baltic Sea, including the Gulf of Bothnia and the Gulf of Finland, has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

This Special Area is under intensive surveillance for pollution and violations of traffic rules. Further information on pollution reporting can be found in **Baltic Sea—Pollution—Pollution Reporting**.

Finnpilot Order Center Contact Information

Pilotage Zone	Telephone	Facsimile	E-mail
Southern	358-20-7546151	358-20-7546161	pilotorder.south@finnpilot.fi
Eastern	358-20-7546152	358-20-7546162	pilotorder.east@finnpilot.fi

Finnpilot Order Center Contact Information			
Pilotage Zone	**Telephone**	**Facsimile**	**E-mail**
Western	358-20-7546153	358-20-7546163	pilotorder.west@finnpilot.fi

Regulations

Foreign vessels should not enter a military zone unless the channel leads through such an area, in which case the vessel must not deviate from the channel. While in a military zone, a vessel is subject to inspection by the commander of the area and the vessel must provide all information which may be requested.

Merchant ships entering Finnish waters must adhere to routes and instructions issued by customs authorities and patrol authorities.

Persons aboard ships in Finnish territory are prohibited from surveying, mapping, taking soundings (except under the supervision of a pilot), subsurface work, and taking photographs within fortified areas.

Foreign warships planning a cruise in Finnish coastal waters should advise the Finnish government through diplomatic channels. Approval should be obtained at least 8 days in advance. Port Regulations will be furnished to shipmasters upon arrival in Finnish ports by the Port Captains.

The Finnish customs flag is similar to the merchant flag and, in addition, it shows in the upper white field next to the staff, the Finnish coat of arms between two crossed black staffs of Mercury. Control vessels may order vessels to stop by international signals on the whistle or siren or by hoisting the customs flag or the flag of the Border Control Service, or at night by signal flares. Aircraft ordering a vessel to stop will circle the ship and fire one signal flare. Enforcement of customs regulations is delegated to Finnish government pilots.

Oil, gas, and chemical tankers of 1,600 grt and above, destined for Finnish ports, should report to Turku Radio before passing latitude 56°N. When the tanker's port of departure is situated in the Baltic N of 56°N, the report is to be made immediately after leaving the harbor.

International Ship and Port Facility (ISPS) Code

The ISPS Code applies to ships on international voyages and port facilities directly interfacing with these ships. Ships covered by the ISPS Code must submit the following information at least 24 hours prior to entering Finnish waters:

1. Vessel name, IMO number, port of registry, flag, type of vessel, call sign, contact details, gross tonnage, name of shipping company, and contact details of the shipping company's security officer.
2. Vessel port-of-call and the name of the port facility, if known, the ETA, and the purpose of the visit.
3. Whether the vessel possesses a valid International Ship Security Certificate or a valid Interim International Ship Security Certificate. If it does, include the name of the competent authority that issued it, along with the expiration date of the certificate. If the vessel does not have these certificates, an explanation must be given.
4. Whether the vessel has an approved Ship's Security Plan.
5. The current Security Level of the vessel and the vessel's location at the time of submitting the notification.
6. The last ten port facilities visited by the vessel, in chronological order, and the Security Level at each port.
7. In addition to the measures set out in the approved Ship's Security Plan, any special or additional security measures implemented that were embarked upon by the vessel during vessel/port interfaces within the period referred to in paragraph 6.
8. Events during vessel/vessel interfaces within the period referred to above in paragraph 6, and the vessel's location during the period in question.
9. Whether the security measures under the approved Ship's Security Plan have been followed in vessel-to-vessel activities; if not, an explanation must be given of which security measures were not followed and which security measures were taken in lieu.
10. A general description of the cargo and information on any hazardous substances on board the vessel.
11. Verification that the vessel has a crew list and a passenger list.
12. Any other matters concerning security.
13. Contact details of the vessel's duly authorized representative at the port of destination.
14. Name and title or permission of the person making the notification, and the date, time, and place of its completion.

If the duration of the voyage from the vessel's previous port of call is less than 24 hours, the information should be submitted no later than the vessel's departure from the previous port of call. If the port of call is not known or if it changes during the voyage, the information should be submitted as soon as the port of call is known.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The report shall be submitted through the vessel's agent or representative in the destination port through the PortNet Information System (http://www.portnet.fi). If the agent or representative is not known, the master should contact the company or charterer to establish the contact information. Information can only be entered ino the PortNet Information System by authorized parties who have been granted access to the system.

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Recommendation on Baltic Sea Navigation

The IMO has issued recommendations regarding vessel transits of the entrances to the Baltic Sea. For further information, **see Baltic Sea—Regulations.**

Particularly Sensitive Sea Areas (PSSA)

The Baltic Sea area of Sweden, Denmark, Finland, Estonia, Lithuania, Latvia, Poland, and Germany (except for waters under Russian jurisdiction) has been declared by the IMO to be a PSSA.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

Restricted Areas

Certain areas in Finnish waters have been designated as restricted areas. Regulations for these areas prohibit landing or approaching the shore closer than 100m in the vicinity of military areas. Fishing; anchoring outside authorized anchorages, except in an emergency; and underwater activities are prohibited without prior permission.

The numbers located on the graphic titled **Finland—Restricted Areas** correspond to the numbers of the restricted areas listed below, as follows:

1. **Haapasaari.—**Area bounded by a line joining the following positions:
   a. 60°15.08'N, 27°04.50'E.
   b. 60°12.25'N, 27°04.49'E.
   c. 60°12.24'N, 27°14.56'E.
   d. 60°18.77'N, 27°14.61'E.
   e. 60°18.78'N, 27°11.19'E.
   f. 60°17.41'N, 27°08.64'E.
   g. 60°17.29'N, 27°08.00'E.
   h. 60°16.06'N, 27°06.13'E.
2. **Kirkonmaa.—**Area bounded by a line joining the following positions:
   a. 60°22.74'N, 26°57.10'E.
   b. 60°21.20'N, 26°57.40'E.
   c. 60°21.11'N, 27°05.58'E.
   d. 60°24.15'N, 27°05.59'E.
   e. 60°24.87'N, 27°03.30'E.
   f. 60°24.94'N, 27°02.51'E.
   g. 60°24.60'N, 27°02.29'E.
   h. 60°24.68'N, 27°01.54'E.
   i. 60°24.37'N, 27°00.33'E.
3. **Orrengrund.—**Area bounded by a line joining the following positions:
   a. 60°16.77'N, 26°24.66'E.
   b. 60°11.73'N, 26°24.71'E.
   c. 60°10.25'N, 26°26.69'E.
   d. 60°10.31'N, 26°39.28'E.
   e. 60°16.75'N, 26°28.98'E.
4. **Vaarlahti.—**Area bounded by a line joining the following positions:
   a. 60°12.34'N, 25°34.36'E.
   b. 60°10.69'N, 25°34.42'E.
   c. 60°10.85'N, 25°40.02'E.
   d. 60°12.39'N, 25°38.50'E.
5. **Pirttisaari.—**Area bounded by a line joining the following positions:
   a. 60°09.36'N, 25°25.98'E.
   b. 60°09.27'N, 25°27.05'E.
   c. 60°08.95'N, 25°29.02'E.
   d. 60°10.10'N, 25°28.21'E.
   e. 60°10.38'N, 25°27.05'E.
   f. 60°10.22'N, 25°26.17'E.
   g. 60°09.91'N, 25°25.76'E.
6. **Santahamina.—**Area bounded by a line joining the following positions:
   a. 60°08.61'N, 24°59.83'E.
   b. 60°07.45'N, 24°59.42'E.
   c. 60°07.44'N, 25°04.84'E.
   d. 60°08.37'N, 25°05.40'E.
   e. 60°08.63'N, 25°05.45'E.
   f. 60°09.00'N, 25°05.48'E.
   g. 60°09.42'N, 25°03.81'E.
   h. 60°09.47'N, 25°03.14'E.
7. **Isosaari.—**Area bounded by a line joining the following positions:
   a. 60°06.68'N, 25°04.92'E.
   b. 60°06.65'N, 25°00.82'E.
   c. 60°06.25'N, 25°00.42'E.
   d. 60°04.67'N, 25°01.89'E.
   e. 59°58.61'N, 24°59.96'E.
   f. 59°58.73'N, 25°08.26'E.
   g. 60°05.47'N, 25°07.88'E.
8. **Miessaari.—**Area bounded by a line joining the following positions:
   a. 60°08.28'N, 24°47.72'E.
   b. 60°07.93'N, 24°47.83'E.
   c. 60°07.65'N, 24°47.05'E.
   d. 60°07.70'N, 24°46.60'E.
   e. 60°07.83'N, 24°46.58'E.
   f. 60°08.08'N, 24°46.78'E.
   g. 60°08.28'N, 24°47.40'E.
9. **Rysakari.—**Area bounded by a line joining the following positions:
   a. 60°06.20'N, 24°50.30'E.
   b. 60°06.05'N, 24°50.57'E.
   c. 60°05.83'N, 24°49.97'E.
   d. 60°06.12'N, 24°49.50'E.
10. **Katajaluoto.—**Area bounded by a line joining the following positions:
   a. 60°06.23'N, 24°55.18'E.
   b. 60°06.15'N, 24°55.60'E.
   c. 60°05.67'N, 24°54.92'E.
   d. 60°05.83'N, 24°54.45'E.
11. **Upinniemi.—**Area bounded by a line joining the following positions:
   a. 59°46.20'N, 24°05.18'E.
   b. 59°48.70'N, 24°26.59'E.
   c. 59°56.27'N, 24°23.91'E.
   d. 59°56.26'N, 24°22.66'E.
   e. 59°55.65'N, 24°21.22'E.
   f. 59°56.25'N, 24°19.86'E.
   g. 60°00.20'N, 24°22.97'E.
   h. 60°01.00'N, 24°23.43'E.
   i. 60°01.72'N, 24°23.10'E.
   j. 60°02.51'N, 24°22.44'E.

k. 60°02.79'N, 24°21.74'E.
l. 59°58.76'N, 24°09.85'E.
m. 59°57.09'N, 24°03.66'E.
n. 59°56.13'N, 24°01.06'E.
o. 59°55.70'N, 24°00.24'E.
p. 59°55.02'N, 24°04.37'E.
q. 59°54.18'N, 24°06.64'E.

12. **Hasto Buso.—**Area bounded by a line joining the following positions:
a. 59°50.67'N, 23°18.86'E.
b. 59°50.02'N, 23°19.07'E.
c. 59°49.62'N, 23°20.60'E.
d. 59°49.90'N, 23°21.42'E.
e. 59°50.55'N, 23°21.51'E.

13. **Hanko.—**Area bounded by a line joining the following positions:
a. 59°46.92'N, 22°55.‘3'E.
b. 59°38.38'N, 22°55.09'E.
c. 59°39.12'N, 23°12.20'E.
d. 59°43.58'N, 23°12.88'E.
e. 59°45.03'N, 22°57.68'E.
f. 59°45.76'N, 22°57.54'E.
g. 59°46.79'N, 22°59.96'E.

14. **Kemio.—**Area bounded by a line joining the following positions:
a. 60°09.96'N, 22°25.09'E.
b. 60°06.82'N, 22°21.76'E.
c. 60°06.21'N, 22°24.46'E.
d. 60°06.58'N, 22°26.86'E.
e. 60°06.76'N, 22°27.48'E.
f. 60°09.17'N, 22°32.88'E.
g. 60°09.61'N, 22°33.01'E.
h. 60°10.30'N, 22°32.74'E.

15. **Oro.—**Area bounded by a line joining the following positions:
a. 59°50.55'N, 22°15.25'E.
b. 59°45.38'N, 22°14.04'E.
c. 59°41.27'N, 22°14.63'E.
d. 59°41.54'N, 22°22.16'E.
e. 59°43.51'N, 22°21.61'E.
f. 59°46.83'N, 22°21.50'E.
g. 59°47.63'N, 22°21.41'E.
h. 59°48.00'N, 22°21.53'E.
i. 59°50.25'N, 22°21.88'E.
j. 59°50.60'N, 22°20.67'E.

16. **Uto.—**Area bounded by a line joining the following positions:
a. 59°48.46'N, 21°20.05'E.
b. 59°46.54'N, 21°20.21'E.
c. 59°41.55'N, 21°20.08'E.
d. 59°42.00'N, 21°29.94'E.
e. 59°45.47'N, 21°29.93'E.
f. 59°47.62'N, 21°29.94'E.

17. **Gylto.—**Area bounded by a line joining the following positions:
a. 60°06.55'N, 21°26.63'E.
b. 60°05.50'N, 21°27.98'E.
c. 60°06.02'N, 21°31.76'E.
d. 60°07.63'N, 21°31.47'E.
e. 60°08.34'N, 21°30.99'E.
f. 60°08.59'N, 21°29.55'E.
g. 60°08.01'N, 21°28.87'E.

18. **Houtskar.—**Area bounded by a line joining the following positions:
a. 60°12.81'N, 21°27.94'E.
b. 60°12.85'N, 21°29.93'E.
c. 60°13.43'N, 21°30.09'E.
d. 60°13.68'N, 21°29.78'E.
e. 60°13.69'N, 21°28.62'E.
f. 60°13.76'N, 21°28.30'E.
g. 60°13.70'N, 21°27.44'E.
h. 60°13.47'N, 21°27.35'E.

19. **Pansio.—**Area bounded by a line joining the following positions:
a. 60°26.88'N, 22°06.66'E.
b. 60°25.75'N, 22°07.05'E.
c. 60°26.00'N, 22°09.44'E.
d. 60°27.17'N, 22°08.84'E.

Semi-Restricted Areas

Semi-restricted areas have been established throughout Finnish waters and are regulated by the same laws and guidelines as apply to restricted areas. See the appropriate chart for limits of these areas.

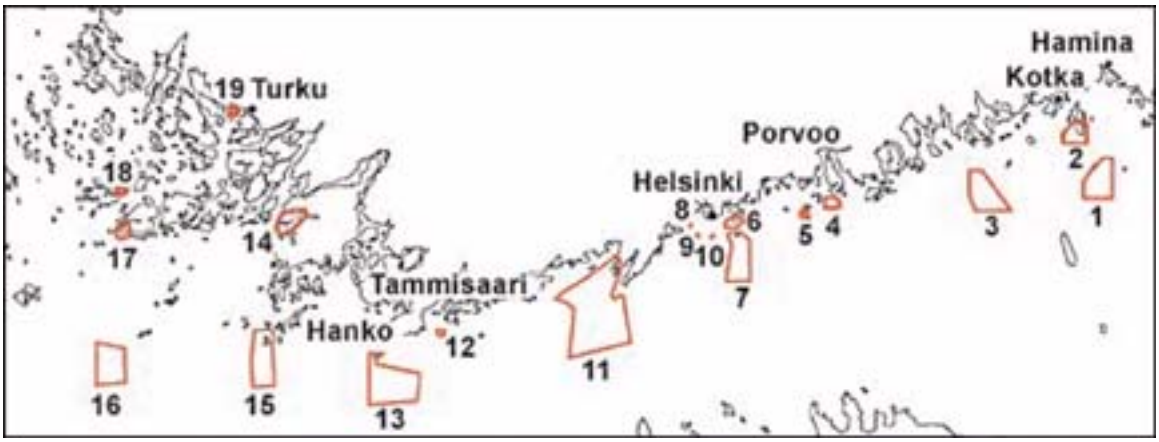
Search and Rescue

The Border Guard (BG) is the authority in Finland responsible for search and rescue operations. The Maritime Search and Rescue Service, under the control of the BG, consists of Maritime Rescue Coordination Center (MRCC) Turku, Maritime Rescue Coordination Subcenter (MRSC) Helsinki, and MRSC Vaasa. MRCC Turku is the central point of contact in operational SAR matters.

MRCC Turku, MRSC Helsinki, and MRSC Vaasa maintain a continuous listening watch for distress traffic on 2187.5 kHz, VHF channel 16, and VHF channel 70. The centers can be contacted, as follows:

1. MRCC Turku
   a. Call sign: Rescue Center Turku
   b. Telephone: 358-20-41001 (distress)
      358-718-720100
      358-718-720111 (Maritime Assistance Center)
   c. Facsimile: 358-718-720109
      358-718-727019 (Maritime As sistance Center)
   d. E-mail: mrcc@raja.fi
2. MRSC Helsinki
   a. Call sign: Rescue Center Helsinki
   b. Telephone: 358-20-41002 (distress)
      358-718-720200
   c. Facsimile: 358-718-720209
   d. E-mail: mrsc.helsinki@raja.fi
3. MRSC Vaasa
   a. Call sign: Rescue Center Vaasa
   b. Telephone: 358-20-41003 (distress)
      358-718-720300
   c. Facsimile: 358-718-720309
   d. E-mail: mrsc.vaasa@raja.fi

The national alarm number (telephone: 358-20-41000) always connects to the nearest MRCC or MRSC.



Finland—Restricted Areas

The Finnish coast is divided into maritime SAR areas which are identical to the Finnish Coastguard districts.

Coastguard stations and rescue craft are located, as follows:

1. Gulf of Finland
   a. Hamina (60°34.0'N., 27°12.0'E.)—Motor lifeboat.
   b. Haaspasaaari (60°17.2'N., 27°11.4'E.)—Coastguard station.
   c. Sapokanlahti (Kotka) (60°27.5'N., 26°57.4'E.)—Coastguard station.
   d. Orrengrund (60°16.5'N., 26°27.0'E.)—Coastguard station.
   e. Valkom (60°24.5'N., 26°15.5'E.)—Motor lifeboat.
   f. Glosholmen (60°11.5'N., 25°50.5'E.)—Coastguard station.
   g. Porvoo Oil Harbor (60°18.0'N., 25°33.0'E.)—Rescue station.
   h. Pirttsaaren (60°10.0'N., 25°26.0'E.)—Coastguard station.
   i. Suomenlinna (60°11.5'N., 24°59.0'E.)—Coastguard station.
   j. Helsinki (60°1.00'N., 24°57.0'E.)—Rescue cruiser and two motor lifeboats.
   k. Porkkala (59°58.0'N., 24°25.0'E.)—Coastguard station.
   l. Inkoo (60°02.5'N., 24°00.5'E.)—Lifeboat.
   m. Kantvik (60°05.0'N., 24°23.0'E.)—Lifeboat.
   n. Bagaskar (59°56.0'N., 24°01.0'E.)—Coastguard station.
   o. Jussaro (59°49.0'N., 23°34.0'E.)—Coastguard station.
   p. Tammisaari (59°59.0'N., 23°26.6'E.)—Motor lifeboat.
   q. Hanko (59°49.0'N., 22°58.0'E.)—Coastguard station and rescue cruiser.
2. Gulf of Bothnia
   a. Enskar (60°13.0'N., 19°20.0'E.)—Coastguard station and lifeboat.
   b. Uusikaupunki (60°48.0'N., 21°24.0'E.)—Rescue cruiser.
   c. Rauma (61°08.0'N., 21°30.0'E.)—Motor lifeboat.
   d. Ryovaskeri (61°23.3'N., 21°25.7'E.)—Coastguard station.
   e. Reposaari (61°36.7'N., 21°27.2'E.)—Rescue cruiser.
   f. Merikarvia (61°51.0'N., 21°29.0'E.)—Coastguard station.
   g. Storkarren (62°09.1'N., 21°19.1'E.)—Coastguard station.
   h. Kaskinen (62°20.1'N., 21°11.6'E.)—Motor lifeboat.
   i. Ebbskar (63°26.2'N., 21°04.3'E.)—Coastguard station.
   j. Molpehallorna (62°54.0'N., 21°05.0'E.)—Coastguard station.
   k. Vallgard (63°09.7'N., 21°15.4'E.)—Coastguard station.
   l. Kummelskar (63°27.6'N., 21°46.6'E.)—Coastguard station.
   m. Vaasa (63°06.0'N., 21°37.0'E.)—Motor lifeboat.
   n. Pietarsaari (63°41.0'N., 22°43.0'E.)—Motor lifeboat.
   o. Masskar (63°43.5'N., 22°35.5'E.)—Coastguard station.
   p. Maraskaret (63°55.5'N., 22°56.5'E.)—Coastguard ststion.
   q. Rahja (64°13.3'N., 23°41.8'E.)—Coastguard station.
   r. Raahe (64°41.0'N., 24°29.0'E.)—Rescue cruiser.
   s. Oulu (65°00.0"N., 25°28.0'E.)—Motor lifeboat.
   t. Virpiniemi (65°07.6'N., 25°14.3'E.)—Coastguard station.
   u. Roytta (65°46.0'N., 24°10.0'E.)—Coastguard station and motor lifeboat.

Ship Reporting System

GOFREP

The Gulf of Finland Reporting System (GOFREP) is a mandatory ship reporting system. It covers the international waters in the Gulf of Finland E of the Western Reporting Line and Russian territorial waters W of longitude 26°30.0'E. In addition, Estonia and Finland have implemented mandatory ship reporting systems to their national water areas outside

VTS areas. These reporting systems provide the same services and make the same requirements of shipping as the system operating in international waters; further information on these systems can be found in Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

The mandatory ship reporting system in the international waters of the Gulf of Finland, including the national mandatory ship reporting systems of Estonia and Finland, are collectively referred to as GOFREP; the area of coverage is referred to as the GOFREP area. Further information on GOFREP can be found in Baltic Sea—Appendix II.

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time (CHARLIE (-3)) is observed from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Finland are, as follows:

1. Off Kalbadagrund Lighthouse. (IMO approved)
2. Off Porkkala Lighthouse. (IMO approved)
3. Off Hankoniemi Peninsula (Hanko). (IMO approved)
4. The Aland Sea. (IMO adopted)

U.S. Embassy

The U.S. Embassy is situated at Itainen Puistotie 14B, Helsinki.

The mailing addresses are, as follows:

1. Finland address—
   Itainen Puistotie 14B
   00140, Helsinki
2. U. S. address—
   APO AE (09723)

U. S. Embassy Finland Home Page
http://finland.usembassy.gov

Vessel Traffic Service

Vessel Traffice Services are in operation, as follows:

1. Gulf of Bothnia (62°59'N., 21°24'E.)—divided into four sectors (designated A to D).
2. Hanko (59°49'N., 22°57'E.).
3. Helsinki (60°03'N., 24°15'E.)—divided into three sectors (designated 1, 2 (Western), and 3 (Eastern)).
4. Kotka (60°18'N., 26°45'E.).
5. Saaristomeri (Archipelago VTS) (60°23'N., 21°11'E.)—divided into four sub-areas (designated 1 to 4).
6. Turku (60°26'N., 22°13'E.).
7. West Coast (61°23'N., 21°14'E.)—divided into two sectors.

For further information, see Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

FRANCE

General	**201**
Areas to be Avoided	**201**
Buoyage System	**201**
Cautions	**202**
Currency	**202**
Firing Areas	**202**
Fishing Areas	**206**
Government	**206**
Holidays	**207**
Industries	**207**
Languages	**207**
Meteorology	**207**
Mined Areas	**207**
Navigational Information	**209**
Pilotage	**209**
Pollution	**210**
Regulations	**210**
Search and Rescue	**213**
Ship Reporting System	**214**
Signals	**216**
Submarine Operating Areas	**216**
Time Zone	**217**
Traffic Separation Schemes	**217**
U.S. Embassy	**217**
Vessel Traffic Service	**217**
Appendix I—SURNAV Reporting Stations and Contact Information	**219**
Appendix II—SURNAV Report Formats	**221**

General

France is located in Western Europe, bordering the Bay of Biscay and the English Channel, between Belgium and Spain, and SE of the United Kingdom. France borders the Mediterranean Sea between Italy and Spain.

The island of Corsica (Corse) lies in the Mediterranean Sea and is a province of France. The main town of the island is Ajaccio.

The climate is generally cool in winter and mild in summer however, the summers are hot along the Mediterranean.

The terrain is mostly flat plains or gently rolling hills in the N and W. The remainder is mountainous.

Areas to be Avoided

An IMO-adopted Area to be Avoided, centered on position 46°10'N, 2°26'W, with a radius of 7 miles, surrounds Plateau de Rochebonne. Vessels carrying hydrocarbons should not enter this described area.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Lights are shown from evening civil twilight until morning civil twilight; lights are also shown by day in fog or poor visibility. Certain range lights may be exhibited 24 hours, with a different charactaristic during the day.

The fairway beneath bridges is marked by lateral daybeacons, as follows:

1. Starboardhand—Green or black triangle on a white square background.
2. Porthand—Red rectangle with a white border.

The daymarks are painted on the span of the bridge above

the limits of the fairway or on the piers if the entire channel between them is navigable. At night, the daymarks may be illuminated or green or red lights may be shown from the same positions. A white light (flashing or isophase) may also be exhibited on the arch indicating the best part of the channel.

Cautions

High Speed Craft

High speed craft operate between the coast of France and the coast of the United Kingdom. For further information, see United Kingdom—Cautions.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

Offshore Dredging

North coast of France—Aggregate dredging is carried out along the N coast of France, particularly E of 3°00'W.

Survey Vessels

French survey vessels carrying out wire-drag surveys uPoor visibility is associated with onshore winds, especially in the area of the entrance points to the Bay of Biscay.sually operate in pairs and are connected by a wire up to 3,000m long that is supported by floats. The vessels display two black balls. Other vessels should keep well clear and, in particular, should not pass between the survey vessels.

Visibility

Poor visibility is associated with onshore winds, especially in the area of the entrance points to the Bay of Biscay.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Firing Areas

Coastal Battery Exercises.—Firing practices take place from French coastal batteries at any season of the year and are announced by Notices to Mariners.

The following warning signals are given:

1. By day—A red flag is displayed from the battery from which the firing is taking place, and from the signal stations in the vicinity, from 1 hour before the practice until the practice is completed. The battery fires a blank round 1 hour before the practice, and two blank rounds, 30 seconds apart, 10 minutes before the practice. The target tugs and range boats also display a red flag during the firings.
2. By night—When a night practice is planned, the signal stations in the vicinity of the battery display, from sunrise to sunset, two red flags, vertically disposed. At sunset and until the practice is completed, two horizontally-disposed red lights are shown at the battery, and a red light is shown from the signal stations in the vicinity.

Thirty minutes before the practice, two red flares are fired at 5 minute intervals by the signal stations. The battery fires a blank round 1 hour before, and two blank rounds, 30 seconds apart, 10 minutes before the practice begins. A white flare marks the end of the practice.

In addition to the usual lights, the target tug exhibits three red lights, disposed vertically, and range boats exhibit one red light at the masthead, during the firings.

The exercises include surface firing, ground to air and air to ground firing, torpedo launchings, bombing, and anti-submarine warfare, minesweeping operations, etc., and are broadcast at least 4 days in advance by radio.

French naval vessels and aircraft carry out exercises, day and night, off all points of the coast, but particularly in certain zones, which are hereinafter described. The exercises include surface firing, ground to air and air to ground firing, torpedo launchings, bombing, anti-submarine warfare, minesweeping operations, etc., and are broadcast at least 4 days in advance by radio and by the local press. These areas are generally located, as follows:

1. Atlantic coast.—Anywhere off the coast but particularly in Baie de la Seine and off Ile d'Ouessant, L'Iroise, and Brest.
2. Mediterranean coast.—In the area bounded by the French coast, latitude 41°40'N, longitude 5°00'E, and a line joining Monaco (longitude 7°25'E) and Cap Corse (43°00'N., 9°25'E.). Although most of this activity is concentrated within 30 miles of the naval base at Toulon, mariners may encounter ships, submarines, and aircraft anywhere within this area.

Surveillance of naval vessel firing areas is assured by the firing vessels, which display a red flag by day, and show a red light, visible around the horizon, at night. Vessels not participating in the exercises should avoid the previously announced exercise areas.

Coastal Belt.—The space between the exercise areas described above and the coast is the coastal belt. This space is not used for exercises on a regular basis, but rather for special, or occasional, activities in this coastal belt.

Special activities (such as ranges, test ranges, measured miles, launching sites, etc.) can take place in areas that are predetermined and prepared for the purpose in advance.

These areas are described below. Their organization and operation are controlled by prefectural orders issued by the Commander-in-Chief of the District. The activities in the coastal belt are always announced in local Notice to Mariners.

Submarine charges.—Any explosion of or experimentation with submarine charges in the Mediterranean is subject to prior authorization of the Naval Commander-in-Chief of the District.

ATLANTIC OCEAN AND ENGLISH CHANNEL FIRING DANGER AREAS

Veules-les-Roses

A circular sector with a radius of 6.5 miles, centered on position 49°52'N, 0°46'E, oriented to the N and limited by the bearings 327° and 032°. All navigation is prohibited in this firing range during times of activation, which are announced by Notices to Mariners and indicated by a red flag hoisted at Dieppe and Fecamp semaphores.

Baie de Seine (D82)

A firing area for vessels of the French Navy is bounded by lines joining the following positions:

a. 49°55'00"N, 0°05'19"W.
b. 49°39'58"N, 0°02'03"W.
c. 49°32'20"N, 0°18'37"W.
d. 49°34'46"N, 0°55'45"W.
e. 49°55'00"N, 0°16'45"W.

The firing zone is divided into Subzone East and Subzone West by a line joining 49°50'00"N, 0°26'00"W and 49°32'20"N, 0°18'37"W.

Querqueville-Castel-Vendon (R156)

A ground-to-sea and ground-to-air firing area is established to the N of Querqueville. The area is bounded to the E by a line joining the following positions: 49°49'10"N, 1°36'00"W and 49°40'40"N, 1°45'30"W; to the S by the coast; to the W by a line joining the following positions: 49°41'25"N, 1°48'46"W and 49°50'55"N, 1°54'10"W; and to the N by the arc of a circle with a radius of 11 miles centered at 49°40'56"N, 1°46'53"W.

Firing takes place at various times throughout the year, except:

1. June 25 to August 3.
2. December 20 to January 5.
3. February and spring school holidays.
4. Days of maximum spring tides.

Times when firings exercises are to take place are broadcast by AVURNAV from Cherbourg Coast Radio.

Biville

An artillery firing range, bounded to the N and S by the parallels 49°38'40"N and 49°34'40"N, respectively, to the E by the coast, and to the W by the meridian 1°58'00"W.

In Anse de Vauville (49°36'N., 1°55'W.), the outer limits of Vauville (Biville sector) firing danger area extend 2.5 miles N from a position 3.5 miles NW of Cap de Flamanville. Practices take place in this area all the year round except from July 15 to November 15.

Fort de la Varde

A firing area extends about 2.5 miles seaward from Pointe de Varde (48°41'N., 1°59'W.).

A considerable sea area, up to 45 miles offshore, between the Gironde and Cap Breton is used as a rocket firing range.

Warnings for particular danger zones are issued by Bordeaux-Arcachon Radio (FFC) on VHF channel 82.

Surveillance of naval vessel firing areas is assured by the firing vessels, which display a red flag by day, and show a red light, visible around the horizon, at night.

Vessels not participating in the exercises should avoid the previously announced exercise areas.

Area D16A—Gascone

A circle 15 miles in radius centered on position 46°09'34.8"N, 4°46'31.8"W.

Area D16C—Glenan

A circle 15 miles in radius centered on position 47°24'22.8"N, 5°28'19.8"W.

Area D16D—Grois

A circle 15 miles in radius centered on position 46°56'15.0"N, 3°10'18.0"W.

Area D16E—Armen

A circle 15 miles in radius centered on position 47°21'00.0"N, 7°36'42.0"W.

Area 17A—Brest

A zone bounded by the parallels of 48°21'N and 48°05'N, and the meridians 4°37'W and 4°53'W.

Area 17B—Pierres Noires

A zone bounded by the parallels of 48°21'N and 48°05'N, and the meridians 4°53'N and 5°20'W.

Area 18—Belle Ile

A zone bounded by lines joining the following positions:

a. 47°23'N, 3°59'W.
b. 47°17'N, 3°41'W.
c. 46°23'N, 4°21'W.
d. 46°29'N, 4°39'W.
e. 47°23'N, 3°59'W.

Area D18D—Armorique

Air-to-air firing practice takes place in an area bounded by lines joining the following positions:

a. 46°46'57"N, 5°00'00"W.
b. 47°28'44"N, 4°05'55"W.
c. 47°18'02"N, 3°47'21"W.
d. 46°36'14"N, 4°42'35"W.

Area Pierre Profunde

Mortar firing practices will take place in a circle 0.75 mile in radius centered on the Rock of Pierre Profunde in the Bay of Douarnenez (48°12'20"N, 4°27'00"W.).

Belle-Ile

Practice against the land may be carried out near the SW coast of Belle-Ile. The restricted zone lies in an area bounded by lines joining the following positions:

a. 47°23'N, 3°23'W.
b. 47°24'N, 3°18'W.
c. 47°14'N, 3°08'W.
d. 47°10'N, 3°22'W.

Basse de Guihel

Aircraft firing practices may be taken against floating targets in an area bounded by lines joining the following positions:

a. 47°35'30"N, 3°30'00"W.
b. 47°30'30"N, 3°23'30"W.
c. 47°35'05"N, 3°16'30"W.
d. 47°39'40"N, 3°23'30"W.
e. A semicircle with a radius of 3 miles centered on position 47°37'25"N, 3°19'57"W, between the bearings 317° and 137°.

Landes

The Landes Zone extends off the coast and begins at a position 3 miles from the coast with the exception of the three connecting sectors to the coast. Navigation may be prohibited in the sectors located in territorial waters. The most utilized sector is 31A, located in front of the land installations at the Landes Test Center.

The prohibition of navigation throughout this sector or parts of it is signalled by day on the coastal dune, as follows:

1. A pylon to the N of the sector (44°26'25"N., 1°15'18"E.) shows a white ball 2m in diameter.
2. A pylon to the S of the sector (44°13'52"N., 1°17'34"E.) shows two white superimposed balls 2m in diameter.

Warnings concerning these areas are broadcast on VHF channel 6, as follows:

1. Monday to Thursday at 0815 and 1615 (on request from 0800 to 1700).
2. Friday at 0815 and 1030 (on request from 0800 to 1100).

Gavres

Gavres Area.—A day practice zone is delimited by a line joining the following points:

1. Pointe de Gavres.
2. Pointe de Beg-el-lan (47°26'33"N., 3°05'35"W.).
3. Pointe des Poulains, on the coast of Belle Ile.
4. The Bagueneres Islands (47°14'28"N., 3°17'38"W.; 47°31'49"N., 3°23'40"W.).

Generally, there is no limitation on navigation in the area during practices, however in an exceptional case, navigation may be prohibited in a delimited zone, and information will be given about 1 week in advance in Notice to Mariners.

Signal stations of Taillefer on Belle Isle, of Beg Melen at Groix, and of S. Julien at Quiberow, hoist red flags during practices.

Gavres Nord and Gavres Sud.—These two triangular zones are night firing zones and may be closed to navigation by Notices to Mariners given 1 week notice. The semaphores hoist, from sunrise to sunset preceding the firing practice, the following signals:

1. A red flag above a red light if practice is to take place in Zone A.
2. A red flag below a red light if practice is to take place in Zone B.

One hour before the beginning of the practice, the red lights for night practices are raised on the various masts of the proving grounds. One-half hour before the beginning of the practice, three red flares are set off at 5-minute intervals by the signal stations of Beg-Melen, Taillefer and S. Julien-de-Quiberon (or by the proving ground itself).

During the duration of the practice, these same signal stations set off a red flare every 30 minutes, with a time lag of 10 minutes between signal stations.

At the end of the firing practice, the proving ground sets off a group of three white flares.

Baie de Quiberon

Practice firings toward the sea may be carried out from the Pierre-Quiberon Proving Grounds Observatory (47°30'50"N., 3°08'30"W.). The dates and times of these practice firings will be given in Notice to Mariners.

The following signals are shown:

1. By day.—One hour prior to practice firings a red flag is hoisted on the tower of the firing range (47°31'50"N., 3°00'30"W.); on the signal stations of S. Julien-de-Quiberon and of Taillefer on Belle Isle; on the lighthouse of Poulains on Belle Isle and of Ponte de Chats at Groix. Two warning shots are fired, the first 1 hour and the second 30 minutes before the beginning of each firing period.
2. By night.—Two red lights on top of the tower of the proving grounds, 1 hour before the beginning and until the end of the firing period. Two red flares are set off, the first 1 hour and the second 30 minutes before the beginning of each firing period. A white flare indicates the end of the firing period.

Area R13A.—An area bounded by the coast and lines joining the following positions:

a. 47°31'49"N, 3°09'40"W.
b. 47°41'10"N, 3°21'30"W.

Area R13B.—An area bounded by lines joining the following positions:

a. 47°41'10"N, 3°21'30"W.
b. 47°31'49"N, 3°09'40"W.
c. 47°31'24"N, 3°09'38"W.
d. 47°29'01"N, 3°08'43"W.
e. 47°23'21"N, 3°15'01"W.
f. 47°23'21"N, 3°25'40"W.
g. 47°37'14"N, 3°25'20"W.
h. 47°39'20"N, 3°24'00"W.

Area R13C.—An area bounded by the coast and lines joining the following positions:

a. 47°23'21"N, 3°15'00"W.
b. 47°23'21"N, 3°25'40"W.
c. 47°08'52"N, 3°26'00"W.
d. 47°14'00"N, 3°08'00"W.
e. 47°17'30"N, 3°11'40"W.

Area R14.—An area bounded by the coast and lines joining the following positions:

a. 47°33.6'N, 3°08.5'W. (coast)
b. 47°32.3'N, 3°10.3'W.
c. 47°36.1'N, 3°15.0'W.
d. 47°37.4'N, 3°11.9'W. (coast)

MEDITERRANEAN SEA FIRING DANGER AREAS

General

French naval aircraft and vessels may conduct exercise in the area bounded, as follows:

1. Northern boundary—French coast.
2. Western boundary—Longitude 5°00'E.
3. Southern boundary—Latitude 41°40'N.
4. Eastern boundary—the W coast of Corsica and a line joining Cap Corse (43°00'N., 9°25'E.) and Monaco (43°44'N., 7°25'E.).

Although most of this activity is concentrated within 30 miles of the naval base at Toulon (43°07'N., 5°55'E.), vessels may encounter naval vessels, submarines, and aircraft anywhere within this area. Exercises may include missile firings, torpedo firings, and gunnery exercises; at night, warships and aircraft may be darkened and operating without navigational lights.

Saint-Elme-La Renardiere (Presqu'ile de Saint-Mandrier)

This firing range is associated with the Saint-Elme batteries (43°04.5'N., 5°54.2'E.) and La Renardiere (43°04.3'N., 5°55.6'E.).

The firing azimuths of Saint-Elme are included between 170° and 230° from the mast of Pointe de Saint-Elme.

The firing azimuths of La Renardiere are, as follows:

1. Wide Renardiere—Bearing 120° from the Cap Cepet flagpole to the meridian 6°00'E, then along this meridian to a bearing of 230° from the flagpole.
2. Narrow Renardiere—Defined by lines drawn 170° to 230° from La Renardiere.

Warning signals are displayed from Cap Cepet signal station (La Croix des Signaux) and at the masts of the firing batteries. They consist of a red flag by day and red lights at night. The user of the range fires one round of blanks 1 hour before firing is to commence and two rounds of blanks 10 minutes prior to firing. The firing range is not in use from June 15 to September 15.

Petit Serranier

This range is used for gunnery exercises fired by naval vessels at Petit Sarranier Rock. It is bounded by a line joining the following positions:

a. 43°04'00"N, 6°15'10"E.
b. 43°02'40"N, 6°18'35"E.
c. 42°56'35"N, 6°17'00"E.
d. 42°56'35"N, 6°13'00"E.
e. 42°59'50"N, 6°15'10"E.
f. 43°04'00"N, 6°15'10"E.

The firing ship maneuvers in the N part of the above area and fires toward the S. A ship patrols that part of the range not visible to the firing ship.

This range is not used between June 15 and September 15.

Warning signals are a red flag displayed by Ile de Porquerolles signal station and at the masthead of one of the firing ships.

Levant Area

The Levant Area consists of an air-to-ground range and an air-to-air range, as follows:

1. The air-to-ground portion of the range is used by aircraft for firing at targets on the ground on the NE part of the Ile du Levant. It is bound by the following points, distances and bearings from Madone Tower (43°01.9'N., 6°28.2'E.):
   a. 1.2 miles 016°. (Pointe de Castelas)
   b. 1.7 miles 010°.
   c. 3.4 miles 034°.
   d. 5.3 miles 052°.
   e. 4.8 miles 090°.
   f. 2.4 miles 090°.
   g. 2.2 miles 063°.

   Points d and e are joined by the arc of a circle centered 1.5 miles, 053°, from Madone Tower.

   The firing range is not in use from June 15 to September 15.
2. The air-to-air portion of the range is rectangular shaped and is 16 miles long and 8 miles wide. The starting point is position 42°56'12"N, 6°20'00"E.

   The long NW side is 16 miles bearing 050° from the above point. The short SW side is 8 miles bearing 140° from the same point.

   The firing range is not in use from July 1 to September 1.

When either range is not in use, warning signals, consisting of a red square flag (by day) or a fixed red light (by night), are shown from the following locations on Ile du Levant (43°02'N., 6°29'E.):

1. The disused signal station on Pointe du Titan.
2. La Madone Tower, near the center of the island.
3. From the firing battery.

Lizerot (Ile du Levant).—This range is used by vessels firing at a target which consists of a mooring buoy anchored at position 43°01'30"N, 6°31'30"E, or 1.6 miles bearing 193° from the l'Esquillade tower. The danger area is inside a circular sector with a radius of 10 miles centered on position 42°58'30"N, 6°28'00"E, and bound by lines extending from this same point on bearings of 025° and 065°.

Warning signals are a blue flag and a red flag hoisted on Madone Tower and a red flag hoisted by the firing ship. At night, red lights are shown from the same places.

The firing range is not in use from June 15 to September 15.

Ile du Toro (D172)

This naval vessel firing range on the E coast of Corse is in the area of Ile du Toro. The firing area is bound by lines joining the following positions:

a. 41°38.0'N, 9°25.7'E.
b. 41°30.0'N, 9°18.0'E.
c. 41°26.7'N, 9°15.5'E.
d. 41°26.0'N, 9°16.6'E.
e. 41°29.7'N, 9°33.1'E.
f. The arc of a circle with a radius of 7.7 miles centered on Ile du Toro (41°30.5'N, 9°22.8'E) from position 41°29.7'N, 9°33.1'E to position 41°38.0'N, 9°25.7'E.

Naval vessels fire to the NE towards the land during daylight hours only. Firing is prohibited from June 15 to September 15.

Diane (R66)

This air-to-ground firing range on the E coast of Corse is under the authority of the Solenzara Air Base. The area forms a rectangle between the parallels 42°05'N and 42°14'N, and the meridians 9°28'E and 9°38'E. It is used during the daytime hours from Monday to Friday.

Solenzara (D67)

This air-to-air firing range on the E coast of Corse is bound by lines joining the following positions:

a. 42°18'N, 9°42'E.
b. 42°19'N, 9°47'E.
c. 42°07'N, 10°26'E.
d. 41°34'N, 10°42'E.
e. 41°14'N, 9°42'E.

This air-to-air firing area is active from Monday to Friday (except during the summer).

LAUNCH RANGES

These launch ranges are part of installations designed for special activities. Their organization and operation are controlled by the Naval Commander-in-Chief of the Third Region at Toulon. Activation is announced via local Notice to Mariners.

Golfe de Saint-Tropez Torpedo Range.—The torpedo launching range is established between the launching mole, situated abreast of Chateau Bertaud, and Seche a l'Huile tower, which stands about 0.5 mile ESE of Pointe des Sardinaux.

This range includes a launching range for submarines, bounded by the following points given in distance and bearing

from Seche a l'Huile tower:

a. 0.75 mile, 214.0°
b. 1.7 miles, 226.0°
c. 1.7 miles, 244.0°
d. 1.3 miles, 248.5°
e. 0.6 mile, 229.0°

Launching can occur every day, usually performed during the day from 0800 to sunset, in clear weather, without prior notice. A protected zone of 0.25 mile has been established around the launching range, on each side of the 4.6 mile line of fire axis, which is oriented 055° on the Seche a l'Huile tower.

The range is permanently marked by mooring buoys placed in the vicinity of the axis, up to about 3.2 miles from the launching mole. At night these buoys are not individually lit, but are covered by the white sector of Pointe de Bertaud mole light. Thirty minutes before the first launching of a firing practice, a blue flag is displayed at the mast of the launching mole, until the end of the firing practice. A small boat displaying a blue flag is stationed at the end of the firing line.

Five minutes before each launching, a red flag is displayed from the launching mole, and at the same time a loud sound signal occurs. Each launching is announced by two brief sound signals.

While the blue flag is displayed at the launching mole mast, vessels and small boats are prohibited from stopping and laying out fishing nets in the protected zone of the launching range. While the red flag is displayed from the mole mast, the same vessels are prohibited from navigating in, or entering, the protected zone.

In the event of a night launching, a fixed red light is shown at the top of the mole mast from one-half hour before the first launching until the end of the firing practice.

While the red light is shown, vessels and small boats are prohibited from navigating in, or entering, the protected zone.

The launch stationed at the end of the firing line will display a red flag when it has recovered the torpedo.

Long Distance Launching Range.—The axis of the long distance launching range is oriented at 060°. A protected zone of 0.25 mile has been established on each side of the axis. The length of this range is unlimited seaward and, as its use is exceptional, it is unmarked.

For long distance firing, the warning signals and regulations remain the same as for the main launching range. In addition, a blue flag is displayed at the Seche a l'Huile tower to repeat that of the launching mole. Vessels anchoring should do so at a prudent distance from the range.

Fishing Areas

General

Although French fishermen are frequenting fishing zones farther and farther from the coast with larger and larger trawlers, coastal fishing remains essential to the economies of certain regions, and concentrations of fishing vessels are likely to be encountered, especially at night, off the French coast.

Atlantic Coast

There are the large concentrations of trawlers and drifters, fishing for herring in autumn and the first days of winter in the North Sea, in the vicinity of Le Sandettie and Cap Gris-Nez, then S of the Strait of Dover, following the fish S from October until the beginning of January.

The drifters, especially, are not maneuverable, as they are either paying out or taking in nets, or are moored to their nets.

The nets which may reach several miles in length, are supported by buoys, which show white lights at night; the buoys may be equipped with radar reflectors.

The Bay of Biscay is an area of intensive fishing activity. Large fishing fleets are based at fishing ports on the NE and S shores of the bay.

The tuna fleet, about 250 vessels, moves slowly NE from a position about 350 miles SW of Cape Ortegal (43°46'N., 7°52'W.) in June to a position about 140 miles N of the cape in August. The fleet then divides, as follows:

1. One part moves NW, then W, reaching a point about 350 miles W of Ile d'Ouessant (48°28'N., 5°05'W.) in October.
2. The other part moves E, then S, and then SW, reaching a point about 60 miles NNW of Santander (43°27'N., 3°49'W.), also in October.

The fleet is usually widely dispersed in June, but tends to concentrate in August and September.

Trawlers work up to 100 miles offshore SW and W of the coast of Brittany, but elsewhere in the Bay of Biscay they are seldom found more than 50 miles offshore.

Mediterranean Coast

Fishing takes place along the S coast of France, particularly in Golfe du Lion where the depths are favorable.

Most fishing vessels work within a coastal strip approximately 10 miles wide, although tuna and sardine boats may be encountered farther offshore. At night, certain vessels practice "lamparo" (lamp) fishing and their powerful lanterns, owing to the motion of the sea, should not be mistaken for the navigational lights and buoyage of the coast.

Government

Flag of France

France is a republic. The country is divided into 22 metropolitan regions and four overseas regions.

France is governed by a directly-elected President who serves a 5-year term. The Prime Minister is nominated by the National Assembly and appointed by the President. The bicameral Parliament is composed of a 343-member Senate, indirectly elected by an electoral college, serving 6-year terms, and a directly-elected 577-member National Assembly, serving 5-year terms. By 2011, the size of the Senate will increase to 348.

The legal system is based on French civil law.

The capital is Paris.

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
May 8	World War II Victory Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
July 14	Bastille Day
August 15	Assumption Day
November 1	All Saint's Day
November 11	Armistice Day
December 25	Christmas Day

Industries

The main industries include machinery, chemicals, motor vehicles, metallurgy, aircraft, electronics, textiles, food processing, and tourism.

The main exports are machinery and transportation equipment, aircraft, plastics, chemicals, pharmaceuticals, iron and steel, and beverages. The main export-trading partners are Germany, Spain, Italy, the United Kingdom, the United States, and Belgium.

The main imports are machinery and equipment, vehicles, crude oil, aircraft, plastics, and chemicals. The main import-trading partners are Germany, Belgium, Italy, Spain, the Netherlands, and the United Kingdom.

Languages

French is the official language.

Meteorology

Marine weather forecasts in French are available from Meteo France (http://www.marine.meteofrance.com).

Mined Areas

Mariners should consult Notice to Mariners and the latest best scale chart for any additional danger areas. A risk exists in the following areas with regard to anchoring, fishing or any form of submarine or seabed activity.

Mine Danger Areas

Approach to Correjou and Port de Tresseny (Kerisoc).— An area bound by the coast, the parallel of 48°40'N and the meridians of 4°23'W and 4°32'W.

Baie de la Fresnaie, Baie de l'Arguenon, and Baie de Lancieux.—An area bound by the coast, by a line joining Pointe de la Latte (48°40.2'N., 2°09.5'W.) to a position 0.5 mile N of Ile Agot and by the meridian of 2°09.5'W.

Strait of Dover to Dunkerque.—Former NEMEDRI Danger Area No. 7 is an area in which danger due to mines laid between 1939 and 1945 still exists. The limits of Former Danger Area No. 7 are comprised of all waters bound by the land and the lines joining the following approximate positions:

a. The coast of France in 2°32'30"E.
b. 51°06'54"N, 2°35'00"E.
c. 51°11'00"N, 2°35'00"E.
d. 51°13'30"N, 2°29'20"E.
e. 51°08'15"N, 2°12'00"E.
f. 51°08'40"N, 2°12'00"E.
g. 51°07'03"N, 2°07'15"E.
h. 51°03'35"N, 2°10'20"E.
i. 51°04'22"N, 2°22'00"E.
j. The coast of France in 2°23'00"E.

These dangers do not exist in either Passe de l'Ouest or Passe de l'Est, which are the approach channels to Dunkerque.

Northwest of Le Treport.—This area has been declared dangerous with regard to anchoring, trawling, or seabed activity and is bound by lines joining the following positions:

a. 50°08.0'N, 1°06.5'E.
b. 50°16.5'N, 1°13.5'E.
c. 50°16.0'N. 1°20.0'E.
d. 50°06.5'N, 1°14.0'E.

Corsica—Baie de Sanary.—An area in which anchoring, diving, and fishing are prohibited due to the presence of mines laid during the war of 1939-1945 lies between Pointe de la Cride and Ile du Grand Nouveau, in Baie de Sanary.

A risk still exists with regard to anchoring, fishing, or any form of submarine activity close to the sea bed.

The area is bounded by lines joining the following positions:

a. 43°06'30"N, 5°45'00"E.
b. 43°06'30"N, 5°46'24"E.
c. 43°05'24"N, 5°45'00"E.
d. 43°05'24"N, 5°46'24"E.

Minesweeping Operations

French minesweeping vessels, operating singly or in groups, exhibit the lights and markings required by the International Regulations for Preventing Collisions at Sea.

Other vessels should not approach within 0.3 mile of, or pass less than 0.5 mile astern of, minesweepers in operation. In any case, vessels should not cross a formation of minesweepers.

Minesweepers warn vessels that persist in approaching too close by means of the International Code of Signals. There are several dangerous areas, open to surface navigation, but in which it is dangerous to anchor, trawl, or navigate submerged, due to the presence of mines, as follows:

1. In the W approaches to Dunkerque
2. In the NW approach to Le Treport
3. In Baie de Seine
4. In Baie de la Fresnaie and Baie de Saint-Brieuc
5. In the NW approach to Brest
6. In the approach to Lorient, Baie de Quiberon and La Loire

7. In the approach to Bayonne and Saint Jean de Luz.

These areas may be charted. In general, the danger of magnetic mines is greater when the vessel has a large magnetic field (a cargo of mineral ore, for example), or is navigated with little water under the keel.

It should be considered, especially, that certain shoal areas have not been dragged, and may still contain mines which have not been rendered harmless by time.

Vessels may encounter minesweepers operating in the following areas:

1. **CM1—Cherbourg**.—Area bounded by a line joining the following positions:
   a. 49°40'31"N, 1°38'50"W.
   b. 49°43'16"N, 1°39'40"W.
   c. 49°43'30"N, 1°40'00"W.
   d. 49°43'30"N, 1°30'00"W.
   e. 49°43'37"N, 1°35'03"W.
2. **CM2—La Capelle St. Vaast**.—Area bounded by lines joining the following positions:
   a. 49°30'30"N, 1°07'40"W.
   b. 49°26'00"N, 0°56'40"W.
   c. 49°28'20"N, 0°53'50"W.
   d. 49°32'10"N, 1°03'40"W.
3. **CM3—Seine Entrance**.—Area bounded by lines joining the following positions:
   a. 49°28'N, 0°04'W.
   b. 49°28'N, 0°09'W.
   c. 49°23'N, 0°09'W.
   d. 49°23'N, 0°04'W.
4. **CM4—Calais Dunkerque**.—Area bounded by lines joining the following positions:
   a. 51°03'30"N, 1°54'00"E.
   b. 51°05'20"N, 1°50'43"E.
   c. 51°07'15"N, 2°03'00"E.
   d. 51°12'00"N, 2°15'00"E.
   e. 51°08'30"N, 2°15'00"E.
   f. 51°05'30"N, 2°05'00"E.
5. **CM5—Baie de Seine**.—Area bounded by lines joining the following positions:
   a. 49°30'00"N, 0°30'00"W.
   b. 49°32'00"N, 0°27'00"W.
   c. 49°37'00"N, 0°37'50"W.
   d. 43°43'50"N, 0°40'00"W.
6. **BM1—Brest, Iroise West**.—Area bounded by lines joining the following positions:
   a. 48°19'00"N, 4°38'36"W.
   b. 48°18'36"N, 4°38'06"W.
   c. 48°17'14"N, 4°43'03"W.
   d. 48°17'37"N, 4°43'18"W.
7. **BM2—Brest, Iroise East**.—Area bounded by lines joining the following positions:
   a. 48°18'48"N, 4°38'15"W.
   b. 48°19'25"N, 4°35'47"W.
   c. 48°19'13"N, 4°35'43"W.
   d. 48°18'37"N, 4°38'08"W.
8. **BM3—Brest Toulinguet**.—Area bounded by lines joining the following positions:
   a. 48°17'30"N, 4°35'00"W.
   b. 48°18'15"N, 4°35'00"W.
   c. 48°18'15"N, 4°41'00"W.
   d. 48°17'30"N, 4°41'00"W.
9. **BM4—Douarnenez Jument**.—Area bounded by lines joining the following positions:
   a. 48°11'06"N, 4°21'26"W.
   b. 48°08'40"N, 4°20'16"W.
   c. 48°06'46"N, 4°28'42"W.
   d. 48°09'09"N, 4°29'56"W.
10. **BM5—Douarnenez Millier**.—Area bounded by lines joining the following positions:
   a. 48°10'26"N, 4°24'18"W.
   b. 48°08'03"N, 4°23'04"W.
   c. 48°06'06"N, 4°31'33"W.
   d. 48°08'28"N, 4°32'46"W.

Explosive Dumping Areas

The following steps are to be taken in case of the discovery of suspicious devices in French waters:

1. Make all efforts to mark it.
2. Inform the nearest CROSS station or, if this is not possible, the authorities at the nearest harbor.
3. Any vessel having a suspicious device on board, in its nets, or in tow must report as in paragraph 2, must not enter harbor without authorization of the port authority, and must keep clear of other vessels and of the shore.
4. Make all efforts to stand into one of the deposit zones (temporary) listed below.

The position in which the device is dumped must be carefully marked, and if this procedure is considered to be dangerous then the vessel must remain in the area until the arrival of the intervention team.

Temporary Explosives Dumping Areas

Deposit Zone Locality	Area radius	Centered on (approx.)
Le Havre	200m	49°28.7'N, 0°02.0'E.
Trouville	200m	49°24.0'N, 0°01.2'E.
Dives-sur-Mer	200m	49°20.8'N, 0°09.3'W.
Ouistreham	200m	49°20.8'N, 0°09.3'W.
Courselles-sur-Mer	200m	49°22.3'N, 0°26.9'W.
Port-en-Bessin	200m	49°22.8'N, 0°45.8'W.
Grandcamp-Maisy	200m	49°25.4'N, 1°02.6'W.
Saint-Vaast-la-Hougue and Barfleur	200m	49°31.1'N, 1°12.8'W.
Cherbourg (heavy devices)	200m	49°41.6'N, 1°38.1'W.
Cherbourg (light devices)	200m	49°40.1'N, 1°37.0'W.
Granville	200m	48°48.9'N, 1°37.1'W.
Cancale	200m	48°43.0'N, 1°47.8'W.
Saint Malo	200m	48°42.5'N, 1°58.8'W.
Saint Jacut-Saint Cast	200m	48°40.5'N, 2°14.9'W.
Cap Frehel	200m	48°39.8'N, 2°24.5'W.
Erquy-Saint Brieuc	200m	48°38.8'N, 2°36.1'W.

Temporary Explosives Dumping Areas		
Deposit Zone Locality	**Area radius**	**Centered on (approx.)**
Saint Quay-Portrieux	200m	48°43.7'N, 2°38.5'W.
Paimpol	200m	48°50.0'N, 2°50.1'W.
Treguier	200m	48°54.2'N, 3°08.9'W.
Perros Guirec	200m	48°51.3'N, 3°24.1'W.
Lannion	200m	48°45.1'N, 3°37.2'W.
Morlaix-Roscoff	200m	48°44.1'N, 3°55.1'W.
Ile de Batz	200m	48°45.3'N, 4°03.3'W.
Kerlouan	200m	48°40.8'N, 4°26.4'W.
L'Aber Wrac'h	200m	48°38.2'N, 4°36.9'W.
L'Aber Benoit	200m	48°35.4'N, 4°40.7'W.
Portsall	200m	48°33.6'N, 4°45.7'W.
Ile de Molene	200m	48°24.3'N, 4°55.8'W.
Le Conquet	200m	48°22.6'N, 4°47.7'W.
Brest	200m	48°21.2'N, 4°27.7'W.
Camaret	An area 500m in width bordering the coast of Presqille de Quelern, between Pointe des Capucins and Pointe du Diable.	
Anse de Dinan	200m	48°14.5'N, 4°35.4'W.
Morgat-Douarnenez	200m	48°11.0'N, 4°21.1'W.
lle de Sein	200m	48°03.0'N, 4°50.2'W.
Audierne	200m	47°59.l'N, 4°32.1'W.
Le Guilvinec	200m	47°45.4'N, 4°16.3'W.
Concarneau	200m	47°47.3'N, 3°53.2'W.
L'orient, Etel, Ile Groix	200m	47°38.4'N, 3°23.1'W.
Quiberon, Auray, La Trinite-sur-Mer, Belle-Ile	200m	47°22.0'N, 3°01.2'W.
Vannes, Penerf	200m	47°27.7'N, 2°43.8'W.
Piriac-sur-Mer, Le Croisic	200m	47°19.7'N, 2°32.7'W.
Saint-Nazaire	200m	47°10.1'N, 2°16.9'W.
Pornic, Ile de Noirmoutier	200m	47°03.8'N, 2°08.3'W.
Ile d'Yeu	200m	46°42.5'N, 2°13.0'W.
Saint-Gilles-Croix-de-Vie	200m	46°40.6'N, 1°59.6'W.
Les Sables-d'Olonne	200m	46°31.2'N, 1°51.5'W.
La Rochelle-Pallice, Ile d'Oleron, Marennes	200m	46°05.7'N, 1°13.5'W.
Marennes, Bordeaux	200m	45°35.6'N, 1°05.5'W.
	200m	45°34.0'N, 1°14.4'W.

Temporary Explosives Dumping Areas		
Deposit Zone Locality	**Area radius**	**Centered on (approx.)**
Arachon	35m	45°35.9'N, 1°13.3'W.
Bayonne	200m	44°33.8'N, 1°31.5'W.
Biarritz, Saint-Jean-de-Luz	200m	43°27.4'N, 1°36.9'W.
Saint-Jean-de-Luz, Hendaye	200m	43°24.2'N, 1°43.5'W.

Navigational Information

Enroute Volumes

Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Pub. 191, Sailing Directions (Enroute) English Channel.

Maritime Claims

The maritime territorial claims of France are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles. **
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines.

** Atlantic coast only. In the Mediterranean Sea, only claims a 12-mile fishery limit and a 200-mile Ecological Protection Zone.

Pilotage

Pilotage is compulsory for vessels of a certain length or tonnage for each port within a defined compulsory pilotage area. Pilotage is compulsory in many ports for vessels carrying hydrocarbons or dangerous substances. Vessels should send an ETA, depending on the port, between 48 and 12 hours in advance, or at the last port of call.

All vessels bound for a port should maintain a listening watch on VHF channel 16, or on a channel designated by the port authority or pilot station before entry into the approach channel.

Vessels arriving or departing ports in northwestern Europe can request Deep Sea Pilots before reaching busy areas. These pilots should be requested from certain Deep Sea Pilot Stations in France, United Kingdom, or other European countries along the North Sea coasts and the Baltic Sea. For further information, see **United Kingdom—Pilotage**.

Vessels transiting the English Channel eastward can pick up Deep Sea Pilots off Cherbourg, Le Harve, Boulogne, Calais, and Dunkerque.

French pilot vessels have the following distinguishing fea-

tures:

1. Black hull with a narrow white band.
2. Anchor painted on the funnel, if any.
3. Lettering indicating the pilot station painted in white on the bulwarks fore and aft.

Pollution

All vessels navigating in French coastal waters are requested to report the following incidents:

1. Pollution caused by hydrocarbons or other noxious substances.
2. Barrels, containers, or other packages found at sea liable to cause pollution.
3. Incidents such as collisions or fire at sea liable to cause pollution.
4. Jettisoning of hydrocarbons to help save vessels and safeguard human life at sea.

Reports should be sent to the nearest CROSS Stations, either directly or through a coast radio station. The report should begin with the word POLREP and contain the following information:

1. Classification of report (doubtful, probable, or confirmed).
2. Date and time of observation reported. Indicate if time is UTC or local. Identity of the observer or the report's originator. Indicate the name and call sign of the vessel sending the report.
3. Position and extent of the pollution (if possible, give the latitude and longitude or distance from a conspicuous point). Estimate of pollution (dimensions of polluted area, tonnage of hydrocarbons pumped out or number of barrels, containers, etc.). Position of observer with respect to the pollution.
4. Speed and direction of wind and current.
5. Meteorological conditions and sea state.
6. Pollution characteristics. Type of pollution (hydrocarbons (crude or refined), jettisoning of chemical products in containers or bulk). In each case, give the appearance (liquid, floating solids, oily appearance, semi-liquid sludge, tarry lumps, dispersed hydrocarbons, changes in water color, visible vapor). Give all distinguishing marks on the containers or barrels.
7. Source and cause of pollution (from vessel or other installations). If the origin is a vessel, indicate if it appears to have been deliberate or an accident; in the latter case, give a brief description. If possible, give the name, type, size, nationality of the home port of the polluting vessel. If the vessel is on passage, give its course and speed.
8. Identification of vessels in the vicinity (to be given if the polluter cannot be identified and if the pollution appears to be recent).
9. Proof of details (photographs or samples).
10. Action taken or planned.
11. Expected development in pollution (arrival at coastline) giving time of estimates.
12. Countries and organizations informed.
13. Any other information judged of value (names of witnesses).

MARPOL Special Area

MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted. Several areas off the coasts of France have been designated as MARPOL Special Areas, as follows:

1. The Mediterranean Sea.
2. The Northwest European Waters (Atlantic coast).

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Navigation and Procedures in French Territorial Waters

Vessels greater than 1,600 grt carrying hydrocarbons, dangerous cargo, or noxious substances must keep at least 7 miles from the French coast except, as follows:

1. In the northeastbound lane of the Straits of Dover Traffic Separation Scheme.
2. Within the passages and fairways to the following French Atlantic ports:

Dunkerque	Saint Brieuc
Calais	Roscoff
Boulogne	Brest
Dieppe	Douarnenez
Fecamp Le Havre-Antifer	Concarneau
Rouen and the ports of the lower Seine	Lorient
Caen/Ouistreham	Ports of the Loire
Cherbourg	Les Sables-d'Olonne
Granville	La Rochelle/La Pallice
The Transfer of Cargo Operations Area ENE of Pointe de Saire in Baie de la Seine	Ports of La Gironde and Bayonne
Saint Malo	

3. Raz Blanchard, the channel between Alderney and the coast of France.
4. Within the passages and fairways to the following French Mediterranean ports:

Port-La-Nouvelle	Ajaccio
Sete	Porto-Vecchio
Golfe de Fos	Solenzara
Marseille	Lucciana
Toulon	Bastia

5. In the narrow passage called Canal de Corse, which separates the NE coast of Corse (Corsica) from the Italian island of Capraia, between the parallels of 42°48'N (disused signal station on Cape Sagro) and 43°07'N. The distance here is reduced to 5 miles to take into account the narrowing of French territorial waters in this region.

6. In the Strait of Bonifacio.

Mandatory Access Routes/Channels

Many French ports contain Mandatory Access Routes/Channels, which are required to be used by vessels greater than 1,600 grt which originate from or are bound to these harbors and roadsteads, and are carrying hydrocarbons, dangerous cargo, or noxious substances. The ports where these Mandatory Access Routes/Channels are in operation are contained the table titled **Mandatory Access Routes/Channels**.

See the appropriate Sailing Directions (Enroute) for particulars concerning Mandatory Access Routes/Channels to the above ports.

Mandatory Access Routes/Channels	
Atlantic ports	**Mediterranean ports**
Saint Malo	Port-La-Nouvelle
Saint Brieuc	Sete
Roscoff	Golfe de Fos
Brest	Marseille
Douarenez	Toulon
Concarneau	Ajaccio
Lorient	Porto-Vecchio
Ports of the Loire	Solenzara
Les Sables-d'Olonne	Lucciana
La Rochelle	Bastia
La Pallice	
La Gironde	
Bayonne	

These vessels, when they are in the access channels, have priority in accordance with Rule 9 of the International Regulations for Preventing Collisions at Sea.

Vessels crossing these channels should do so as nearly as possible at right angles to the channel and stay well clear of any vessels in the approach channel and, if it is equipped with VHF radiotelephone, it must maintain a listening watch on VHF channel 16.

Vessels are not to anchor or wait in the approach channels except in the circumstances beyond their control.

Those vessels forced by necessity to anchor or wait should inform port authorities by the most expedient means.

Those vessels carrying a dangerous cargo must, in the approach channels, fly Flag "B" of the International Code of Signals by day and exhibit one red light, at night, clearly visible all around.

The preceding regulations do not excuse masters and pilots from conforming to the International Regulations for Preventing Collisions at Sea.

Channel Navigation and Information Service (CNIS)

The CNIS operates from Dover Strait Coast Guard and CROSSMA Griz Nez. The broadcasts include information concerning traffic, navigation, and visibility.

For further details of these regulations, see Pub. 191, Sailing Directions (Enroute) English Channel.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The reports shall be sent directly to the harbormaster at the port of destination.

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Particularly Sensitive Sea Areas (PSSA)

The waters off the W coast of the United Kingdom, Ireland, Belgium, France, Spain, and Portugal, from the Sheltand Islands in the N to Cabo San Vicente in the S, including the English Channel, were granted (2004) the status of PSSA by the International Maritime Organization.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

The Western Europe Tanker Reporting System (WETREP) was instituted to help protect the environment of the PSSA.

Regulations for Movement of Vessels in Port Access Routes and Anchorage Areas

The following special navigation regulations are in effect to control sailboat and small vessel traffic in the approach routes and anchorage areas of certain French ports:

1. Port-Vendres.
2. Port La-Nouvelle.
3. Marseille.
4. Toulon.
5. Nice.
6. Ajaccio.
7. Bonifacio.
8. Port-Vecchi.
9. Bastia.
10. Ile Rousse.
11. Calvi.

Sailing vessels must stay clear of the course of warships, and all other mechanically propelled vessels with a length equal to or greater than 50m.

Motorized vessels less than 20m in length must not impede the passage of warships, and all other mechanically propelled vessels with a length equal to or greater than 50m.

Sailing or motorized vessels should only navigate in these areas when entering or leaving a harbor, occupying or leaving an anchorage, or when carrying out a public or commercial ser-

vice. Within these port access routes and anchorage areas, swimming, deep sea diving, movement of beach apparatus and wind surfing are prohibited.

Speed Limit in the Coastal Area

To ensure the safety of swimmers and deep sea divers, the movement of all sailing and motorized vessels (including seaplanes and maritime hovercraft), beach and nautical sports apparatus, and windsurfers is prohibited at a speed greater than 5 knots, in a continuous strip 300m wide along the French Mediterranean coast, and around the islands and islets off the coast. However, this speed limit is not applicable in the approach routes and anchorage areas of the ports mentioned in the preceding regulation.

Seaplanes

During the summer season, seaplanes, when combating forest fires, normally use open and calm areas to fill their water tanks. No prior warning can be given. These planes make passes at very low altitude over the selected landing axis. Upon sighting this maneuver all vessels, sailboats, small craft and divers must, without fail, depart as quickly as possible from the landing axis, on a perpendicular course, to a distance of 0.25 mile.

This zone is to remain free and clear until 1 hour after the passage of the last plane. The following areas on the S coast of France may be used:

1. La Ciotat.
2. Sanary.
3. Toulon.
4. Hyeres.
5. Saint-Tropez.
6. Saint-Raphael.
7. Villefranche.
8. Beaulieu.
9. Etang de Thau.
10. Berre.
11. Marseille.

The following gulfs and bays of Corse may be used:

1. Saint-Florent.
2. Calvi.
3. Sagone.
4. Ajaccio.
5. Valinco.
6. Figari.
7. Porto-Vecchio.

Tanker Regulations

Single hull oil tankers over 15 years old must contact the appropriate CROSS station 24 hours prior to entering the Exclusive Economic Zone of France.

Single hull oil tankers carrying heavy petroleum products are prohibited from entering or departing from French ports or terminals and from anchoring in French waters without prior permission.

Single-hull tankers of 5,000 dwt and greater carrying heavy products are prohibited from anchoring in French inshore maritime waters. Internal maritime waters are defined as being between the coast and the strait baselines or closing lines of bays, including the following areas along the English Channel/North Sea coast:

1. Baie de Seine—From Cap de la Heve Light to the light on the W jetty at Trouville.
2. Rade de Saint-Vaast-la-Capelle—From Cap Levi Light to Fort de Nacqueville.
3. Anse de Vauville—From Jobourg signal tower to the Flamanville signal tower.
4. Baie du Mont-Saint-Michel—From Pointe du Roc Light to Ilot Herpin and continuing on to Pointe du Grouin.

Pre-arrival Quarantine Reporting

Messages should be sent to the appropriate port at the indicated time before the vessel's ETA; information concerning the message address and sending time is listed in the table titled **France—Pre-arrival Quaranatine Reporting Information**.

The message should contain the following information:

1. Name and call sign of vessel.
2. Message address.
3. Vessel nationality and type.
4. ETA at pilot station.
5. Port and date of departure.
6. Last port-of-call and date.
7. Number of crew and passengers.
8. The condition of all persons and animals on board.
9. Date and place of issue of any de-ratting certificate or de-ratting exemption certificate applicable to the vessel.
10. Request for free pratique.

France—Pre-arrival Quaranatine Reporting Information

Port	Message Address	Report sent before ETA
Ajaccio	SANIPORT Ajaccio	12 hours
Bayonne	SANIPORT Bayonne	24 hours
Bordeaux	SANIPORT Bordeaux	12 hours
Boulogne	SANIPORT Boulogne	12 hours
Brest	SANIPORT Brest	24 hours
Caen	SANIPORT Caen	24 hours
Calais	SANIPORT Calais	24 hours
Cherbourg, St. Lo	SANIPORT Cherbourg	15 hours
Dieppe	SANIPORT Le Havre	24 hours
Dunkerque	SANIPORT Dunkerque	24 hours
Fecamp	SANIPORT Le Havre	24 hours
Fos/Port-de-Bouc	SANIPORT Marseille	24 hours
La Rochelle/La Palica	SANIPORT La Rochelle	24 hours
Le Havre/ Antifer	SANIPORT Le Havre	24 hours

France—Pre-arrival Quaranatine Reporting Information		
Port	**Message Address**	**Report sent before ETA**
Lorient	SANIPORT Lorient	12 hours
Marseille	SANIPORT Marseille	24 hours
Nantes/ Saint-Nazaire	SANIPORT Saint-Nazaire	24 hours
Nice	SANIPORT Nice	24 hours
Port-La Nouvelle	SANIPORT Port-La Nouvelle	24 hours
Port Saint-Louis	SANIPORT Port Saint-Louis	24 hours
Port-Vendres	SANIPORT Port-Vendres	24 hours
Rouen	SANIPORT Rouen	4 hours
Saint-Malo	SANIPORT Saint-Malo	24 hours
Sete	SANIPORT Sete	24 hours
Toulon	SANIPORT Toulon	24 hours

Search and Rescue

Atlantic Ocean

France has four Regional Surveillance and Rescue Operations situated on the Atlantic coast. These centers are located in MRCC Griz-Nez (50°52'N., 1°35'E.), MRCC Jobourg (49°38'N., 1°38'E.), MRCC Corsen (48°24'N., 4°47'E.), and MRCC Etel (47°39'N., 3°12'E.).

A Search and Rescue Organization, Centre Regional de Surveillance et de Sauvetage (CROSS) covers the English Channel and S part of the North Sea. MRCC Griz-Nez has been designated as the initial point of contact for foreign search and rescue authorities or when one of the other MRCCs is unable to deal with the incident. The MRCCs can be contacted, as follows:

France—MRCC Contact Information (Atlantic Ocean)	
MRCC Gris Nez	
Telephone	33-3-21872187
Facsimile	33-3-21877855
E-mail	grisnez.mrcc@developpement-durable.gouv.fr
	griznez@mrccfr.eu
MRCC Jobourg	
Telephone	33-2-33527213
Facsimile	33-2-33527172
E-mail	jobourg.mrcc@developpement-durable.gouv.fr
	jobourg@mrccfr.eu

France—MRCC Contact Information (Atlantic Ocean)	
MRCC Corsen	
Telephone	33-2-98893131
Facsimile	33-2-98896575
E-mail	corsen.mrcc@developpement-durable.gouv.fr
	corsen@mrccfr.eu
MRCC Etal	
Telephone	33-2-97553535
Facsimile	33-2-97554934
E-mail	etel.mrcc@developpement-durable.gouv.fr
	etel@mrccfr.eu

CROSS provides a permanent, full-time weather operational presence along the coast of France. CROSS also coordinates surveillance of marine traffic, especially within the 12 mile limit, maritime search and rescue, fishery surveillance out to 200 miles, monitors pollution, and collects data for future use.

The purpose of the marine traffic surveillance is to enhance navigational safety which includes the policing of the IMO adopted Traffic Separation Schemes (TSS) and Inshore Traffic Zones (ITZ) in the English Channel and off Ushant.

CROSS broadcasts information bulletins on movements of vessels which appear to be navigating within a TSS or ITZ contrary to the requirements as per the International Rules of the Road, Rule 10.

The Societe Nationale de Sauvetage en Mer (SNSM) maintains offshore lifeboats, at constant readiness, at the following locations:

1. Saint-Jean-de-Luz (43°23'N., 1°40'W.).
2. L'Ardour, Anglet (43°32'N., 1°30'W.).
3. Cap Ferret (44°39'N., 1°14'W.).
4. Port-Medoc (45°33'N., 1°03'W.).
5. Port Bloc (45°34'N., 1°04'W.).
6. La Cotiniere (45°55'N., 1°20'W.).
7. Les Sables-d'Olonne (46°42'N., 1°57'W.).
8. Saint-Saveur (46°42'N., 2°21'W.).
9. Port Joinville (46°44'N., 2°21'W.).
10. L'Herbaudiere (47°01'N., 2°18'W.).
11. Le Croisic (47°18'N., 2°31'W.).
12. Le Palais (47°21'N., 3°09'W.).
13. Etel (47°39'N., 3°12'W.).
14. Le Guilvinec (47°48'N., 4°17'W.).
15. Saint-Guenole (47°49'N., 4°23'W.).
16. Ile d'Ouessant (Lampaul) (48°27'N., 5°06'W.).
17. Ile Molene (48°24'N., 4°57'W.).
18. Ile de Sein (48°03'N., 4°52'W.).
19. Audierne (48°01'N., 4°32'W.).
20. Portsall (48°33'N., 4°42'W.).
21. Aber-Wrac'h (48°36'N., 4°34'W.).
22. Ile de Batz (48°45'N., 4°01'W.).
23. Ploumanach-Perros-Guirec (48°50'N., 3°29'W.).
24. Saint-Malo (48°38'N., 2°02'W.).
25. Granville (48°50'N., 1°36'W.).
26. Goury (49°43'N., 1°57'W.).
27. Barfleur (49°40'N., 1°15'W.).
28. Ouistreham (49°17'N., 0°15'W.).

29. Fecamp (49°46'N., 0°22'E.).
30. Dieppe (49°56'N., 1°05'E.).
31. Boulogne-sur-Mer (50°44'N., 1°36'E.).
32. Calais (50°58'N., 1°51'E.).
33. Dunkerque (51°02'N., 2°21'E.).

Mediterranean Sea

France has two Regional Surveillance and Rescue Operations situated on the Mediterranean coast. These centers are located in MRCC La Garde (43°06'N., 6°00'E.) and MRSC Corse (41°55'N., 8°45'E.).

A Search and Rescue Organization, Centre Operationnel de Surveillance et de Sauvetage en Mediterranee (CROSS MED) (Mediterranean Operational Center for Surveillance and Rescue) covers the Mediterranean Sea from the Franco-Spanish border, then by the line joining the following points:

a. 42°00'N, 4°40'E.
b. 39°00'N, 4°40'E.
c. 39°00'N, 8°00'E.
d. 41°00'N, 8°00'E.
e. 41°20'N, 8°20'E.
f. 41°20'N, 9°45'E.
g. 43°10'N, 9°45'E.
h. and to the E by the Franco-Italian border.

The MRCCs can be contacted, as follows:

France—MRCC Contact Information (Mediterranean Sea)	
MRCC La Garde	
Telephone	33-4-94611616 (emergency)
	33-4-94617110 (administration)
Facsimile	33-4-94271149
E-mail	lagarde.mrcc@developpement-durable.gouv.fr
MRSC Ajaccio	
Telephone	33-4-95201363
Facsimile	33-4-95225191
E-mail	ajaccio.mrsc@developpement-durable.gouv.fr

CROSS provides a permanent, full-time weather operational presence along the coast of France. CROSS also coordinates surveillance of marine traffic, especially within the 12 mile limit, maritime search and rescue, fishery surveillance out to 200 miles, monitors pollution, and collects data for future use.

CROSS broadcasts information bulletins on the movements of vessels which appear to be navigating within a TSS or ITZ contrary to the requirements as per the International Rules of the Road, Rule 10.

The Societe Nationale de Sauvetage en Mer (SNSM) maintains offshore lifeboats, at constant readiness, at the following locations:

1. Port-Vendres (42°31'N., 3°07'E.).
2. Sete (43°24'N., 3°42'E.).
3. Port de Carro (43°19.9'N., 5°02.6'E.).
4. La Ciotat (43°10'N., 5°36'E.).
5. Hyeres (43°05'N., 6°09'E.).
6. Saint-Tropez (43°16'N., 6°38'E.).
7. Monaco (43°44'N., 7°25'E.).
8. Bonifacia (41°23'N., 9°09'E.).
9. Macinaggio (42°57.7'N., 9°27.3'E.).
10. Bastia (42°42'N., 9°27'E.).

French Police Vessels

These vessels display, by day, a blue and white triangular flag with the letter "P" in the white portion, and at night exhibit an all-round flashing purple light.

Ship Reporting System

United Kingdom Ship Movement Report System (MAREP)

The United Kingdom Ship Movement Report System (MAREP) is a voluntary reporting system which applies to the following vessels:

1. All merchant vessels over 300 grt. Vessels of 300 grt and under are strongly encouraged to participate.
2. Any vessels "not under command" or at anchor in a Traffic Separation Scheme (TSS) or an Inshore Traffic Zone (ITZ).
3. Any vessel "restricted in its ability to maneuver."
4. Any vessel with defective navigational aids.

Further information can be found in United Kingdom—Ship Reporting System and United Kingdom—Appendix I.

Dover Strait Reporting System (CALDOVREP)

CALDOVREP, a mandatory reporting system under SOLAS regulations, has been established in a 65-mile stretch of the Dover Traffic Separation Scheme (TSS). All vessels over 300 gross tons are required to participate in this system; specified vessels under 300 gross tons are also required to participate in the system. Vessels participating in this system are tracked by radar. Vessels which appear to be navigating within a TSS contrary to the requirements of Rule 10 of the International Collision Regulations (72 COLREGS) will be reported to their flag state.

Further information can be found in Pub. 191, Sailing Directions (Enroute) English Channel.

CORSEN-OUESSANT (OUESSREP)

CORSEN-OUESSANT (OUESSREP), a Vessel Traffic Service (VTS) system, has been established in the W approaches to the English Channel. It is a mandatory reporting system under SOLAS regulations and operates within an area with a radius of 40 miles centered on Ile d'Ouessant. All vessels over 300 gross tons are required to participate in this system. Special IMO provisions have also been established for vessels using the Traffic Separation Scheme (TSS) situated off Ouessant (Ushant).

Further information can be found in Pub. 191, Sailing Directions (Enroute) English Channel.

Jobourg Vessel Traffic Service (MANCHEREP)

MANCHEREP is a mandatory reporting system operating under SOLAS regulations which has been established in an area covering the Traffic Separation Scheme off Les Casquets. All vessels over 300 gross tons are required to participate in this system; specified vessels under 300 gross tons are also required to paricipate in the system.

Further information can be found in Pub. 191, Sailing Directions (Enroute) English Channel.

Western Europe Tanker Reporting System (WETREP)

The Western Europe Tanker Reporting System (WETREP), a mandatory reporting system covering the waters off Belgium, the W coast and English Channel coasts of France, Ireland, Portugal; the N and W coasts of Spain, and the English Channel and W coasts of the United Kingdom, including the Shetland Isles, is in effect.

Further information can be found in **North Atlantic Ocean—Ship Reporting System**.

Bonifacio Strait Reporting System (BONIFREP)

The Strait of Bonifacio borders the S side of Corsica and separates it from Sardinia, a province of Italy. The Bonifacio Strait Reporting System (BONIFREP) has been established within the Strait of Bonifacio and its E and W approaches. The system is mandatory for all vessels of 300 grt and over. Further information can be found in Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

SURNAV

SURNAV is a system designed to monitor the movements and condition of vessels carrying hydrocarbons, dangerous cargo, or noxious substances navigating in the approaches to the French coasts of the North Sea, the English Channel, the Atlantic Ocean, and the Mediterranean Sea. The regulations apply to the following vessels:

1. Vessels carrying hydrocarbons or the gaseous residues of hydrocarbons as specified in Annex 1 of MARPOL 73.
2. Non-inert tankers and vessels carrying the following:
   a. Noxious liquid substances as specified in Annex 2 of MARPOL 73 and classed in Category A and Category B in Chapter 17 of the IBC Code.
   b. Liquefied gas in bulk.
   c. Plutonium-239, uranium-233, uranium-235, uranium-238, thorium, or any material containing them, with the exception of ores.
   d. Acetaldehyde (UN 1089), ether ethyl (UN 1155), ethylvinylic ether (UN 1302), monoethylamine (UN 1036), ammonium nitrate (UN 0222), or propylene oxide (UN 1280).
   e. Composite organochlorides, such as organochloride pesticides (UN 2761, UN 2762, UN 2995, and UN 2996).
3. Vessels carrying the following:
   a. Noxious liquid substances as specified in Annex 2 of MARPOL 73.
   b. Harmful liquid substances as specified in Annex 3 of MARPOL 73.
   c. Dangerous cargo as specified in the International Maritime Code of Dangerous Goods (IMDG), including radioactive materials specified in the INF Code.
   d. Dangerous cargo as specified in Chapter 17 of the IBC Code and Chapter 19 of the IGC Code.

Vessels carrying the indicated cargo shall report to the appropriate CROSS station, as given in **Appendix I—SURNAV—Reporting Stations and Contact Information**.

Movement information.—Vessels indicated above intending to enter or pass through French territorial waters shall send a movement information report to the relevant CROSS center. The message shall be sent 6 hours prior to entering French territorial waters or 6 hours prior to leaving a port or anchorage on the French coast. The format and information required can be found in **Appendix II—Atlantic Coast—Movement Information** and **Appendix II—Mediterranean Coast—Movement Information.**

Any subsequent changes should be reported immediately.

Vessels indicated above arriving from a port or anchorage outside the European Union and intending to anchor in French territorial waters shall send a message to the relevant CROSS station (for vessels in the North Sea, the English Channel, or the Atlantic Ocean) or to CROSS La Garde (for vessels in the Mediterranean Sea) when leaving the loading port, or as soon as possible in the event of a change in destination, stating the following information (or indicating what authority within the European Union holds that information):

1. Name, call sign, and MMSI of vessel.
2. Nationality of vessel.
3. Length and draft of vessel.
4. Port of destination.
5. ETA at the port of destination, at the pilot station, or in the intended anchorage area, as requested by the competent authority.
6. ETD.
7. Passage plan.
8. Precise technical description of the dangerous or polluting cargo; UN numbers, if applicable; the IMO risk category determined in accordance the IMDG and with the IBC and IGC sets of rules; and the vessel's IMF category, if applicable.
9. Confirmation of the existence on board of a suitable list, manifest, or lading plan, giving precise details of the dangerous or polluting cargo carried by the vessel and their locations.
10. Number of crew onboard.

Contact information for the appropriate CROSS station can be found in **Appendix I—SURNAV Reporting Stations and Contact Information**.

During the entire transit or stay within French territorial or inshore waters, except when berthed at a quayside in a port, vessels indicated above shall maintain a continuous listening watch on the following frequencies:

1. DSC—2187.5 kHz and VHF channel 70.
2. VHF channel 16.
3. On any specified channel.

Accident and incident at sea information.—All vessels 300 gross tons and over on commercial passage within the limits of the Environmental Protection Zone shall immediately report the following information to the responsible CROSS center:

1. Any incident or accident affecting the safety of the vessel (e.g. collision, grounding, damage, failure or breakdown, intrusion or displacement of cargo, and all hull defects or structural failures).
2. Any incident or accident affecting navigational safety (e.g. failures likely to affect the vessel's maneuverability or defects affecting the propulsion system, steering system, electrical generating system, navigation equipment, or communications equipment).
3. Any situation likely to cause pollution of the water or coast line (e.g. any discharge or the risk of discharge of pol-

lutants into the sea).

4. Any slicks of pollution and any containers or packages observed adrift in the sea.

The format and information required can be found in **Appendix II—Atlantic Coast—Accident and Incident at Sea Information** and **Appendix II—Mediterranean Coast—Accident and Incident at Sea Information.**

The vessel suffering the accident shall also:

1. Inform the appropriate CROSS station of the developing situation.
2. Maintain a continuous listening watch, as follows:
   a. DSC—2187.5 kHz and VHF channel 70.
   b. VHF channel 16.
   c. On any specified channel.
3. Take all precautions stipulated by the maritime authorities to prevent any navigational dangers and risks of pollution.

Assisting vessel information.—Any vessel called upon to assist or tow a damaged or defected vessel shall immediately send a message to the appropriate CROSS station. The format and information required can be found in **Appendix II—Atlantic Coast—Assisting Vessel Information** and **Appendix II—Mediterranean Coast—Assisting Vessel Information.**

The assisting vessel shall also:

1. Inform the appropriate CROSS station of the developing situation.
2. Maintain a continuous listening watch, as follows:
   a. DSC—2187.5 kHz and VHF channel 70.
   b. VHF channel 16.
   c. On any specified channel.
3. Take all precautions stipulated by the maritime authorities to prevent any navigational dangers and risks of pollution.

Signals

Port Control Signals

International storm signals and traffic signals are used. The use of the following signals may indicate that obstructions exist in the fairways; however, vessels should proceed with caution and conform to any signals made by the port authorities:

1. Three red balls, vertically disposed, by day, or three all-round red lights, vertically disposed, at night, indicate the port is closed.
2. The appropriate signal from the International Code of Signals by day, or three all-round green lights, vertically disposed, at night, indicate that the port is open.

In small ports, these signals may be replaced by a simplified system, as follows:

Simplified Port Entry Control Signals		
Day signal	**Night signal**	**Meaning**
One square red flag	One red light	Entry prohibited
One square green flag	One green light	Exit prohibited
One square red flag over one square green flag	One red light over one green light	Entry and exit prohibited

Tidal Signals

The state of the tide is indicated by the following signals displayed at the masthead:

1. A blue pennant by day or two green lights, horizontally disposed, at night signify the LW stand.
2. A white flag with a black diagonal cross by day or two white lights, horizontally disposed, at night signify the HW stand.
3. An elongated black cone, point up, by day or a green light over a white light at night signify the rising tide.
4. An elongated black cone, point down, by day or a white light over a green light at night signify the falling tide. The height of the tide above chart datum is indicated, by day, by means of a display of cones (0.2m), cylinders (1m), and spheres (5m), displayed, respectively, in three vertical lines.
5. By night, a display of green lights (0.2m), red lights (1m), and white lights (5m) indicates the height of the tide.

The summation of the figures represented by the above-mentioned shapes gives the height of the water.

Strong Wind Signals

Light signals, which operate during daylight hours only, may be exhibited from certain ports and indicate predicted strong winds, as follows:

1. Eight white flashes in 4 seconds followed by 4 seconds of darkness—Winds of force 6 or greater predicted to occur in the next 6 hours.
2. Very quick white flashes—Winds of force 6 or greater alrready occurring or predicted to occur in the next 3 hours.

Maritime Police Vessels

French warships and other vessels on maritime law enforcement duties display the following signals:

1. By day.—A white and blue triangular flag, with the letter P in the white part.
2. By night.—An all-around violet quick flashing light.

Signal Stations

Signal stations are situated on the principal points and headlands of the French coast. Independently of its military function, each station is equipped to display storm signals, transmit urgent messages pertinent to the safety of shipping, and warn of marine disasters in its vicinity, and guide rescue craft.

Communication between vessel and signal station is made by light signal, flag signals of the International Code of Signals, and, in some cases, by radiotelephone (2716 kHz).

Some lighthouses are normally equipped with radiotelephone. In case of non-functioning of the latter equipment they may show the following signals:

1. A ball above, or below, a square flag indicates immediate assistance is required.
2. A black flag at the masthead indicates a shipwreck in the vicinity.

Submarine Operating Areas

Although submerged submarines may be encountered at any point on the French coast, vessels should be particularly attentive in the vicinity of the ports of Cherbourg, Brest, and Lorient, and off the entrance to Baie de Douarnenez.

French naval vessels while exercising with submarines will

fly the appropriate international signal indicating that a submarine in the vicinity is submerged. All other vessels, therefore, should clear the area without stopping their screws, keeping a careful lookout ahead for a periscope or a snorkel.

Zones prohibited to submerged submarines have been established off the entrances of ports frequented by submarines.

Vessels approaching or leaving these ports are recommended to navigate in these zones. The limits of the zones within this area, Chenal du Four, Brest, Lorient, Loire, and Gironde, are described in Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Coast of Africa.

Air and sea exercises are carries out with submarines in the Irish Sea and the Bay of Biscay in an area bounded by the French coast and lines joining the following positions:

a. Coast of France at latitide 48°40.0'N.
b. 48°40.0'N, 5°55.0'W.
c. 48°20.0'N, 7°00.0'W.
d. 48°20.0'N, 7°30.0'W.
e. 48°00.0'N, 7°48.0'W.
f. 48°00.0'N, 10°00.0'W.
g. 46°00.0'N, 10°00.0'W.
h. 46°00.0'N, 8°05.0'W.
i. 45°23.0'N, 8°18.0'W.
j. 43°53.0'N, 4°00.0'W.
k. 43°48.0'N, 2°02.7'W.
l. 43°43.6'N, 1°55.5'W.
m. 43°40.0'N, 1°52.0'W.
n. 43°23.0'N, 1°47.0'W. (PA) (Spain/France border)

Mariners may encounter submarines anywhere along the French coast of the Mediterranean, particularly between Marseille and Nice. Particular care should be exercised around Toulon. French submarines may also be encountered in the sea area S of the Gulf of Lyon and W of Corsica, sometimes in company with naval vessels and aircraft.

Within these areas, mariners may encounter at any time of the day or night warships conducting exercises with other warships, with submarines, and with aircraft, including torpedo and missile launching and artillery fire at floating targets or anti-aircraft fire.

During certain exercises at night warships may navigate with their lights out. Rockets may be launched, as well as smoke and flame producing floats; these light displays should not be confused with distress or lifesaving signals.

These activities are announced in French Notice to Mariners or by Avurnav (French coastal or local navigational warnings) through Marseille Radio, Grasse Radio, and Monaco Radio.

Military ships engaged in maneuvers that include submarines hoist the international code signal “NE2” to indicate that a submerged submarine is in their vicinity.

Commercial ships should be ready to give a wide berth to a vessel displaying this signal. If for some reason it is inevitable to pass close by, they should exercise caution and be ready to maneuver to avoid a periscope or a snorkel observed within a 10 degree angle forward and to either side.

A submarine which is too deeply submerged to show its periscope may indicate its position by ejecting a smoke candle which develops considerable smoke at the surface. Its position can also be indicated by means of a towed floating object painted red and white or red and yellow.

Due to their specific configuration, submarines cannot conform strictly to the requirements of Rule 23 of the International Regulations for the Prevention of Collisions at Sea, as far as the number and placement of their lights. The navigation lights are grouped on the house.

The lights are neither high above the water nor widely spaced. Consequently, they give no indication of the size of the submarine and little information concerning its route or changes of direction.

The submarines can be mistaken for ships of much smaller size. The stern light sometimes can mark the rear of the submarine; in this case it is located at the water line, and therefore may be partially obscured by spray or swell of the wake.

In order to facilitate their identification at night, French submarines on the surface are allowed to carry, in addition to the lights prescribed by the International Regulations for Preventing Collisions at Sea, one quick flashing yellow light, mounted above the light at the head of the mast, visible all around the horizon from a distance of at least 5 miles.

The rate of flash for French submarines is 100 to 120 flashes per minute; without advance notice the rate of flash can increase to between 120 and 180 flashes per minute. Caution is necessary not to confuse this signal with that of an air-cushion vessel operating in a non-displacement mode.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is maintained from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in France are, as follows:

1. **Atlantic Coast**
   a. In the Strait of Dover and adjacent waters. (IMO adopted)
   b. Off Casquets. (IMO adopted)
   c. Off Ushant. (IMO adopted)
2. **Mediterranean Coast—**Approaches to Porto-Vecchio. (Government of France)

U.S. Embassy

The U.S. Embassy is situated at 2 Avenue Gabriel, Paris.

The mailing addresses are, as follows:

1. France address—
   2 Avenue Gabriel
   75382 Paris CEDEX 08
2. U. S. address—
   PSC 116
   APO AE (09777)

U. S. Embassy France Home Page
http://france.usembassy.gov

Vessel Traffic Service

Vessel Traffic Services are in operation, as follows:

1. Calais (50°58'N., 1°51'E.) [1]
2. Cherbourg (49°40'N., 1°38'E.) [1]
3. Corsen-Ouessant (48°27'N., 5°00'W.) [1]

4. Dunkerque (51°03'N., 2°16'E.) [1]
5. La Seine (49°28'N., 0°00'E.) [1]
6. Le Havre (49°29'N., 0°05'E.) [1]
7. Brest (48°22'N., 4°29'W.) [2]
8. La Gironde (45°10'N., 0°59'W.) [2]
9. La Loire (47°10'N., 2°05'W.) [2]
10. Golfe de Fos (43°22'N., 5°07'E.) [3]
11. Marseille (43°19'N., 5°21'E.). [3]

[1] For further information, See Pub. 191, Sailing Directions (Enroute) English Channel.

[2] For further information, See Pub. 143, Sailing Directions (Enroute) west Coast of Europe and Northwest Africa.

[3] For further information, See Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Appendix I—SURNAV Reporting Stations and Contact Information

CROSS station	Traffic	Contact Information	
CROSS Gris-Nez	For vessels on passage in the French Economic Zone E of a line joining Cap d'Antifer and the Greenwich Lightfloat, marking the entrance to the Dover Strait TSS.	Call sign:	Gris-Nez Traffic
		VHF:	VHF channels 13, 16, and 79
		Telephone:	33-3-21872187
		Facsimile:	33-3-21877855
		Telex:	42-130680 (CROSSGN 130680F)
		E-mail:	grisnez.mrcc@developpement-durable.gouv.fr griznez@mrccfr.eu
CROSS Jobourg	For vessels on passage in the French Economic Zone W of a line joining Cap d'Antifer and the Greenwich Lightfloat, marking the entrance to the Dover Strait TSS, and E of a line joining the following positions: a. 49°31.0'N, 4°00.0'W. b. 48°53.0'N, 2°20.0'W. c. 48°49.0'N, 1°49.0'W. d. 48°37.7'N, 1°34.0'W.	Call sign:	Jobourg Traffic
		VHF:	VHF channels 13, 16, and 80
		Telephone:	33-3-33527213
		Facsimile:	33-3-33527172
		E-mail:	jobourg.mrcc@developpement-durable.gouv.fr jobourg@mrccfr.eu
CROSS Corsen	For vessels on passage in the French Economic Zone W of a line joining the following positions: a. 49°31.0'N, 4°00.0'W. b. 48°53.0'N, 2°20.0'W. c. 48°49.0'N, 1°49.0'W. d. 48°37.7'N, 1°34.0'W. and N of latitude 47°47' 33"N.	Call sign:	Ouessant Traffic
		VHF:	VHF channels 13, 16, and 79
		Telephone:	33-2-98893131
		Facsimile:	33-2-98896575
		E-mail:	ouessant-trafic@developpement-durable.gouv.fr
CROSS Etel	For vessels on passage in the French Economic Zone S of latitude 47°47'33"N.	Call sign:	CROSSA Etel
		VHF:	VHF channel 16
		Telephone:	33-2-97553535
		Facsimile:	33-2-97554934
		Telex:	42-950519 (CROSS B 950519F)
		E-mail:	etel.mrcc@developpement-durable.gouv.fr etel@mrccfr.eu
CROSS La Garde	For vessels going to French Mediterranean ports.	Call sign:	CROSS MED
		VHF:	VHF channels 16 and 70
		Telephone:	33-4-94617110
		Facsimile:	33-4-94271149
		Telex:	42-430024 (CROMD B 430024F)
		E-mail:	lagarde.mrcc@developpement-durable.gouv.fr

Appendix II—SURNAV Report Formats

Atlantic Coast	
Movement Information	
TO: Appropriate CROSS station (see Appendix I)	
PREFIX: SURNAV-FRANCE	
ALFA	Vessel's name, call sign, and flag
BRAVO	Date and in time UT(GMT), suffixed Z
CHARLIE	Position (latitude and longitude)
ECHO	Course
FOXTROT	Speed
GOLF	Last port of call
HOTEL	Date and time (UTC) and position of entry into French territorial waters or date and time (UTC) and position on departure
INDIA	Destination
KILO	Date and time (UTC) and position of leaving French territorial waters or date and time (UTC) of arrival at the port, anchorage, or waiting area, of the destination in French waters
MIKE	RT watch maintained
OSCAR	Draft
PAPA	Cargo—type (as defined by MARPOL 73/78) and quantity
QUEBEC	Defects, damages, failures, or restrictions
UNIFORM	Type of vessel
X-RAY	Any other information
ZULU	End of message

Mediterranean Coast	
Movement Information	
TO: CROSS La Garde	
PREFIX: SURNAV-FRANCE	
ALFA	Vessel's name, call sign, flag, and MMSI number
BRAVO	Date and in time UT(GMT), suffixed Z
CHARLIE	Position (latitude and longitude)
ECHO	Course
FOXTROT	Speed
GOLF	Last port of call
HOTEL	Date and time (UTC) and position of entry into French territorial waters or date and time (UTC) and position on departure
INDIA	Destination
KILO	Date and time (UTC) and position of leaving French territorial waters or date and time (UTC) of arrival at the port, anchorage, or waiting area, of the destination in French waters
LIMA	Intentions
MIKE	RT watch maintained
OSCAR	Draft
PAPA	Cargo—type (as defined by MARPOL 73/78) and quantity
QUEBEC	Defects, damages, failures, or restrictions
SIERRA	Weather in the area
TANGO	Vessel's representative
UNIFORM	Type of vessel
WHISKEY	Number of persons on board
X-RAY	Any other information
ZULU	End of message

Atlantic Coast	
Accident and Incident at Sea Information	
TO: Appropriate CROSS station (see Appendix I)	
ALFA	Vessel's name, call sign, and flag
BRAVO	Date and time (UTC) suffixed Z
CHARLIE	Position (latitude and longitude)
ECHO	Course
FOXTROT	Speed
GOLF	Last port of call
INDIA	Destination
MIKE	RT watch maintained
OSCAR	Draft
PAPA *	Cargo and details enabling information to be obtained about dangerous cargo or pollutants on board
QUEBEC *	Nature of the incident or situation encountered
ROMEO *	Description of any pollution or dangerous cargo lost overboard
TANGO	Name and address of owner, charterer, and any other French consignee
UNIFORM	Type of vessel
WHISKEY	Number of persons on board
X-RAY *	Date and time (UTC) of call for assistance or towage; name of assisting vessel, if present or, if not, its ETA (UTC); any other information
YANKEE	Request for transmission of the report to another reporting system (AMVER, AUSREP, JASREP, MAREP, etc.)
ZULU	End of message
* Vessels should consult IMO Resolution A.851(20) to ensure that the required information is given correctly.	

Mediterranean Coast	
Accident and Incident at Sea Information	
TO: CROSS La Garde	
ALFA	Vessel's name, call sign, and flag
BRAVO	Date and time (UTC) suffixed Z
CHARLIE	Position (latitude and longitude)
ECHO	Course
FOXTROT	Speed
GOLF	Last port of call
INDIA	Destination
MIKE	RT watch maintained
OSCAR	Draft
PAPA *	Cargo and details enabling information to be obtained about dangerous cargo or pollutants on board
QUEBEC *	Nature of the incident or situation encountered
ROMEO *	Description of any pollution or dangerous cargo lost overboard
SIERRA	Weather in the area
TANGO	Name and address of owner, charterer, and any other French consignee
UNIFORM	Type of vessel
WHISKEY	Number of persons on board
X-RAY *	Date and time (UTC) of call for assistance or towage; name of assisting vessel, if present or, if not, its ETA (UTC); any other information
YANKEE	Request for transmission of the report to another reporting system (AMVER, AUSREP, JASREP, MAREP, etc.)
ZULU	End of message
* Vessels should consult IMO Resolution A.851(20) to ensure that the required information is given correctly.	

Atlantic Coast	
Assisting Vessel Information	
TO: Appropriate CROSS station (see Appendix I)	
PREFIX: SURNAV-AVARIES	
ALFA	Assisting vessel's name, call sign, flag, and MMSI number
BRAVO	Date and time (UTC) suffixed Z
CHARLIE	Position of assisting vessel (latitude and longitude)
ECHO	Course of assisting vessel
FOXTROT	Speed of assisting vessel
INDIA	Destination
PAPA	Cargo of the casualty, if known
QUEBEC	Damage to casualty, if known
TANGO	Name and address of owner, charterer, and any French consignee of the assisting vessel
UNIFORM	Type of assisting vessel
X-RAY	Date and time (UTC) and position of casualty; name, nationality, and call sign of casualty; course and speed of the casualty; any other information

Mediterranean Coast	
Assisting Vessel Information	
TO: CROSS La Garde	
PREFIX: SURNAV BREAKDOWNS	
ALFA	Assisting vessel's name, call sign, flag, and MMSI number
BRAVO	Date and time (UTC) suffixed Z
CHARLIE	Position of assisting vessel (latitude and longitude)
ECHO	Course of assisting vessel
FOXTROT	Speed of assisting vessel
INDIA	Destination
MIKE	RT watch maintained
OSCAR	Draft
PAPA	Cargo of the casualty, if known
QUEBEC	Damage to casualty, if known
TANGO	Name and address of owner, charterer, and any French consignee of the assisting vessel
UNIFORM	Type of assisting vessel
X-RAY	Date and time (UTC) and position of casualty; name, nationality, and call sign of casualty; course and speed of the casualty; any other information

GAMBIA

General	**225**
Buoyage System	**225**
Cautions	**225**
Currency	**225**
Government	**225**
Holidays	**225**
Industries	**226**
Languages	**226**
Navigational Information	**226**
Search and Rescue	**226**
Time Zone	**226**
U.S. Embassy	**226**

General

The Gambia is the smallest sovereign state in Africa, less than half the size of Massachusetts. It consists of a narrow strip of land extending for over 200 miles from the coast on both sides of the Gambia River. It lies in a narrow river basin. From the valley floor in the center, the relief slopes upward, both northward and southward, to a plateau.

The climate of Gambia is pleasant along the coast during the dry season (December to May) but is very hot in the interior. The monthly temperature range is 23° to 27°C on the Atlantic Ocean, with greater extremes upriver.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation in the Gambia are unreliable. Lights may be extinguished; buoys and beacons may be missing, unlit, or out of position.

Cautions

Fishing vessels may be encountered off the entire coast of the Gambia.

Currency

The official unit of currency is the dalasi, consisting of 100 butut.

Government

Flag of the Gambia

The Gambia is a republic under multi-party democratic rule. The country consists of five divisions and one city.

The Gambia is governed by a directly-elected President serving a 5-year term. The unicameral National Assembly consists of 53 members serving 5-year terms; 48 members are directly elected and five members are appointed.

The legal system is based on a mixture of English common law, Islamic law, and customary law.

The capital is Banjul.

Holidays

The following holidays are observed:

January 1	New Year's Day
February 18	Independence Day
Good Friday	Variable
Holy Saturday	Variable

Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
August 15	Assumption Day
December 25	Christmas Day

Islamic holidays, which are subject to the appearance of the moon, include Eid Al-Fitr (End of Ramadan), Eid Al-Adha (End of Pilgrimage), and the Prophet's Birthday.

Industries

The main industries are agriculture, food processing (peanuts and fish), hides, tourism, beverages, agricultural machinery assembly, woodworking, metalworking, and clothing.

The main exports are peanut products, fish, cotton lint, and palm kernels. The main export-trading partners are India, the United Kingdom, Indonesia, and France.

The main imports are foodstuffs, manufactured goods, fuel, machinery, and transport equipment. The main import-trading partners are China, Senegal, Ivory Coast, and Brazil.

Languages

English is the official language. Mandinka, Wolof, Fula, and other indigenous languages are also spoken.

Navigational Information

Enroute Volume

Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Maritime Claims

The maritime territorial claims of the Gambia are, as follows:

Territorial Sea	12 miles.
Contiguous Zone	18 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin

Search and Rescue

The Ministry of Defense coordinates search and rescue operations from Maritime Rescue Coordination Subcenter (MRSC) Banjul, which can be contacted, as follows:

1. Telephone: 220-4472737
2. Facsimile: 220-4472190
   220-4472896
3. E-mail: dggcaa@qannet.gm

Banjul Coast Radio Station (C5G) maintains a continuous listening watch for distress traffic on VHF channel 16.

Time Zone

The Time Zone description is ZULU. Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at Kairaba Avenue, Fajaira, Banjul.

The mailing address is P. M. B. No. 19, Banjul.

U. S. Embassy The Gambia Home Page
http://banjul.usembassy.gov

GEORGIA

General	**227**
Buoyage System	**227**
Cautions	**227**
Currency	**227**
Government	**227**
Holidays	**228**
Industries	**228**
Languages	**228**
Mined Areas	**228**
Navigational Information	**228**
Pilotage	**229**
Pollution	**229**
Regulations	**229**
Restricted Areas	**229**
Search and Rescue	**231**
Ship Reporting System	**231**
Time Zone	**231**
Traffic Separation Schemes	**231**
U.S. Embassy	**232**
Appendix—Georgia Ship Reporting System	**233**

General

Georgia is located in southwestern Asia on the Black Sea, between Russia on the N and Turkey on the S.

The coastal climate is a Mediterranean-like warm and pleasant climate.

The terrain is mostly mountainous, with the Great Caucasus Mountains in the N and the Lesser Caucasus Mountains in the S.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

It has been reported (2003) that navigational aids in Georgia may be unreliable and that navigational aids in Georgian waters may be different from those charted and described in navigational publications. Mariners should use extreme caution when attempting to identify navigational aids.

Cautions

General

The ports of **Sokhumi** (43°00'N., 41°01'E.) and **Ochamchir** (42°44'N., 41°26'E.) and all waters within 12 miles of the coast between the Russian/Georgian border (43°23'N., 40°00'E.) and Mys Anaklia (42°23'N., 41°34'E.) are closed to navigation to all vessels except those carrying humanitarian aid. Such vessels should anchor off **Poti** (42°09'N., 41°39'E.) to obtain clearance prior to entry.

Tyagun

The Tyagun, an unpleasant and sometimes dangerous wave condition which may occur inside a harbor, is reported to affect ports on the Caucasian coast between Tuapse and Bat'umi. For further information, see **Black Sea—Cautions—Dangerous Waves**.

Currency

The official unit of currency is the lari, consisting of 100 tetri.

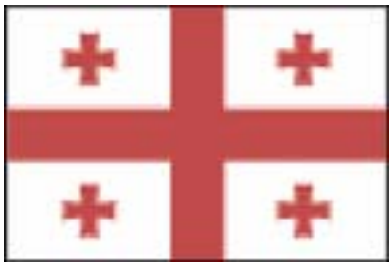
Government

Georgia is a republic. The country is divided into nine regions, one city, and two autonomous republics.

Georgia is governed by a directly-elected President serving a 5-year term. The unicameral Supreme Council is composed of 150 directly-elected members serving 5-year terms.

The legal system is based on civil law.

The capital is Tlibisi.



Flag of Georgia

Holidays

The following holidays are observed:

January 1-2	New Year's Holidays
January 7	Orthodox Christmas
January 19	Orthodox Epiphany
March 3	Mothers' Day
March 8	International Women's Day
April 9	Memorial Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 9	Victory Day
May 12	St. Andrew the Apostle Day
May 26	Independence Day
August 28	Assumption Day (Mariamoba)
October 14	Svetitskhovlobo
November 23	St. George's Day (Giorgoba)

Industries

The main industries are agriculture, steel, aircraft, machine tools, electrical appliances, mining (manganese and copper), chemicals, wood products, and wine.

The main exports are scrap metal, machinery, chemicals, fuel re-exports, citrus fruits, tea, and wine. The main export-trading partners are the United Kingdom, Turkey, the United States, spain, Azerbaijan, and Turkmenistan.

The main imports are fuels, machinery and parts, transport equipment, grain and other foods, and pharmaceuticals. The main import-trading partners are Russia, Turkey, the United States, Azerbaijan, Ukraine, and Germany.

Languages

Georgian is the official language.

Mined Areas

Former Mined Areas

Southeast of Cape Pitsunda

Area No. 1 (former Area No. 32)—Area bounded by lines joining the following positions:

a. 43°04'24.0"N, 40°27'00.0"E.
b. 43°01'15.0"N, 40°33'15.0"E.
c. 42°58'54.0"N, 40°30'12.0"E.
d. 43°03'30.0"N, 40°23'24.0"E.

West of Cape Anaklia

Area No. 2 (former Area No. 34)—Area bounded by lines joining the following positions:

a. 42°27'25.2"N, 41°23'27.0"E.
b. 42°27'25.2"N, 41°25'39.6"E.
c. 42°25'56.4"N, 41°28'45.0"E.
d. 42°21'33.0"N, 41°29'39.0"E.
e. 42°21'31.8"N, 41°23'10.2"E.

Approaches to Poti from the north

Area No. 3 (former Area No. 38)—Area bounded by lines joining the following positions:

a. 42°08'56.4"N, 41°38'58.8"E.
b. 42°08'56.4"N, 41°36'00.0"E.
c. 42°10'54.0"N, 41°35'30.0"E.
d. 42°14'15.0"N, 41°35'48.0"E.
e. 42°14'13.8"N, 41°38'51.0"E.

Approaches to Batumi (Cape Green)

Area No. 4 (former Area No. 36)—Area bounded by lines joining the following positions:

a. 41°44'25.8"N, 41°40'00.0"E.
b. 41°44'25.8"N, 41°41'30.0"E.
c. 41°41'45.0"N, 41°39'54.0"E.
d. 41°41'19.2"N, 41°38'36.0"E.
e. 41°42'02.4"N, 41°38'00.0"E.

Approaches to Batumi

Area No. 5 (former Area No. 37)—Area bounded by lines joining the following positions:

a. 41°43'33.0"N, 41°30'34.8"E.
b. 41°42'30.0"N, 41°34'48.0"E.
c. 41°40'13.2"N, 41°36'12.0"E.
d. 41°37'32.4"N, 41°31'51.6"E.
e. 41°40'33.0"N, 41°28'22.8"E.

Navigational Information

Enroute Volume

BA NP 24, Black Sea and Sea of Azov Pilot (British Admiralty publication).

Maritime Claims

The maritime territorial claims of Georgia are, as follows:

Territorial Sea	12 miles.
Fisheries or Economic Zone	200 miles or to median lines or boundaries.

Maritime Boundary Disputes

The maritime boundary with Russia is unresolved.

Pilotage

Pilotage is compulsory for entry to and departure from all Georgian ports, as well as for mooring and casting off, regardless of vessel type or size.

Pilots should be ordered, via the ship's agent, 24 hours in advance and confirmed 2 hours prior to arrival, except as stated otherwise by local port authorities.

Batumi (41°39'N., 41°39'E.)

Pilotage is available 24 hours. The pilot boards in position 41°40'20"N, 41°37'57"E.

The pilot can be contacted (call sign: Batumi Pilot) on VHF channels 12 and 16.

Kulevi (42°16'N., 41°39'E.)

Pilotage is compulsory for all vessels entering and leaving the harbor. Pilotage is available during daylight hours only, subject to weather conditions. The pilot boards about 1.5 miles NW of Fairway Lighted Buoy.

The pilot can be contacted (call sign: VTS Kulevi) on VHF channels 16 and 74.

Poti (42°10'N., 41°39'E.)

Pilotage is available 24 hours and should be requested 48 hours in advance. The pilot boards in position 42°10'09.6"N, 41°37'58.2"E.

Sokhumi (43°00'N., 41°01'E.)

Pilotage is available 24 hours. The pilot boards in the roadstead along the range line in position 42°58'30"N, 41°01'42"E.

SUPSA Terminal (42°01'N., 41°43'E.)

Pilotage is compulsory for berthing and is available during daylight hours only. The pilot boards 3 miles W of the SPM.

Pollution

General

Dumping oily mixtures, ship waste, clean ballast from tankers, and bilge water from any vessel is prohibited within 12 miles of the coast.

Dumping any oily water or clean ballast is prohibited within 50 miles of the coast, except when when within the requirements of MARPOL 73/78.

Pollution Reports

All vessels in the Georgia Search and Rescue Region are requested to report oil pollution and accidents which could lead to pollution. The report, which is free of charge, should be sent through SMRCC Georgia. The message should begin with the word GEOPOLREP and should contain the following information:

1. Date and type of pollution.
2. Position.
3. Wind direction and speed at sea surface.
4. Sea state.
5. Origin of pollution (collision, grounding, etc.).
6. Name, tonnage, and nationality of vessel causing pollution.
7. Names of vessels in the vicinity.
8. Information on type of oil.
9. Dimensions of the oil slick (width, length), estimated amount of oil spilled, and any possible information on thickness of oil layer.
10. Measures already taken by the vessel to stop further escape of oil or to control floating oil.
11. Details of observer.

SMRCC Georgia can be contacted, as follows:

1. Telephone: 995-222-73913
2. Facsimile: 995-222-73905 (24 hours)
3. E-mail: mrcc@maradgeorgia.org

MARPOL Special Area

The Black Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Advanced Notice

The vessel's ETA should be sent, via the agent, 7 days, 72 hours, 48 hours, and 24 hours prior to arrival, as well as 2 hours prior to arriving at the roads.

Quarantine

Messages must be sent to the Sanitary Officer of the Port of Batumi, through the vessel's agent, 24 hours prior to arrival. The name of the vessel should be given in plain language; the remainder may be given in groups according to the International Code of Signals.

Restricted Areas

Georgian Regulated Areas, where navigation, fishing, and anchoring are prohibited, are listed below.

Prohibited Areas (Navigating, Stopping, Fishing, and Anchoring are Prohibited)

South of the Georgia/Russia border

Area No. 21 (former Area Psou)—Area bounded by lines joining the following positions:

a. 43°23'00.0"N, 40°00'30.0"E.
b. 43°14'22.8"N, 39°48'46.2"E.
c. 43°14'04.8"N, 39°50'19.8"E.
d. 43°22'57.0"N, 40°02'03.6"E.

West of Poti

Area No. 22 (former Area Poti)—Area bounded by lines joining the following positions:

a. 42°09'10.2"N, 41°38'19.2"E.
b. 42°09'16.2"N, 41°38'19.2"E.
c. 42°09'16.2"N, 41°38'27.0"E.
d. 42°09'10.2"N, 41°38'27.0'E.

Westsouthwest of Batumi

Area No. 23 (former Area Sarpi)—Area bounded by the shoreline and lines joining the following positions:

a. 41°32'05.4"N, 41°33'10.2"E. (shore)
b. 41°34'02.4"N, 41°25'45.6"E.
c. 41°33'06.0"N, 41°25'18.0"E.
d. 41°31'03.0"N, 41°32'48.6"E. (shore)

Southwest of Sokhumi

Area SOKHUMI—Area bounded by the shoreline and lines joining the following positions:

a. 42°59.8'N, 40°57.3'E. (shore)
b. 42°59.6'N, 40°56.6'E.
c. 42°57.0'N, 40°58.8'E.
d. 42°57.9'N, 41°00.7'E.
e. 42°59.2'N, 40°59.1'E. (shore)

Westnorthwest of Mys Pitsunda

Area BZYB (Area 117)—Area bounded by the shoreline and lines joining the following positions:

a. 43°09.6'N, 40°19.4'E. (shore)
b. 43°06.3'N, 40°16.7'E.
c. 43°11.9'N, 40°10.2'E.
d. 43°14.2'N, 40°16.3'E. (shore)

West of Grigoleti

Area No. 32 (former Area Supsa)—Area bounded by lines joining the following positions:

a. 42°03'12.0"N, 41°43'48.0"E.
b. 42°03'12.0"N, 41°40'00.0"E.
c. 42°00'30.0"N, 41°40'12.0"E.
d. 42°00'30.0"N, 41°45'36.0"E.

Areas Temporarily Prohibited for Navigation

Southwest of Mys Batumskiy

Area No. 33 (former Area Burun-Tabia)—Area bounded by the shoreline and lines joining the following positions:

a. 41°37'51.0"N, 41°36'00.0"E. (shore)
b. 41°40'07.2"N, 41°36'00.0"E.
c. 41°40'07.2"N, 41°37'31.8"E.
d. 41°39'01.8"N, 41°37'31.8"E. (shore)

South of Potiyskiy

Area No. 31 (former Area Maltakva)—Area bounded by the shoreline and lines joining the following positions:

a. 42°06'28.2"N, 41°40'21.6"E.
b. 42°06'11.4"N, 41°39'21.6"E.
c. 42°07'07.2"N, 41°38'16.2"E.
d. 42°07'34.2"N, 41°39'23.4"E.

Approaches to Ochamchira

Area OCHAMCHIRA—Area bounded by the shoreline and lines joining the following positions:

a. 42°44.8'N, 41°24.8'E. (shore)
b. 42°42.7'N, 41°20.8'E.
c. 42°40.8'N, 41°23.8'E.
d. 42°44.4'N, 41°25.4'E. (shore)

Mys Kodori to Mys Iskuriya

Area KODORI—Area bounded by lines joining the following positions:

a. 43°50.5'N, 41°06.6'E. (shore)
b. 43°49.7'N, 41°05.2'E.
c. 43°46.8'N, 41°09.2'E.
d. 43°47.7'N, 41°09.8'E. (shore)

South of Sokhumi

Area BIRTS—Area bounded by lines joining the following positions:

a. 42°59.2'N, 40°59.0'E.
b. 42°58.5'N, 41°00.0'E.
c. 42°58.9'N, 41°01.3'E.
d. 42°59.5'N, 41°01.3'E.

North part of the territorial sea of Georgia

Area No. 34—Area bounded by lines joining the following positions:

a. 43°23'04.8"N, 40°00'21.6"E.
b. 43°14'25.2"N, 39°48'32.4"E.
c. 43°12'00.0"N, 40°00'14.4"E.
d. 43°05'25.2"N, 40°04'14.4"E.
e. 43°02'00.0"N, 40°09'00.0"E.
f. 42°59'03.6"N, 40°14'28.8"E.
g. 42°58'03.6"N, 40°23'22.4"E.
h. 42°55'18.0"N, 40°28'28.8"E.
i. 42°54'21.6"N, 40°35'07.2"E.
j. 42°54'00.0"N, 40°43'28.8"E.
k. 42°52'14.4"N, 40°46'00.0"E.
l. 42°49'00.0"N, 40°51'18.0"E.
m. 42°43'14.4"N, 40°55'00.0"E.
n. 42°39'14.4"N, 40°59'20.4"E.
o. 42°37'14.4"N, 41°05'14.4"E.
p. 42°36'14.4"N, 41°13'00.0"E.
q. 42°35'14.4"N, 41°15'10.8"E.
r. 42°31'03.6"N, 41°17'00.0"E.
s. 42°23'04.2"N, 41°18'13.8"E.
t. 42°24'18.0"N, 41°33'13.8"E.

Dangerous Maritime Areas (Spoil Grounds)

Northeast of Batumi

Area No. 43 (former Area 10)—Area bounded by the shoreline and lines joining the following positions:

a. 41°39'42.0"N, 41°39'16.0"E.
b. 41°39'54.0"N, 41°39'16.0"E.
c. 41°39'54.0"N, 41°39'36.5"E.
d. 41°39'42.0"N, 41°39'36.5"E.

Southwest of Poti

Area No. 42 (former Area 20)—Area bounded by lines joining the following positions:

a. 42°08'25.2"N, 41°38'19.8"E.
b. 42°09'00.0"N, 41°38'19.8"E.

c. 42°09'00.0"N, 41°38'32.4"E.
d. 42°08'25.2"N, 41°38'32.4'E.

Approaches to Ochamchira

Area No. 41 (former Area 30)—Area bounded by lines joining the following positions:
a. 42°44'12.0"N, 41°26'00.0"E.
b. 42°44'55.2"N, 41°26'12.0"E.
c. 42°44'19.8"N, 41°26'18.6"E.
d. 42°44'03.0"N, 41°26'31.2"E.

Dangerous Maritime Areas (Explosives Dumping Areas)

West and Northwest of Poti

Area No. 11 (former Area 30)—Area bounded by lines joining the following positions:
a. 42°15'00.0"N, 41°13'24.0"E.
b. 42°15'00.0"N, 41°20'00.0"E.
c. 42°11'00.0"N, 41°20'00.0"E.
d. 42°11'00.0"N, 41°13'24.0"E.

Area No. 12 (former Area 40)—Area bounded by lines joining the following positions:
a. 42°10'54.0"N, 41°25'48.0"E.
b. 42°13'48.0"N, 41°25'48.0"E.
c. 42°13'48.0"N, 41°29'54.0"E.
d. 42°10'54.0"N, 41°29'54.0"E.

Northnorthwest of Batumi

Area No. 13—Area bounded by lines joining the following positions:
a. 41°52'00.0"N, 41°29'30.0"E.
b. 41°52'00.0"N, 41°34'00.0"E.
c. 41°48'00.0"N, 41°34'00.0"E.
d. 41°48'00.0"N, 42°29'30.0"E.

Military Restricted Areas

Westsouthwest of Mys Anaklia

Area No. GG001—Area bounded by lines joining the following positions:
a. 42°11'00.0"N, 41°05'00.0"E.
b. 42°50'00.0"N, 39°48'00.0"E.
c. 42°24'00.0"N, 39°45'00.0"E.
d. 41°46'00.0"N, 41°08'00.0"E.

West of Mys Anaklia

Area No. GG002—Area bounded by lines joining the following positions:
a. 42°33'00.0"N, 41°02'00.0"E.
b. 42°11'00.0"N, 41°05'00.0"E.
c. 42°26'00.0"N, 39°28'00.0"E.
d. 42°44'00.0"N, 39°29'00.0"E.

South of Mys Anaklia

Area No. GG003 (Area ANAKLIA)—Area bounded by the shoree and lines joining the following positions:
a. 42°20'00.0"N, 41°36'45.0"E. (shore)
b. 42°19'20.4"N, 41°26'52.8"E.
c. 42°21'48.0"N, 41°25'36.0"E.
d. 42°22'24.0"N, 41°35'12.0"E.

Northwest of Mys Anaklia

Area No. GG004—Area bounded by lines joining the following positions:
a. 42°23'01.8"N, 41°14'42.6"E.
b. 42°13'01.8"N, 41°06'42.6"E.
c. 42°52'43.8"N, 39°48'12.6"E.
d. 42°12'01.8"N, 39°50'42.6"E.

Search and Rescue

The State Coordination Rescue Center (SMRCC Georgia) of the Georgian Maritime Transport Administration, located at Batumi, is responsible for the coordination of all maritime distress and safety incidents within the Maritime Search and Rescue Region of Georgia. Contact information for the Georgian Maritime Transport Administration is, as follows:
1. E-mail: mtag@maradgeorgia.org
2. Internet: http://www.maradgeorgia.org

SMRCC Georgia can be contacted, as follows:
1. Telephone: 995-222-73913
2. Facsimile: 995-222-73905 (24 hours)
3. E-mail: mrcc@maradgeorgia.org

The harbormaster's offices in the ports of Batumi and Poti are designated as Rescue Subcenters for the areas up to 12 miles from the respective ports.

Ship Reporting System

Georgian Ship Reporting System (GEOREP)

The Georgian Ship Reporting System (GEOREP) is operated by MRCC Georgia. Participation is compulsory; vessels of any nationality, tonnage, or type should participate when within the GEOREP area. For further information, see the Appendix.

Time Zone

The Time Zone description is DELTA (-4). Daylight Savings Time is not observed.

Traffic Separation Schemes

Traffic Separation Schemes are located, as follows:
1. Approaches to Poti (42°12'N., 41°32'E.) (Government of Georgia).
2. Approaches to Supsa Terminal (42°02'N., 41°33'E.) (Government of Georgia).
3. Approaches to Batumi (41°42'N., 41°36'E.) (Government of Georgia).

In addition to the Traffic Separation Schemes, new two-way recommended routes have been established between the Traffic Separation Schemes and in the approaches to them, as follows:
1. From the Psou River to Poti (7.6 miles long).
2. From Poti through the Euro-Asian Transport Corridor (6.6 miles long).
3. Humanitarian Corridor from Poti to Sukhuni. (46.2 miles long).
4. From Kulevi (under construction) to Poti (4.2 miles long).
5. From Poti to Batumi (24.3 miles long).
6. From Poti to Supsa Terminal (4.0 miles long).
7. From the W side of the Black Sea to Supsa Terminal

(7.5 miles long).

8. From Supsa Terminal to Batumi (14.2 miles long).

9. From the W side of the Black Sea to Batumi (8.3 miles long).

10. From Batumi to Sarpi (8.1 miles long).

Further information on the Traffic Separation Schemes and the two-way routes can be found at the following web site:

Georgian Maritime Transport Administration http://www.maradgeorgia.org
Click on the following links (in order): 1. Law of Georgia 2. Navigation Regime 3. Navigation Regime (EN)

U.S. Embassy

The U. S. Embassy is situated at 11 George Balanchine Street, Tbilisi.

The mailing addresses are, as follows:

1. Georgia address—
   11 George Balanchine Street
   Tbilisi 0131
2. U. S. address—
   7060 Tbilisi Place
   Washington, DC (20521-7060)

U. S. Embassy Georgia Home Page http://georgia.usembassy.gov

Appendix—Georgia Ship Reporting System

The Georgian Ship Reporting System (GEOREP) is operated by MRCC Georgia. Participation is compulsory; vessels of any nationality, tonnage, or type should participate when within the GEOREP area.

GEOREP identifies and monitors the positions of vessels participating in the system. Vessels participating in GEOREP provide regular reports which are used to maintain a chart plot of the vessels' positions. GEOREP aids in search and rescue operations by:

1. Reducing the time between the loss of the vessel and initiation of search and rescue action in cases where no distress signals are sent out.
2. Limiting the search area for rescue operations.
3. Providing up-to-date information on shipping resources available in the vicinity of a casualty.

The GEOREP area is bounded by the shoreline and lines joining the following positions:

a. 43°23'00.0"N, 40°00'30.0"E.
b. 42°24'00.0"N, 38°41'00.0"E.
c. 42°20'09.0"N, 39°00'07.8"E.
d. 42°08'00.0"N, 39°50'30.0"E.
e. 42°02'00.0"N, 40°26'00.0"E.
f. 41°57'00.0"N, 40°42'00.0"E.
g. 41°35'30.0"N, 41°16'30.0"E.
h. 41°31'00.0"N, 41°33'00.0"E.

All GEOREP messages should be forwarded through MRCC Georgia, as follows:

Telephone:	995-222-73913
Facsimile:	995-222-73905
	995-222-73929
MMSI:	002130100
Telex:	51-9475392 MRCC G
E-mail:	mrcc@maradgeorgia.org

There are seven types of reports in GEOREP, as follows:

1. **Sailing Plan (SP).—**Should be sent within 6 hours prior to a vessel entering the GEOREP area from Istanbul Bogazi (The Bosporus) or from ports on the NW coast of the Black Sea. If the vessel is coming from ports in Turkey or Russia, the SP should be sent immediately after the vessel's departure from the port. If the vessel is leaving from a port within the GEOREP area, the SP should be sent prior to the vessel's departure from the port.The SP contains information necessary to initiate a plot and give the outline of the intended passage.
2. **Position Report (PR).—**Should be sent within 3 hours prior to the vessel entering the Georgian SAR zone. The PR contains information about the vessel's position within the GEOREP area and the course and speed of the vessel. This information is used to update the plot.
3. **Deviation Report (DR).—**Should be sent when the vessel's position varies more than 1 hour's sailing from the position that would be predicted from the SP or last PR (changing route, speed, etc.).
4. **Final Report (FR).—**Used to terminate participation in GEOREP. The FR should be sent upon arrival at a destination in the GEOREP area or when leaving the area covered by GEOREP. The GEOREP plot of a vessel ceases when the FR is sent.
5. **Dangerous Goods Report (DG).—**Required when an incident takes place involving the loss or likely loss overboard of packaged dangerous cargo, including those in freight containers, portable tanks, road and rail vehicles, and shipborne barges, into the sea.
6. **Harmful Substances Report (FR).—**Required when an incident takes place involving the discharge of the probable discharge of oil (Annex I of MARPOL 73/78) or noxious liquid substances in bulk (Annex II of MARPOL 73/78).
7. **Marine Pollutants Report (MP).—**Required in the case of loss overboard of harmful substances in package form, including those in freight containers, portable tanks, road and rail vehicles, and shipborne barges, identified in the International Maritime Dangerous Goods Code as marine pollutants (Annex III of MARPOL 73/78).

The format for all GEOREP messages is given in the accompanying table titled **GEOREP Message Formats**. It should be noted that the information required to be sent in the MP is not available at this time (2008).

If a vessel does not report at the indicated time, action will be taken to check the safety of the vessel. To avoid unnecessary search actions being taken, it is important that vessels report at the nominated reporting time each day and send their FR when leaving the GEOREP area. If the vessel is unable to pass a PR due to faulty radio equipment, all attempts should be made to pass the PR through other vessels, using VHF, or as soon as it arrives at a port.

Questions regarding GEOREP can be sent to the Maritime Transport Administration of Georgia, as follows:

Telephone:	995-222-73917
	995-222-73909
Facsimile:	995-222-73929
E-mail:	mtag@maradgeorgia.org or magheadof@fsc.gov.ge

GEOREP Message Formats

Identifier	Content	SP	PR	DR	FR	DGR	HS
A	Name, call sign, MMSI number, and flag—(for flag, use as defined in Lloyd's publications)	X	X	X	X	X	X

GEOREP Message Formats							
Iden-tifier	**Content**	**SP**	**PR**	**DR**	**FR**	**DGR**	**HS**
B	Time (UT (GMT))—(date and time of report 6 digits-day of month 2 digits; hour and minutes 4 digits). If other than UTC is used, state time zone used.	X	X	X	X	X	X
C	Latitude and longitude—(latitude is 5-digit group in degrees and minutes with N; longitude is 6-digit group in degrees and minutes E)	X	X	X	X	X[1]	X[1]
D	True bearing (3-digit group) and distance (state distance) in nautical miles from a clearly identified landmark (state landmark).						
E	Course—(true heading is a 3-digit group)	X	X	X			X
F	Speed—(knots and tenths of knots e.g. 155=15.5)	X	X	X			X
G	Port of departure—(name of last port of call)	X					
H	Date, time, and position of entry into the GEOREP area—(date and time as expressed in B; position as expressed in C)	X					
I	Destination and ETA—(port and ETA as expressed in B)	X					
K	Date, time, and position of departure from GEOREP area—date and time as expressed in B; position as expressed in C				X		
L	Route information in latitude/longitude should be given for each Way Point (WP) in the GEOREP area as expressed in C. The Way Points should be designated WP1, WP2, etc.	X		X			X
M	Radio communications—(Name(s) or call sign(s) of coast radio stations and frequencies guarded)	X				X	X
N	Time, as expressed in B, the next DR or PR will be sent	X	X	X			X
O	Draft, in meters and centimeters	X					
P	Cargo—(a brief description of cargo carried on board {e.g. Bulk Coal, General, chemicals, etc.})	X					
Q	Defects, damages, deficiencies, and other limitations—(brief details)					X	X
R	Brief details of type of pollution (oil, chemicals, etc.) or dangerous cargo lost overboard; position expressed as in C					X	X
S	Brief details of weather and sea conditions prevailing					X	X
T	Vessel's owner agent—(names and particulars)					X	X
U	Vessel size and type—(vessel's length, beam, gross tonnage, and type)	X				X	X
V	Medical personnel—(doctor, physician's assistant, nurse, or NIL)	X					
W	Persons—(State number of persons on board)	X					
X	Remarks—(Any other useful information)			X		X	X
A full stop "." should be used after each code (e.g. A.) and a space between each code. All reports should include the system identifier "GEOREP" and the code for the appropriate report (e.g. GEOREP SP). Vessels should only include those components listed above. Others may be included at the master's discretion if relevant to the type of report.							
X[1] Either C or D may be used.							

GERMANY

General	**235**
Buoyage System	**235**
Cautions	**236**
Currency	**236**
Firing Areas	**236**
Government	**237**
Holidays	**237**
Ice	**237**
Industries	**238**
Languages	**238**
Mined Areas	**238**
Navigational Information	**238**
Pilotage	**238**
Pollution	**239**
Regulations	**240**
Search and Rescue	**243**
Signals	**244**
Submarine Operating Areas	**245**
Time Zone	**246**
Traffic Separation Schemes	**246**
U.S. Embassy	**246**
Vessel Traffic Service	**246**
Appendix—AIS Coverage in the German Bight and the North Sea	**249**

General

Germany is located in Central Europe, bordering the Baltic and North Sea, between the Netherlands and Poland, S of Denmark.

The climate is temperate with cool, cloudy, wet winters and summers. There is an occasional warm tropical foehn wind and relative high humidity.

The terrain is lowlands in the N, uplands in the central portion, and the Bavarian Alps located in the S.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Prohibited areas are marked by yellow buoys, sometimes with a red cross, marked "Sperrgebiet."

Submarine cable buoys are painted yellow, are usually spherical, and marked with the letter "K" or word "Kabel" in white. Obstructions outside the buoyed channels are not normally marked.

Winter seamarks are the same color as the fair weather marks, however topmarks may be absent or replaced by bush brooms and straw wisps. Special purpose buoys are barrel-shaped in most cases, but other shapes may be used.

Anchorage buoys are painted red, and may carry a red cylindrical topmark, to mark the limit of an anchorage on the port hand side of a fairway.

The limit of an anchorage on the starboard side of a fairway is marked by black buoys, and may carry a black conical topmark.

The dangerous goods anchorage is marked by yellow buoys with the letter "P" in black.

Military prohibited areas are marked by white buoys with either a blue cross or a blue band, marked "Sperrgebiet," or "Warngebiet," respectively. Yellow buoys with a red cross mark all other prohibited areas.

Dumping grounds are marked by buoys painted yellow at the top and black at the lower part, and may carry a black flag.

In inshore waters, some aids may be withdrawn or altered during the winter, or when ice is forming or breaking up.

Lighted buoys may be replaced by unlighted buoys; unlighted buoys may be replaced by spar buoys or floating beacons. The replacements have the same charactaristics at the original buoyage but may be without topmarks. changes may be announced by Notice to Mariners. Buoyage may be damaged, displaced, or sunk if subject to heavy ice movement.

Fishing grounds are marked by blue buoys or unpainted poles, either of which may carry a yellow topmark in the shape of a fish.

Moored or fixed fishing nets are usually marked by flags, with two at the beginning and end of each line of nets and a single flag placed every sixth net. Towed nets are marked at the end of the last net by a white light. The outer end of a line of moored or fixed nets is also marked by a white light.

Cautions

High Speed Craft

High speed ferries operate in Die Ems between Emden (53°20'N., 7°11'E.) and Borkum (53°33'N., 6°45'E.).

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Firing Areas

North Sea and Baltic Firing Danger Areas have been established for the occasional use of the German Navy.

Local announcements of firing practice are made. Usually there is no obstruction to shipping. Firing may be carried out by day or at night when the visibility is good and the target area is clear. Patrol vessels may warn approaching vessels.

The danger areas in Kieler Bucht, Hohwachter Bucht, Todendorf, and Putlos should be avoided during firing exercises but vessels may pass through after permission has been granted by the Bundeswahr. Todendorf Naval Coast Radio Station transmits updated situation broadcasts concerning the danger areas on VHF channel 11 from Monday through Friday at 0730, 1100, and 1530; in exceptional cases, braodcasts will also be made on Saturday at 0730 and 1100. The station's broadcast will be announced 5 minutes in advance on VHF channel 16.

Gunnery, aerial bombing, and torpedo firing occur at various times and locations along the German coast. Shipping is forbidden, or otherwise subjected to special regulations within the firing area. When firing or aircraft exercises are in progress, lightships, signal stations, and patrol vessels in the vicinity display the following signals:

1. By day.—Flags BB vertically.
2. By night.—A red light above two white lights.

A vessel towing a target or targets for firing practice will display the following signals:

1. By day.—Two black cones, points down, in a vertical line.
2. By night.—In addition to the lights prescribed by the International Rules of the Road, two red lights above a white light in a vertical line.

If a vessel approaches the tow too closely, a flare will be shown on the towing vessel. Targets which are being towed at night when firing is not in progress display two white lights, one forward and the other aft, at the same elevation.

When firing is in progress, targets do not display lights. As targets may be towed as far as 1 mile astern of the towing vessel, a wide berth should be given to the tow.

A firing danger area is established N of Zingst and is occasionally closed to shipping. The approximate boundaries are:

a. 54°26.7'N, 12°44.6'E.
b. 54°30.2'N, 12°37.7'E.
c. 54°37.0'N, 12°37.7'E.
d. 54°37.0'N, 13°00.5'E.
e. 54°26.6'N, 12°59.5'E.

A military training area, marked by blue and white can buoys, established in Greifswalder Bodden is restricted to shipping. The approximate boundaries are:

a. 54°10.5'N, 13°47.7'E.
b. 54°11.4'N, 13°47.7'E.
c. 54°11.4'N, 13°50.0'E.
d. 54°10.6'N, 13°51.6'E.
e. 54°09.5'N, 13°51.9'E.
f. 54°09.3'N, 13°50.6'E.
g. 54°09.2'N, 13°49.3'E.

A torpedo excercise area, located NW of Helgoland, is bounded by lines joining the following positions:

a. 54°40'N, 7°13'E.
b. 54°40'N, 7°27'E.
c. 54°20'N, 7°27'E.
d. 54°20'N, 7°13'E.

Two firing practice areas are located NW of Oder Bank in the approaches to Greifswalder Bodden, as follows:

1. Area ED-D47A—bounded by lines joining the following positions:
   a. 55°39.5'N, 14°19.5'E.
   b. 55°39.2'N, 13°57.5'E.
   c. 55°37.8'N, 13°51.5'E.
   d. 55°27.3'N, 14°00.0'E.
   e. 55°27.3'N, 14°08.0'E.
   f. 55°21.0'N, 14°08.0'E.
   g. 55°21.0'N, 14°17.0'E.
2. Area ED-D47B—bounded by lines joining the following positions:
   a. 55°37.8'N, 13°51.5'E.
   b. 55°37.1'N, 13°50.0'E.
   c. 55°10.5'N, 13°58.5'E.
   d. 55°10.5'N, 13°15.5'E.
   e. 55°21.0'N, 14°17.0'E.
   f. 55°21.0'N, 13°05.5'E.

Area ED-D41A, a firing practice area located NW of Helgoland, is bounded by lines joining the following positions:

a. 54°55'01.8"N, 8°02'04.8"E.
b. 54°48'16.2"N, 8°11'43.2"E.
c. 54°44'00.0"N, 8°11'00.0"E.
d. 54°39'00.0"N, 8°12'00.0"E.
e. 54°29'43.2"N, 8°18'37.2"E.
f. 54°16'19.8"N, 7°53'00.0"E.
g. 54°15'30.0"N, 7°34'00.0"E.

Two firing practice areas are located North of the German Bight Western Approach Traffic Separation Scheme, as follows:

1. Area ED-D44—bounded by lines joining the following positions:

a. 54°40'00.0"N, 6°30'00.0"E.
b. 54°40'00.0"N, 7°00'00.0"E.
c. 54°15'00.0"N, 7°00'00.0"E.
d. 54°15'00.0"N, 6°30'00.0"E.

2. Area ED-D46—bounded by lines joining the following positions:
a. 55°00'00.0"N, 6°30'00.0"E.
b. 55°00'00.0"N, 7°15'00.0"E.
c. 55°10'00.0"N, 7°20'00.0"E.
d. 55°10'00.0"N, 7°50'00.0"E.
e. 55°00'00.0"N, 7°43'25.2"E.
f. 54°15'00.0"N, 7°13'36.0"E.
g. 54°40'00.0"N, 7°00'00.0"E.
h. 54°15'00.0"N, 7°00'00.0"E.
i. 54°40'00.0"N, 7°30'00.0"E.

Government

Flag of Germany

Germany is a federal republic. The country is divided into 16 states.

Germany is governed by a President who is elected by a Federal Convention to a 5-year term. The Chancellor is elected by the Federal Assembly to a 4-year term. The bicameral Parliament is composed of the 622-member Federal Assembly, directly elected through a combination of direct and proportional representation, serving 4-year terms, and the appointed 69-member Federal Council, consisting of three to six members from each state based on that state's population, serving terms based on each state's individual election cycle.

The legal system is based on German civil law.

The capital is Berlin.

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
Corpus Christi	Variable
October 3	German Unity Day
December 24	Christmas Eve
December 25	Christmas Day
December 26	Second Christmas Day
December 31	New Year's Eve

Ice

The Ice Service, which includes the Ice Breaking Service and Ice Reporting Service, assists vessels in German Baltic waters during ice operations. There are three Ice Service Centers (ISC) to assist vessels, as follows:

1. ISC Kiel-Holtenau covers the Kiel Canal. The section of ISC Kiel-Holtenau covering the area of the Kiel Canal from km 0.0 to km 49.5 can be contacted, as follows:
a. Call sign: Kiel Kanal 2
b. VHF: VHF channel 2
c. Telephone: 49-4852-885360
49-4852-885362
49-4852-885369 (after office hours)
d. Facsimile: 49-4852-885400
49-4852-885407 (after office hours)

The section of ISC Kiel-Holtenau covering the area of the Kiel Canal from km 49.5 to km 98.7 can be contacted, as follows:
a. Call sign: Kiel Kanal 3
b. VHF: VHF channel 3
c. Telephone: 49-431-3603480
49-431-3603482
49-431-3603483
49-4852-885469 (after office hours)
d. Facsimile: 49-431-3603296
49-4852-885407 (after office hours)
e. E-mail: verkehrszentrale.nok@wsv.bund.de

2. ISC Lubeck covers the western Baltic Sea from the Denmark/Germany border to Ob Buk Light at longitude 11°42'E. It can be contacted, as follows:
a. Call sign: Trave Traffic
Kiel Traffic
b. VHF: VHF channel 13 (Trave Traffic)
VHF channel 22 (Kiel Traffic)
c. Telephone: 49-451-6208360
49-451-6208362
49-4502-8475511 (after office hours)
d. Facsimile: 49-451-6208190
e. E-mail: wsa-luebeck@wsv.bund.de
vkz-trave.wsa-luebeck@wsv. bund.de

3. ISC Stralsund covers the western and southern Baltic Sea from Ob Buk Light at longitude 11°42'E to the Germany/Poland border. It can be contacted, as follows:
a. Call sign: Stralsund Traffic
Sassnitz Traffic
Warnemunde Traffic
b. VHF: VHF channel 67 (Stralsund Traffic)

VHF channel 13 (Sassnitz Traffic)
VHF channel 73 (Warnemunde Traffic)

c. Telephone: 49-3831-249360
49-3831-20671141 (after office hours)

d. Facsimile: 49-3831-206711451

e. E-mail: wsa-stralsund@wsv.bund.de
nvd@hast.wsd. nord.de

Requests for ice breaking assistance are normally directed to the appropriate ISC. Requests should contain the following information:

1. Vessel name.
2. Call sign.
3. Flag.
4. Size.
5. Ice class.
6. Engine power.
7. Position.
8. Destination.

During the voyage, vessels should follow the instructions given by the ISC. After the initial contact with the ISC or the icebreaker, vessels should maintain a continuous listening watch as directed.

Icebreakers can be contacted on VHF channels 6, 10, 16, or, by arrangement, on another channel. The icebreakers, and their call signs are, as follows:

1. Neuwerk (DBJM).
2. Arkona (DBBU).
3. Mellum (DBPG).
4. Scharhorn (DGOQ).

For information on obtaining general ice information for the Baltic Sea, see **Baltic Sea—Ice**.

Industries

The main industries include iron, steel, coal, cement, chemicals, machinery, vehicles, machine tools, electronics, food and beverages, shipbuilding, and textiles.

The main exports are machinery, vehicles, chemicals, metals, manufactured goods, foodstuffs, and textiles. The main export-trading partners are France, the United States, the United Kingdom, Italy, the Netherlands, Belgium, and Austria.

The main imports are machinery, vehicles, chemicals, foodstuffs, textiles, and metals. The main import-trading partners are France, the Netherlands, the United States, China, the United Kingdom, Italy, and Belgium.

Languages

German is the official language.

Mined Areas

Former NEMEDRI Danger Area No. 9 is an area in which danger due to mines laid between 1939 and 1945 still exists. For further information, see **North Sea and English Channel—Mined Areas**.

Navigational Information

Enroute Volumes

Pub. 192, Sailing Directions (Enroute) North Sea.

Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

Maritime Claims

The maritime territorial claims of Germany are, as follows:

Territorial Sea	12 miles. *
Fisheries or Economic Zone	200 miles. **
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines. A special claim extends the limit to include the deep water anchorage W of Helgoland. Territorial sea limits reduced in the following areas to retain a high seas corridor:

1. Kattegat.	5. Fehmarn Belt.
2. Northern and southern approaches to The Sound.	6. Kieler Bucht.
3. Samso Baelt.	7. Bornholmsgat.
4. Kadet Renden.	

** To defined coordinates.

Pilotage

German Bight Pilotage

Pilotage is compulsory, as follows:

1. Petroleum, gas, and chemical tankers with a length greater than 150m, or a beam greater than 23m, en route to or from the River Ems, the River Jade, the River Weser, or the River Elbe.
2. Bulk carriers, other than oil, gas, and chemical tankers, with a length greater than 220m, or a beam greater than 32m, en route to or from the River Elbe.
3. Bulk carriers, other than oil, gas, or chemical tankers, with a length greater than 250m, a beam greater than 40m, or a draft greater than 13.5m, en route to or from the River Weser or the River Jade.
4. Other vessels with a length greater than 350m, or a beam greater than 45m, en route to or from the River Jade, the River Weser, or the River Elbe.

Pilots must be requested 24 hours prior to arrival at the pilot boarding position or upon departure from the last port of call. further information concerning pilot boarding positions, pilotage request messages, ETA messages, and helicopter boarding procedures may be found in Pub. 192, Sailing Directions (Enroute) North Sea in Sector 8.

District Pilotage

District pilotage is compulsory, as follows:

1. Tankers carrying gas, chemicals, petroleum, or petroleum products in bulk.

2. Unloaded tankers if not cleaned, degassed, or completely inerted after carrying petroleum or petroleum products with a flashpoint below 35°C.
3. All vessels greater than 90m in length.
4. All vessels greater than 13m in beam.
5. Vessels with drafts greater than:
   a. 6.0m—Flensburger Forde and the River Ems.
   b. 8.0m—Kieler Forde and the River Jade.
   c. 8.0m—bound for Bremerhaven.
   d. 6.5m—bound for destinations above Bremerhaven and the River Elbe.

Pilots must be requested 12 hours before arrival at the pilot boarding position or upon departure from the last port of call. Further information may be found under the appropriate river in Sector 8 of Pub. 192, Sailing Directions (Enroute) North Sea.

Deep Sea Pilotage

Vessels requiring a licensed Deep Sea Pilot in the North Sea, the English Channel, or the Baltic Sea should send a request to the following Pilot Agencies through their port agents:

1. Die Elbe.
2. Die Weser.
3. Helgoland.
4. North Sea Pilot Association.

Requests for German Deep Sea Pilots should be made, as follows:

1. Vessels berthed in German North Sea ports.—6 to 8 hours before ETD.
2. Vessels berthed in Continental North Sea ports.—24 hours before ETD.
3. Vessels berthed in the United Kingdom, North Sea, and Channel ports.—48 hours before ETD.

Deep sea pilots may also be requested from pilotage organizations in other countries bordering these areas. Further information on Deep Sea Pilots may be found in **United Kingdom—Pilotage**.

Pilotage in Adverse Weather

In adverse weather conditions, when pilot vessels have been moved to more sheltered positions upriver, pilotage is compulsory from these positions to the original position of the pilot vessel for the following categories of vessels:

1. Vessels 170m long and over or with a beam of 28m and over, other than oil, gas, and chemical tankers, on the River Ems, the River Jade, the River Weser, and the River Elbe.
2. Car carriers and ro-ro vessels with a length of 140m and over or a beam of 23m and over, on the River Ems.

Miscellaneous

Tankers of all nationalities coming from sea and entering the territorial waters of the Federal Republic of Germany must complete a check list before the pilot starts his duties. This check list enables the pilot to satisfy himself about the condition of the ship and her equipment for safe operation, or in the case of deficiencies, to enable him to take these into account.

Two copies of the check list are required. One copy of the checklist is for the pilot to examine and send to the responsible authority, while the other is to be retained on board the ship. Failure to complete the check list correctly or to produce it upon request may result in a fine.

Pilot Vessels

A large SWATH vessel operates as a mothership at the outer pilot boarding position in Die Elbe. A smaller SWATH vessel may be used for direct transfers on vessels with a freeboard of more than 2 to 2.5m, depending on weather conditions. Both craft have red hulls marked with the word PILOT.

Elsewhere, German pilot vessels are conventional, with black hulls with the word LOTSE marked in white letters on both sides and a yellow funnel with a black top.

Helicopter Pilotage Operations

Wind direction on the location of landing/winching area must be considered when embarking or disembarking pilots by helicopter. Vessels should steer to keep the relative wind direction four points to starboard or port. A red and white windsock should be hoisted from a turbulence-free area where it can be clearly visible to the helicopter pilot. Vessels should adjust their course and speed to minimize rolling, pitching, and to prevent heavy sea sprays. Loose obstacles should be removed from the landing and winching area. Firefighting equipment must be kept on standby.

Oil, gas, and chemical tankers should take precautionary measures against flashpoint mishaps. Vessel personnel should be well-familiar with the safety guidelines for helicopter landings or winching operations over a vessel's deck.

Pollution

Pollution Reporting

All vessels navigating off the Baltic Sea and North Sea coasts of Germany are requested to report pollution and any accidents which could lead to such pollution. Reports of oil pollution should be sent to the Maritime Emergencies Reporting and Assessment Center (MERAC) through the nearest coast radio station. MLZ Cuxhaven is available 24 hours and will bear the cost of the message.

MLZ Cuxhaven can be contacted, as follows:

1. Telephone: 49-4721-567485
   49-4721-567392
2. Facsimile: 49-4721-554744
   49-4721-554745
3. E-mail: MLZ@havariekommando.de

Low Sulpher Fuel—Reporting Requirements

In connection with reducing sulpher emissions, ships using different marine fuels are only allowed to call at a German port if the following entries regarding fuel changeover operations have been correctly entered in the ship's log book:

1. Quantity of low-sulpher marine fuel (less than or equal to 1.5 per cent by mass) in each tank.
2. Date, time, and position of each fuel changeover operation.

The master shall ensure that this changeover operation occurs early enough to ensure that upon entering the sulpher oxide (SO_x) control area (North Sea or Baltic Sea), the fuel oil system has been fully flushed of any residues of marine fuel which do not have a low sulpher content.

The master shall ensure the contact point at the German port-of-call of the log book entry not less than 24 hours prior to arrival or, if the voyage is less than 24 hours, not later than the departure time from the previous port. In circumstances where

the destination port is not known until less than 24 hours prior to arrival, the report is to be made as soon as the information becomes available.

If the fuel changeover occurs at a later time than required above, the master shall make the log book entry immediately afterwards and report the entry without delay.

The reporting requirements do not apply to the following vessels:

1. Vessels employed in government non-commercial purposes, including service and scientific research vessels, as well as vessels engaged in pilot-transfer services.
2. Warships and state-owned vessels not engaged in commercial purposes.
3. Vessels with a hull length not exceeding 45m.

For further information on Sulpher Emissions Control Areas, see **North Atlantic Ocean—Pollution**.

MARPOL Special Area

The Baltic Sea, including the Gulf of Bothnia and the Gulf of Finland, has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

This Special Area is under intensive surveillance for pollution and violations of traffic rules. Further information on pollution reporting can be found in **Baltic Sea—Pollution—Pollution Reporting**.

Regulations

General

Before navigating German waterways all vessels required to report to waterway authorities should contact the appropriate authority by VHF stating name, position, dimensions, and destination.

When navigating German waterways all vessels required to report to waterway authorities should report at each listed reporting point stating the following:

1. Name.
2. Position.
3. Speed.
4. Time of passing reporting point.

All vessels required to report must maintain continuous listening watch on VHF channel 16, or other channel as required by the River and Shipping Police, commencing at the time of the first report.

Seeschiffahrtstrassen-Ordnung (SeeSchStrO) (English translation—*Traffic Regulations for Navigable Waterways*) are regulations which are in force in the waters of the Federal Republic of Germany. Vessels should have a copy of this document on board. An English version of this publication is available in PDF from the BSH (German hydrographic office) website (http://www.bsh.de) using the link "Seeverkehrsvorschriften" and then the link "englische Fassung."

It should be noted that within German coastal waters extending out to the 3-mile limit and within buoyed fairways extending out as far as the 12-mile limit, *Seeschiffahrtstrassen-Ordnung (SeeSchStrO)* includes some rules that differ from the COLREGS 1972. In particular, it should be noted that a vessel which is proceeding along the course of the fairway channel, irrespective of whether or not the vessel can safely navigate only within the fairway channel, shall have the right-of-way over vessels entering the fairway, vessels crossing the fairway, vessels making turns in the fairway, or vessels leaving their anchorage or mooring.

A right-of-way vessel is one which is obliged by its draft, length, or other characteristic to keep to the deepest part of the fairway.

Traffic regulations (other than in Der Nord-Ostsee Kanal) include the following:

1. Vessels are normally to navigate on the right of the fairway. In specified places mentioned in the text, certain vessels, including right-of-way vessels, are authorized to navigate on the left.
2. Overtaking is normally on the left. If the cooperation of the overtaken vessel is required, sound signals should be made. Overtaking is prohibited at narrow places, near chain ferries, etc.
3. Vessels meeting normally give way to the right. On meeting, right-of-way vessels and certain other hampered vessels have the right of way. On meeting at a narrow place, including a narrow bridge or flood barrage opening, the vessel which is proceeding with the stream or current has the right of way.
4. Anchoring is prohibited in the fairway, except in designated roadsteads, in narrow places, within 0.15 mile of wrecks, obstructions etc., or in poor visibility, of an overhead cable.
5. The prior approval, to be sought in good time, of the appropriate navigation authority is required for certain unusual operations or passages, including the passage of, nuclear-powered vessels, and extraordinarily large vessels.
6. Especially dangerous cargoes, where referred to in the text, include most explosives, gases and inflammable liquids.
7. Designated Transhipment Roadsteads are located within the waterways of this nation, many of which handle dangerous cargo. Special regulations are in force for such roadsteads, for which the local authorities should be consulted.
8. During periods of reduced visibility, tank vessels of specific cargo capacity may be prohibited from entering a waterway.
9. Speed restrictions may apply to vessels when in some portions of the waterway.

International Ship and Port Facility (ISPS) Code

The ISPS Code applies to ships on international voyages and port facilities directly interfacing with these ships. The following information must be sent at least 24 hours prior to arrival:

1. Vessel name, flag, type, IMO number, call sign.
2. Confirmation that the vessel possesses a valid International Ship Security Certificate (ISSC), including the issue date and the expiration date, and the name of the issuing authority.
3. Security level ship is currently operating at.
4. Destination port in Germany, including the facility name and the ETA at the destination port in Germany.
5. Name, country, and security level of the last ten port facilities where the vessel has conducted a ship/port interface.

6. Any special or additional measures that were taken by the vessel in any of the last ten port facilities where it has conducted a ship/port interface.
7. Confirmation that appropriate ship security procedures were maintained by the vessel during any ship-to-ship activities during the period covered by its last ten calls at port facilities.
8. Port facilities of the port of destination.

If the passage time from the previous port of call is less than 24 hours, the required information should be sent upon departure from the previous port of call. If the port of call is not known or if the port of call changes during the voyage, the required information should be sent as soon as the port of call becomes known.

The is information should be sent to the Point of Contact at the Maritime Security Center at Cuxhaven using one of the following methods:

1. E-mail: poc.germany@point-of-contact.de
2. Facsimile: 49-47-21-39-48-52

Germany—Maritime Security Report
http://www.bsh.de/en/Maritime%20shipping/Commercial%20shipping/Maritime%20security/FurtherInformations.jsl
Scroll to bottom of the page and click on the link titled "security report."

Territorial Sea/Pollution Enforcement

The federal government of Germany has decreed that "the territorial sea of the Federal Republic of Germany shall be extended in the North Sea to enable appropriate action to be taken against the risk of tanker casualties and of pollution by oil of the sea and the coast of the German Bight."

The area of extension is in the vicinity of Helgoland in the German Bight; the outer limits of the extension area of the territorial sea may be best seen on the chart.

Special shipping police regulations have been put into force in the extension area and are stated below.

By derogation from the provisions of Rule 18(d) of the International Regulations for Preventing Collisions at Sea any vessel, other than a vessel not under command, navigating in the area of extension of the territorial sea in the German Bight shall, irrespective of the circumstances of the case, avoid impeding the safe passage of a vessel constrained by its draft and shall take avoiding action in ample time. This provision shall apply in particular, to any vessel approaching a vessel constrained by its draft so as to involve risk of collision.

In practice this provision means, especially for vessels heading E in the Off Terschelling and in the German Bight TSS, that they must not in any way impede those large vessels, especially tankers, which are heading from the German Bight Western Approach TSS towards the River Jade, the River Weser, or the River Elbe and which, on account of their draft, have reached the point of no return even before passing the Off Terschelling and in the German Bight TSS and which, after consultation with the pilots, are exhibiting the signals of Rule 28 of the International Regulations for Preventing Collisions at Sea.

The restricted obligation in Rule 18(d) of the Collision Regulations not to impede the safe passage of vessels constrained by their draft has thus been replaced, as far as the area of extension of the territorial sea is concerned, by the clear, unambiguous, and unrestricted obligation not to impede the safe passage of vessels constrained by their draft.

This provision shall apply irrespective of visibility conditions. Therefore, information on any movements of vessels constrained by their draft will be broadcast in good time by the coast radio station "German Bight Traffic" to all vessels navigating in the area of extension of the territorial sea.

These safety broadcasts will be announced at 15 minute intervals on VHF channel 16 and transmitted on VHF channels 80 and 79 immediately following the situation report. As soon as vessels have been informed through such safety broadcasts of the position of vessels constrained by their draft, they shall take avoiding action as prescribed above.

All vessels of a length exceeding 50m, including pushed and towed units, shall be subject to compulsory reporting to shipping police authorities before entering into, and when sailing in, the area of extension of the territorial sea of the Federal Republic of Germany in the North Sea. This regulation in no way affects the obligation of vessels to report to the shipping police authorities before entering onto, and when sailing on, the River Ems, the River Jade, the River Weser, the River Hunte, the River Elbe, or on the Kiel Canal.

In good time before any such vessel enters into the area of extension of the territorial sea, the vessel's name, position, dimensions, and port of destination shall be communicated to the coast radio station "Deutsche Bucht Revier Radio" on VHF channel 80 when the vessel in question passes any one of the following positions:

1. In the case of a vessel proceeding in the German Bight Western Approach TSS in an E direction, when passing TG7 Lighted Buoy.
2. In the case of a vessel proceeding in the Off Terschelling and in the German Bight TSS or in the associated inshore traffic zone in an E direction, when passing the separation scheme German Bight Western Approach TSS in an E direction, when passing TG7 Lighted Buoy.
3. In the case of a vessel enroute from N and heading for a position anywhere between German Bight Lightvessel and Helgoland, when passing 54°20'N.

While any such vessel is sailing in the area of extension of the territorial sea, the vessel's name, position, cruising speed, and time of passage shall be communicated to the coast radio station "Deutsche Bucht Revier Radio" on VHF channel 80 when the vessel in question passes any one of the following positions:

1. In the case of a vessel proceeding in the German Bight Western Approach TSS in an E direction, when passing GW 9 Lighted Buoy.
2. In the case of a vessel proceeding in the traffic separation scheme Off Terschelling and in the German Bight TSS or in the associated inshore traffic zone in an E direction, when passing TG17 Lighted Buoy.
3. In the case of a vessel outbound from River Weser, when passing No. 1 Lighted Buoy (Neue Weser Fairway), or A1 Lighted Buoy (Alte Weser Fairway).
4. In the case of a vessel outbound from River Elbe and proceeding in a W direction, when passing a line connecting Helgoland Light and Nordergrunde N Lighted Buoy.

While vessels are sailing in the area of extension of the territorial sea, they shall remain constantly available for radio con-

tact by the coast radio station "German Bight Traffic" on VHF channel 80 or VHF channel 16, even after they have dispatched their reports under the provisions of paragraph 2 or 3 above.

During maneuvers, exercises, or for other causes, the entrance of vessels into river mouths and harbors, as well as departure therefrom, may depend on special conditions or may be entirely prohibited. In such cases a warning signal, consisting of three red balls by day, and three red lights, disposed vertically at night, will be shown from conspicuous positions.

Similar signals will be shown by patrol vessels, which, under certain circumstances, will also carry the pilot flag.

All vessels wishing to enter or leave German territorial waters must, on observing the warning signal, fly the pilot flag and await the arrival of the patrol or pilot vessel. Further instructions can be obtained from the patrol vessel. Should the warning signal be made at night, it is advisable to anchor outside the German territorial limits or remain in harbor.

If hailed by, or if a gun is fired from, the patrol vessel all vessels in sight must immediately stop or heave-to.

Vessels must submit to an examination when required.

The patrol or pilot vessel will give full particulars as to the following:

1. Whether a special examination service is in force, and where it takes place.
2. Whether, and for how long, the harbor entrance or river mouth is closed.
3. Whether special regulations are in force for the navigation of a particular waterway.

Outbound vessels will be given the aforementioned information, or their examination will be carried out in the harbor, according to circumstances.

Dangerous or Polluting Cargo Pre-entry Report

Vessels carrying packaged or bulk dangerous or polluting cargo, are required to submit a Pre-entry Report to the Central Reporting Point (Zentrale Meldestelle) via the web site at Cuxhaven (http://www.zmgs.de) or through authorized agencies in the following circumstances:

1. When the vessel comes from a port outside the European Union and next calls at a port, berth, or anchorage in Germany.
2. When a vessel leaves a German port.

The report must contain the information as listed in the tabled titled **Pre-Entry Report**.

Pre-Entry Report	
Designator	**Information Required**
A	Vessel's name, type, flag, and call sign or IMO number.
U	Length (in meters), beam (in decimeters), and draft (in decimeters) upon arrival in German waters or upon departure from a German port.
I	ETA at port of destination in Germany or ETD from a German port.
L	Intended route.
P	Correct technical names, quantities, and locations of the dangerous or polluting cargo, with UN numbers and classes according to IMDG, IBC, or ICG Codes (INF code for radioactive material) and, if in portable tanks or containers, their identification marks. A corresponding list is kept on the bridge or in the master control room.
W	Number of persons on board.

When a vessel bound for or leaving the internal waters of Germany is involved in a marine casualty or in any other incident or circumstances from which actual damage to the German coatal area arises or may arise, the vessel's master shall forward the information on the marine casualty, incident, or circumstances, completed with the designators listed in the table above, to the Central Reporting Point. The requirement to forward this information under Designator P shall be considered fulfilled if the master indicated which authority of a Member State of the European Union is holding this information.

Nature Reserves

The North Sea coast of the Federal Republic of Germany, including large areas of the shallower channels and drying flats off, and inshore of, the German Frisian Islands, is designated a National Park. Entry and activities within the park are controlled. As a general rule, entry into the unpopulated areas is prohibited. Mariners should consult the German authorities for details.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The 72-hour report shall be sent, as follows:

Mail	BG Verkehr, Port State Control
	Reimerstwiete 2
	20457 Hamburg
	Germany
Telephone	49-40-36137295
Facsimile	49-40-36137295
E-mail	psc@bg-verkehr.de

The 24-hour report shall be sent through the following web site:

Central German Reporting System Home Page

http://www.zmgs.de

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Recommendation on Baltic Sea Navigation

The IMO has issued recommendations regarding vessel transits of the entrances to the Baltic Sea. For further information, see **Baltic Sea—Regulations**.

Particularly Sensitive Sea Areas (PSSA)

The Wadden Sea and adjacent parts of the North Sea in the common Wadden Sea area of Denmark, Germany, and the Netherlands were granted (2002) the status of PSSA by the International Maritime Organization. For further information, see **North Sea and English Channel Sea—Regulations**.

The Baltic Sea area of Sweden, Denmark, Finland, Estonia, Lithuania, Latvia, Poland, and Germany (except for waters under Russian jurisdiction) has been declared by the IMO to be a PSSA.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

Advance notification requirements for certain vessels

The following vessels are subject to additional advance notification requirements:

1. Gas and chemical tankers older than 10 years of age.
2. Bulk carriers older than 12 years of age.
3. Oil tankers over 3,000 gross tons and older than 15 years of age.
4. Passenger vessels, other than ro-ro ferries and high speed passenger craft, older than 15 years of age

The advance notification shall be sent at least 3 days prior to the ETA at the port. If the voyage from the previous port is expected to take less than 3 days, the advance notification shall be sent prior to leaving the previous port.

The advance notification shall be submitted to See-Berufsgenossenschaft by one of the following methods:

1.	Mail:	See-Berufsgenossenschaft Reimerstweite 2 20457 Hamburg
2.	Facsimile:	49-40-36-13-72-95
3.	E-mail	psc-germany@see-bg.de

The advance notification shall contain the following information:

1. Vessel name.
2. Flag.
3. IMO number.
4. Deasdweight tons.
5. Date of construction of the vessel, as determined by the date indicated in the vessel's safety certificates.
6. For tankers:
   a. Configuration (single hull, single hull with segregated ballast tanks, double hull).
   b. Condition of the cargo and ballast tanks (full, empty, inerted).
   c. Volume and type of cargo.
7. ETA at the port.
8. Planned duration of the port call.
9. Planned operations at the port of destination (loading, unloading, other).
10. Planned statutory survey inspections and substantial maintenance/repair work to be conducted in the port of destination.

Tanker Regulations

Single hull tankers over 5,000 dwt carrying or transporting fuel oils are prohibited from entering the territorial waters of Germany.

Search and Rescue

The German Sea Rescue Service (GSRS) is responsible for coordinating search and rescue operations and is supported by search and rescue units of the German navy. The Maritime Rescue Coordination Center in Bremen maintains a continuous listening watch on VHF channel 16 and VHF channel 70 for distress traffic and can be contacted, as follows:

1. Call sign:Bremen Rescue Radio
2. Telephone: 49-421-536870
3. Facsimile: 49-421-5368714
4. E-mail: mail@mrcc-bremen.de

Rescue craft on the Baltic Sea coast are maintained at the following locations:

1. Sassnitz (54°31'N., 13°38'E.).
2. Glowe (54°34'N., 13°28'E.).
3. Greifswalder Oie (54°15'N., 13°15'E.).
4. Lauterbach (54°20'N., 13°30'E.).
5. Stralsund (54°19'N., 13°06'E.).
6. Freest (54°08'N., 13°44'E.).
7. Zinnowitz (54°05'N., 13°55'E.).
8. Ueckermunde (54°44'N., 14°04'E.).
9. Langballigau (54°39'N., 9°39'E.).
10. Gelting (54°45'N., 9°53'E.).
11. Maasholm (54°41'N., 9°59'E.).
12. Schleswig (54°31'N., 9°34'E.).
13. Damp (54°35N., 10°02'E.).
14. Eckernforde (54°28'N., 9°51'E.).
15. Schilksee (54°26'N., 10°10'E.).
16. Laboe (54°24'N., 10°13'E.).
17. Lippe (54°20'N., 10°39'E.).
18. Heiligenhafen (54°23'N., 10°59'E.).
19. Puttgarden (54°30'N., 11°14'E.).
20. Fehmarn/Grobenbrode (54°30'N., 11°30'E.).
21. Neustadt (54°06'N., 10°49'E.).
22. Gromitz (54°09'N., 10°58'E.).
23. Travemunde (53°58'N., 10°53'E.).
24. Timmendorf Poel (53°59'N., 11°23'E.).
25. Kuhlungsborn (54°09'N., 11°47'E.).

26. Warnemunde (54°11'N., 12°05'E.).
27. Wustro (54°20'N., 12°24'E.).
28. Darber Ort (54°28'N., 12°31'E.).
29. Zingst (54°26'N., 12°41'E.).
30. Stralsund (54°19'N., 13°06'E.).
31. Kloster/Vitte Hiddensee (54°35'N., 13°07'E.).
32. Breege (54°37'N., 13°21'E.).

Rescue craft on the North Sea coast are maintained at the following locations:

1. * Hafen von Borkum (53°33'N., 6°45'E.).
2. Juist (53°41'N., 7°00'E.).
3. Hafen von Norddeich (53°37'N., 7°10'E.).
4. * Hafen von Norderney (53°42'N., 7°10'E.).
5. Baltrum (53°44'N., 7°24'E.).
6. * Hafen von Langeoog (53°43'N., 7°30'E.).
7. Neuharlingerseil (53°42'N., 7°42'E.).
8. Wangerooge (53°46'N., 7°52'E.).
9. * Helgoland (54°11'N., 7°53'E.).
10. Wangersiel (53°41'N., 8°02'E.).
11. * Hooksiel (53°38'N., 8°02'E.).
12. Wilhelmshaven (53°32'N., 8°08'E.).
13. Fedderwardersiel (53°36'N., 8°21'E.).
14. * Bremerhaven (53°33'N., 8°35'E.).
15. * Cuxhaven (53°52'N., 8°43'E.).
16. Brunsbuttel (53°54'N., 9°09'E.).
17. * Busum (54°08'N., 8°52'E.).
18. Eiderdamm (54°16'N., 8°51'E.).
19. * Nordstrannd (54°30'N., 8°49'E.).
20. * Hafen von Amrum (54°38'N., 8°23'E.).
21. Hafen von Hornum (54°45'N., 8°18'E.).
22. Westerland (54°55'N., 8°19'E.).
23. * List (55°01'N., 8°26'E.).

* These locations have permantnetly-manned rescue cruisers capable of speeds of 20 to 26 knots. Other locations have rescue boats and secondary craft, capable of speeds of 8 to 20 knots, that are manned as and when required.

Signals

Vessels entering German waterways should have on board a copy of *New Traffic Regulations on German Waterways for Seagoing Vessels*. Some of the more important signals from these regulations are described below.

The new traffic signs are mostly self-evident; those prohibiting anything consist of white rectangular daymarks with a red border. The prohibited item is shown as a black symbol crossed by a red diagonal stripe. A bollard or letter P indicates that mooring is prohibited.

The signals indicating that a channel is closed are, as follows:

1. Day signals:
   a. One black ball over two black cones, points together, vertically disposed.
   b. A red rectangular daymark with a horizontal white band.
2. Night signal—One red light over one green light over one white light, vertically disposed.

The signals to be used when vessels must navigate slowly to prevent wake damage are, as follows:

1. Day signal—One red cylinder displayed vertically.
2. Night signal—One red light between two white lights, vertically disposed.

In the event of an obstruction in the fairways of German waters, the following signals will be shown in the vicinity:

1. By day.—Two black balls over a cone, point down, vertically disposed.
2. By night.—Two red lights over a green light, vertically disposed.

In the event of a long-term closure of a German waterway, the following signals will be shown in the vicinity:

1. By day.—One black ball over two cones, points together, vertically disposed.
2. By night.—One red light over one green light over one white light, vertically disposed.

The L flag from the International Code, or that letter in Morse Code sounded by a local authority craft, indicates that the vessel addressed should stop.

The passage to be used through bridges is indicated by one or two yellow diamond daymarks close together, or its limits are marked by diamond daymarks painted red and white vertically, the outer halves being red.

Pilot signals are in accordance with the International Code of Signals.

Vessels show the flag of the Federal Republic of Germany and a rectangular green flag by day; by night they show four green vertical lights in addition to the lights prescribed by the International Rules of the Road.

Quarantine signals are as provided in the International Code of Signals. In addition, at night a red light over a white light signifies "I have not received pratique." These two lights must be at least 2m apart and visible all around the horizon. This signal may be set only inside the harbor limits.

Visual and sound signals involving movable bridges, locks, and flood barrages are given in the table titled **Germany—Signals Involving Movable Bridges, Locks, and Flood Barrages**.

A fire alarm is a steady tone on the siren for 1 minute interrupted twice.

A disaster alarm is a twice interrupted steady tone on the siren of 1 minute, then steady tone of 1 minute after a pause of 12 seconds.

Germany—Signals Involving Movable Bridges, Locks, and Flood Barrages

Visual Signals		Sound Signals	
Signal	**Meaning**	**Signal**	**Meaning**
Two red lights, horizontally disposed	Passage or entry prohibited	. . . .	Passage or entry temporarily prohibited

Germany—Signals Involving Movable Bridges, Locks, and Flood Barrages			
Visual Signals		Sound Signals	
Signal	Meaning	Signal	Meaning
Two red lights, horizontally disposed, with one white light over the leftmost red light	Passage or entry permitted provided there is sufficient clearance and awareness of oncoming traffic	— —	Request to open bridge or lock or to raise bridge to first step
One green light	Exit from lock permitted	— — .	Request to raise lift bridge to its full extent.
Two green lights, horizontally disposed, with one white light over the leftmost green light	Passage or entry permitted but beware of oncoming traffic	— — . —	Vessels proceeding seaward may pass or enter
One red light	Prepare to pass or enter; exit from lock prohibited	— — . . —	Vessels proceeding inwards may pass or enter
Two white lights, vertically disposed, over two red lights, vertically disposed	Lift bridge is at first lift position and may be passed by vessels for which the vertical clearance is safe	— — — (sounded twice)	Channel is closed
Two green lights, horizontally disposed	Passage or entry permitted; oncoming traffic stopped		
Two red lights, vertically disposed	Bridge, lock, or flood barrage closed to navigation		

In order to indicate that distress signals made by a ship or aircraft have been seen, and that help is coming, by day the flag of the Society for Saving Shipwrecked Persons will be displayed at the flagstaff on the lifesaving station, and, if the station is concealed from view, a signal bomb, which will rise to a height of about 150m and then detonate, will be fired on the shore. This signal can also be used at night, together with the general night signal, made by firing a light rocket.

Further, the lifeboats, when proceeding by day to a ship in distress, will from time to time fire white rockets and/or white stars, and, in addition, will, at night, burn white flares.

German coastal signal stations and light vessels answer distress signals at sea, when observed, as follows:

1. By day.—Suitable flag signals from the International Code of Signals.
2. By night.—Five white light balls fired at intervals of about 1 minute. In case of necessity, this signal will be repeated.

Visual storm warning signals are not used.

Submarine Operating Areas

German Submarine Operating Areas are located in the North Sea (off Deutsche Bucht) and in the Baltic Sea off Flensburger Forde (North Surface Area) and Eckernforder Bucht (South Surface Area); for limits see the charts. Ships and fishing vessels are requested to use extreme caution when vessels are operating in these areas. Submarines of the German Navy show the following lights when proceeding on the surface:

1. A blue light at the bow, visible all round for a distance of 1 mile.
2. A white light at the masthead, visible from right ahead to two points abaft the beam on either side for a distance of 5 miles.
3. On the starboard side two green lights and on the port side two red lights, disposed vertically, respectively, and visible in accordance with the rules governing the exhibition of side lights.
4. A stern light as laid down in the Rules for Preventing Collisions at Sea.
5. An all round orange light, showing about 100 flashes per minute, visible for at least 3 miles.

Submarines are usually not in a position to carry their running lights in the prescribed order and height. Since the lights are attached close together at the conning tower and the second masthead light often is missing, the danger arises that a submarine surfaced will be taken at night for a much smaller vessel, and accordingly, its speed will also be underestimated. Submarines require special attention during their surfacing.

It is possible that a surfacing submarine is not completely able to maneuver, and also is not in a position to show immediately the signals prescribed for ships unable to maneuver. Many submarines announce their surfacing by signalling with smoke candles or flares, some also use a searchlight, with which they cast rays on the water surface from below.

Submerged submarines are often accompanied by other vessels, which call attention to the exercises below the surface with the international signal “NE 2.” Vessels so marked should be avoided as far away as possible. If one should be forced to approach such a vessel, nevertheless, it must be done at slow speed. The escort vessel will point out the danger zone with flags or megaphone. A sharp lookout must be kept for peri-

scopes. When submarines dive so far below that they cannot show the periscope any longer, they announce their position occasionally with a smoke candle, which develops a strong smoke track when it reaches the water surface.

German sunken submarines which can no longer surface under their own power, need immediate assistance and identify themselves, if possible, with the following signals:

1. By rising marker buoys which are attached to the submarine with a wire.
2. By shooting off signals, which give off white or yellow smoke or flames on the water surface (during the day yellow smoke signals are used, if possible).
3. By pumping out fuel oil or engine oil.
4. By releasing air.

When such signals are observed and especially when a marker buoy is sighted, it should be reported immediately by the most expedient means, giving, if possible, in that connection, the name or nationality of the submarine, if the marker buoy carries such an indication. The most accurate possible ship's position is important at that juncture. If one finds that the marker buoy is drifting and is no longer attached to the submarine, this must be added to the report.

With water depths of more than 200m, one can assume that a sighted marker buoy is drifting, since the buoy wire is usually not longer; with lesser depths one can observe it by carefully hauling up the wire.

Care must be taken not to break the buoy wire, and one must not make fast any vessel to the buoy or to the wire. A drifting marker buoy may also have detached itself from a submarine during the voyage and therefore does not point to an accident in every case. As long as no rescue vessel has arrived at a sunken submarine, every other vessel can contribute to the rescue of the submarine crew and should not, if possible, leave the scene of the accident. Since the living conditions quickly deteriorate in a sunken submarine, the crew may be forced to abandon the submarine before the arrival of the rescue vessels.

One should therefore stay at such a distance from the scene of the wreck that one does not impede the vertically ascending survivors, and keep a boat clear for rescuing them. In most cases, the survivors require medical assistance and pressure chambers, which must be prepared or called in, as far as possible. To notify the submarine crew of the presence of an assisting vessel, very small detonators are employed, however, only at a minimum distance of 0.25 mile from the submarine, so that persons leaving the submarine and rising in the water, will not be injured.

One can also knock vigorously against the ship's hull below the water line with a hard object, or switch on the echo sounding machines. These signals should be repeated from time to time and may possibly be answered by the submarine by releasing pyrotechnics, which develop flares or smoke on the water surface. Most submarines are equipped with two marker buoys, of which one is attached forward, the other aft. In many cases, the marker buoys are provided with a quick flashing light or with a telescope aerial and an automatic emergency transmitter.

Besides these marker buoys, there are long cylindrical buoys with telescope aerials, which are dropped by airplanes and serve as sonic buoys for tracking down submarines. They should not be confused with the marker buoys.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is observed from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Germany are, as follows:

1. **The North Sea**
   a. German Bight Western Approach. (IMO adopted)
   b. Approaches to the River Elbe. (IMO adopted)
   c. Approaches to the River Jade. (IMO adopted)
   d. Terschelling—German Bight. (IMO adopted)
   e. East Friesland. (IMO adopted)
2. **The Baltic Sea**
   a. Off Kiel Lighthouse. (IMO adopted)
   b. South of Gedser. (IMO adopted)
   c. North of Rugen. (IMO adopted)

U.S. Embassy

The U.S. Embassy is situated at Pariser Platz 2, at the intersection of Behrenstrasse and Ebertstrasse.

The mailing addresses are, as follows:

1. Germany address—
   Clayallee 170
   14195, Berlin
2. U. S. address—
   PSC 120, Box 1000
   APO AE (09265)

U. S. Embassy Germany Home Page
http://germany.usembassy.gov

Vessel Traffic Service

Vessel Traffic Services provide regulatory measures to control traffic flow to prevent accidents and/or threat to the environment, by providing information, warnings, advice, or instruction. The fact that a VTS is in operation in a given area shall not relieve that master of the duty to comply with the provisions of the Collision Regulations and, while navigating in the area of German jurisdiction, to comply with any supplementary national rules and regulations as may be applicable.

While within an area covered by a VTS, a continuous listening watch on the appropriate VHF channels must be main-

tained.

Germany—Vessel Traffic Services	
VTS	**Remarks**
Inner Deutsche Bucht (German Bight)	For further information, see Pub. 192, Sailing Directions (Enroute) North Sea.
Jade	
Ems	
Weser and Hunte	
Elbe	
Kiel Canal West	
Kiel Canal East	For further informations, see Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).
Travenmunde/Lubeck	
Wismar	
Warnemunde/Rostock	
Stralsund	
Sassnitz/Mukran	
Wolgast	

There are four types of reports which must be sent when operating in a German VTS area, as follows:

1. **Sailing Plan (SP).—**An SP must be sent before entering a VTS area or before leaving a berth within a VTS area by the following vessels:
   a. Vessels 50m long and over, including pushed or towed composite vessels.
   b. Vessels carrying bulk dangerous cargo (gas, chemicals, petroleum, or petroleum products).
   c. Nuclear-powered vessels.

   The SP must contain the following information:

Designator	Information Required
A	Vessel name and call sign.
D	Position.
U	Length (in meters), beam (in decimeters), and type.
O	Draft (in decimeters).
G	Port of departure.
I	Port of destination.
P	Indication if liquefied gases, chemicals, petroleum, or petroleum products are or were carried in bulk. If yes, type, quantity, and UN number and whether tanks are uncleaned or completely inerted.
Q	Deficiencies or restrictions on maneuverability.
T	Name of vessel's owner or agents.

2. **Position Report (PR).—**A PR must be sent when passing certain Reporting Points in the VTS area. The PR must contain the following information:

Designator	Information Required
A	Vessel name and call sign.
B	Time of report (local time in four digits).
D	Position.
F	Speed.

3. **Deviation Report (DR).—**A DR must be sent by vessels changing their SP.
4. **Incident Report (IR).—**An IR must be sent by vessels when an accident impairs safety or the environment.

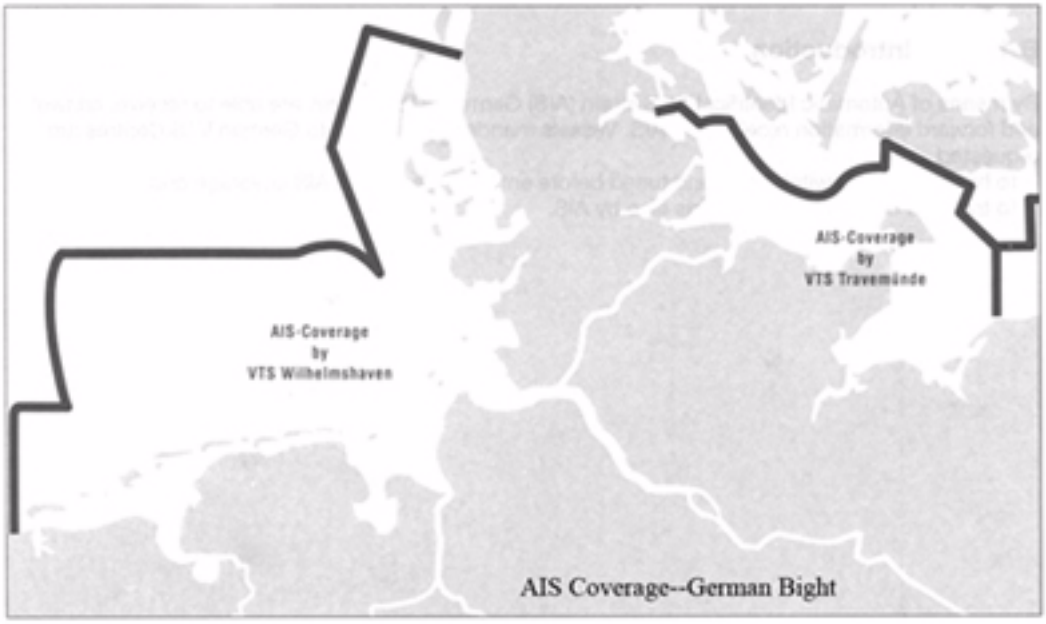
AIS Reporting

German VTS Centers are able to receive, answer, and forward information received by Automatic identifdications Systems (AIS). Vessels required to submit mandatory reports to German VTS Centers are requested to:

1. Have their AIS switched on and tuned before entering the area of German AIS coverage.
2. Transmit the mandatory reports by AIS.

The charlets titled **AIS Coverage—German Bight** and **AIS Coverage—Baltic Sea** in the Appendix show the general boundaries of German AIS coverage.

Appendix—AIS Coverage in the German Bight and the North Sea



GIBRALTAR

General	**251**
Buoyage System	**251**
Cautions	**251**
Currency	**251**
Firing Areas	**251**
Government	**251**
Holidays	**252**
Industries	**252**
Languages	**252**
Navigational Information	**252**
Pilotage	**252**
Regulations	**252**
Search and Rescue	**252**
Signals	**252**
Submarine Operating Areas	**253**
Time Zone	**253**
U.S. Embassy	**253**
Vessel Traffic Service	**253**

General

Gibraltar is located in southwestern Europe, bordering the Strait of Gibraltar, which links the Mediterranean Sea and the North Atlantic Ocean, on the S coast of Spain.

The climate is Mediterranean, with mild winters and warm summers.

The terrain is a narrow coastal lowlands bordering the Rock.of Gibraltar.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

In the E approaches to the Strait of Gibraltar, tide rips have been reported to occur under certain weather conditions during a W current. These tide rips, which have been detected on radar, may be up to 4 miles long.

Currency

The official unit of currency is the Gibraltar pound, consisting of 100 pence. The British pound is also legal tender.

Firing Areas

Firing practice may take place, in an area extending up to 1.6 miles seaward from the SE coast of Gibraltar. A red flag will be displayed from three places along the coast 30 minutes before the start of firing.

Government

Gibraltar is a dependent territory of the United Kingdom.

Elizabeth II, recognized as the Chief of State, appoints a Governor. The cabinet is appointed by the Governor. The Prime Minister is appointed by the Governor. The unicameral House of Assembly consists of 18 members serving 4-year terms; 17 members are directly elected while the remaining member is appointed.

The legal system is based on English law.

The capital is Gibraltar.

Flag of Gibraltar

Holidays

The following holidays are observed:

January 1	New Year's Day
Second Monday in March	Commonwealth Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	May Day
Last Monday in May	Spring Bank Holiday
Monday after the Second Saturday in June	Queen's Birthday
Last Monday in August	Summer Bank Holiday
September 10	Gibraltar National Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are tourism, banking and finance, ship repair, and tobacco.

The main exports are the re-export of petroleum and manufactured goods. The main export-trading partners are the United Kingdom, Spain, Germany, Turkmenistan, Switzerland, and Italy.

The main imports are fuels, manufactured goods, and foodstuffs. The main import-trading partners are Spain, Russia, Italy, the United Kingdom, France, and the Netherlands.

Languages

English is the official language. Spanish, Italian, Portuguese, and Russian are also spoken.

Navigational Information

Enroute Volume

Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Maritime Claims

The maritime territorial claims of Gibraltar are, as follows:

Territorial Sea	3 miles.
Fisheries or Economic Zone	3 miles.

Pilotage

Pilotage is compulsory for all vessels, except those leaving the anchorage direct for sea. Bay pilots berth ships at the Mercantile Port; Admiralty Pilots berth ships at the HM Naval Base.

Regulations

Siongle Hull Tankers

Single hull tankers over 5,000 grt carrying heavy grades of oil are prohibited from entering or leaving Gibraltar waters, including the East Anchorage. The owner or master of single hull tankers carrying oil products must supply the vessel's agent with details of the cargo and the grade of oil when sending the vessel's ETA in Gibraltar.

Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR)

The NIR of the PMoU has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the Paris MoU region.

The report should be sent to the Gibraltar Port Authority via e-mail (gpaops@portofgibraltar.gi).

Enquiries can be directed to the Gibraltar Port Authority, as follows:

1. Telephone: 350-20046254
2. E-mail: enquiries@portofgibraltar.gi

For further information, see **North Atlantic Ocean—Regulations—Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR).**

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Search and Rescue

Gibraltar coordinates search and rescue operations within the Spanish Search and Rescue Region. The Gibraltar Maritime Rescue Coordination Center (MRCC) is located at MRCC Tarifa. (See **Spain—Search and Rescue**.)

Signals

Local storm signals may be shown, as given in the accompanying table titled **Gibraltar—Local Storm Signals**.

Submarine Operating Areas

Submarines may be found conducting exercises outside Spanish territorial waters, E of the Strait of Gibraltar. For further information, see **Spain—Submarine Operating Areas**.

The notice "Submarine Exercise Area" on the chart should not be read to mean that submarines do not operate outside such areas.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is observed from the last Sunday in March until the last Sunday in October.

U.S. Embassy

Gibraltar is a dependent territory of the United Kingdom. There is no diplomatic representation.

Vessel Traffic Service

A Vessel Traffic Service provides a traffic control and information service within the territorial waters of Gibraltar and for vessels proceeding to the anchorage E of Gibraltar. The VTS is mandatory for all vessels with an loa of greater than 8m.

Further information can be found in Pub. 131, Sailing Directions (Enroute), Western Mediterranean.

Gibraltar—Local Storm Signals

Day signal	Night signal	Meaning
Black cylinder	One green light	A levante is probable in the Strait of Gibraltar and wave heights of 2m or more may be expected from the SE
Black triangle, point up	Three red lights arranged in a triangle, point up	Gale or strong wind probable from E
Black triangle, point down	Three red lights arranged in a triangle, point down	Gale or strong wind probable from W

GREECE

General	**255**
Buoyage System	**255**
Cautions	**255**
Currency	**255**
Firing Areas	**255**
Government	**258**
Holidays	**259**
Industries	**259**
Languages	**259**
Meteorology	**259**
Navigational Information	**259**
Pilotage	**259**
Pollution	**259**
Regulations	**260**
Search and Rescue	**261**
Submarine Operating Areas	**262**
Time Zone	**262**
Traffic Separation Schemes	**262**
U.S. Embassy	**262**
Vessel Traffic Service	**262**

General

Greece is located in Southern Europe, bordering the Aegean Sea, the Ionian Sea, and the Mediterranean Sea, between Albania and Turkey.

The climate is temperate, with mild wet winters and hot dry summers.

The terrain is mostly mountainous with ranges extending into the sea as peninsulas or chains of islands.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Special Warning 121 (Issued 20 March 2003)

Information on Special Warning 121 can be found in North Atlantic Ocean—Cautions.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

Marine Farms

Marine farms and their associated moorings may be found anywhere close inshore along the coasts of Greece.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Firing Areas

Information concerning firing practice and exercise areas is broadcast by coastal radio stations as Hellenic Navwarnings.

If the limits of a pre-designated firing practice range or exercise area were to change suddenly, this information would be referred to in the announcement of firing practices or exercises.

In addition to the existing pre-designated firing practice ranges and exercise areas, firing practice or exercises may be executed in other areas not predesignated, in which case an announcement will be made at least 48 hours before the start of the firing practice or exercises, describing the limits of the area, as well as the time and duration of the practice or exercises.

1. **Areas Controlled by the Navy.—Submarine Weapons Firing Practice**:

A. **Gulf of Megara** (Kolpos Megaron)—Between 37°52'00"N and 37°56'30"N and 23°11'00"E and 23°21'00"E.

B. **Velopoulas** (NW of Nisis Velopoula)—Between 37°00'N and 37°10'N and 23°05'E and 23°20'E.

C. **Argolikou** (Argolikos Kolpos)—Area bounded by lines joining:

a. 37°09'30"N, 22°59'30"E.
b. 37°18'00"N, 22°52'00"E.
c. 37°21'30"N, 22°58'30"E.
d. 37°13'00"N, 23°06'00"E.

Note.—The above areas are periodically activated after an announcement made 48 hours before the start of the firing practice.

2. **Areas Controlled by the Navy.—Firing Practice from Ships, Aircraft, and Land Artillery:**

A. **Myrtoon** (SW of Nisos Milos)—Between 36°20'N and 36°40'N and 23°40'E and 24°10'E.

B. **Hydra** (N of Nisis Velopoula)—Between 37°00'N and 37°10'N and 23°00'E and 23°36'E.

C. **Petrokaravo** (Saronikos Kolpos)—Between 37°22'N and 37°37'N and 23°35'E and 23°44'E.

D. **Plateia** (NW of Nisos Aiyina)—Area bounded by lines joining:

a. 37°47'N, 23°17'E.
b. 37°52'N, 23°22'E.
c. 37°50'N, 23°26'E.
d. 37°44'N, 23°22'E.

E. **Akra Spatha** (N of Kriti)—Between 36°05'N and 36°15'N and 23°45'E and 24°00'E.

F. **Akra Hondros** (Akra Khondhros Karos)—Area bounded by lines joining:

a. 35°33'N, 24°39'E.
b. 35°26'N, 24°39'E.
c. 35°26'N, 24°49'E.
d. 35°29'N, 24°49'E.

G. **Akrotiri** (E of Khersonisos Akrotiri)—Area bounded by lines joining:

a. 35°28'00"N, 24°22'00"E.
b. 35°36'00"N, 24°22'00"E.
c. 35°36'00"N, 24°12'00"E.
d. 35°31'00"N, 24°12'00"E.
e. 35°28'00"N, 24°08'30"E.
f. 35°27'00"N, 24°10'00"E.

H. **Agioi Apostoloi** (W of Khersonisos Akrotiri)—Between 35°30'36"N and 35°32'56"N and 23°58'41"E and 24°00'00"E.

Note.—The above areas are activated with advance warning.

I. **Soudhas** (N coast of Kriti)—Akrotiri Practice Area (LGD 90)—Area bounded by lines joining:

a. 35°28'42"N, 24°10'08"E.
b. 35°28'06"N, 24°10'25"E.
c. 35°27'56"N, 24°09'37"E.

3. **Areas Controlled by the Navy.—Mine Warfare Exercises:**

A. **Strymonikos** (Strimonikos Kolpos)—Area bounded by lines joining:

a. 40°44'20"N, 23°58'00"E.
b. 40°33'40"N, 23°53'00"E.
c. 40°39'40"N, 23°45'00"E.
d. 40°45'30"N, 23°45'00"E.

B. **Atheridas** (S of Akra Atheridha)—Area bounded by lines joining:

a. 40°21'50"N, 22°39'25"E.
b. 40°20'00"N, 22°43'00"E.
c. 39°57'07"N, 22°42'17"E.

and contained by the coast of the above.

C. **Epanomis** (S of Akra Epanomi)—Area bounded by lines joining:

a. 40°22'45"N, 22°53'20"E.
b. 40°20'30"N, 22°52'00"E.
c. 40°11'00"N, 23°l7'00"E.
d. 40°13'15"N, 23°18'50"E.

and contained by the coast of the above.

D. **Aiyina** (NW of Nisos Aiyina)—Area bounded by lines joining:

a. 37°48'00"N, 23°12'40"E.
b. 37°48'00"N, 23°24'00"E.
c. 37°45'30"N, 23°24'00"E.
d. 37°44'30"N, 23°21'00"E.
e. 37°40'30"N, 23°19'00"E.
f. 37°40'30"N, 23°13'00"E.

E. **Mesologgiou** (Patraikos Kolpos)—Area bounded by lines joining:

a. 38°18'36"N, 21°32'00"E.
b. 38°17'00"N, 21°32'00"E.
c. 38°19'00"N, 21°39'48"E.
d. 38°20'48"N, 21°39'48"E.

and contained by the coast of the above.

F. **Katakolou** (Limin Katakolou)—Area bounded by lines joining:

a. 37°38'10"N, 21°18'35"E.
b. 37°32'00"N, 21°32'00"E.
c. 37°33'40"N, 21°32'40"E.

and contained by the coast of the above.

G. **Patrai** (Patraikos Kolpos)—Area bounded by lines joining:

a. 38°10'10"N, 21°30'00"E.
b. 38°12'30"N, 21°30'00"E.
c. 38°13'30"N, 21°42'00"E.
d. 38°12'06"N, 21°42'00"E.

and contained by the coast of the above.

H. **Soudhas** (N coast of Kriti)—Area bounded by lines joining:

a. 35°29'40"N, 24°15'02"E.
b. 35°29'10"N, 24°15'08"E.
c. 35°28'48"N, 24°12'22"E.
d. 35°29'16"N, 24°12'28"E.

I. **Almyrou** (N coast of Kriti)—Area bounded by lines joining:

a. 35°23'00"N, 24°15'30"E.

b. 35°23'00"N, 24°22'20"E.
c. 35°21'45"N, 24°22'20"E.
and contained by the coast of the above.

J. **Salamis** (Nisos Salamis)—Area bounded by lines joining:
a. 37°55'54"N, 23°23'00"E.
b. 37°56'36"N, 23°23'00"E.
c. 37°56'36"N, 23°27'54"E.
d. 37°55'54"N, 23°27'54"E.

Note.—The above areas are periodically activated after an announcement made 48 hours prior to the start of the exercises.

4. **Areas Controlled by the Army.—**Land artillery practice may be scheduled in the following areas.

A. **Xylagani-Proskynitai** (Komotini) (N of Nisos Samothraki)—Area bounded by lines joining:
a. 40°54'00"N, 25°18'00"E.
b. 40°52'00"N, 25°18'00"E.
c. 40°50'00"N, 25°22'00"E.
d. 40°51'00"N, 25°27'00"E.
e. 40°52'00"N, 25°29'00"E.
f. 40°54'30"N, 25°24'10"E.
g. 40°54'35"N, 25°23'15"E.

B. **Marathon** (Kolpos Petalion).—Area bounded by lines joining:
a. 38°07'30"N, 24°01'30"E.
b. 38°07'40"N, 24°01'45"E.
c. 38°02'50"N, 24°03'10"E.
d. 38°05'00"N, 24°06'45"E.

C. **Asprokavos** (S of Nisos Samos)—Defined by a circle with a radius of 2 miles centered at position 37°38'30"N, 26°53'30"E.

D. **Avdira Xanthis** (NE of Nisos Thasos)—Between 40°51'N and 40°56'N and 24°55'E and 25°02'E.

E. **Koskina Evoia**—Area bounded by lines joining:
a. 38°22'20"N, 24°12'50"E.
b. 38°32'45"N, 24°14'50"E.
c. 38°32'45"N, 24°17'40"E.
d. 38°24'30"N, 24°19'30"E.

F. **Litochoron Pierias** (Thermaikos Kolpos)—Area bounded by lines joining:
a. 40°07'N, 22°33'E.
b. 40°06'N, 22°39'E.
c. 40°12'N, 22°39'E.
d. 40°09'N, 22°32'E.

G. **Dikela Alexandroupolis** (W of Alexandroupolis)—Area bounded by lines joining:
a. 40°51'40"N, 25°39'30"E.
b. 40°51'10"N, 25°43'00"E.
c. 40°47'20"N, 25°37'30"E.
d. 40°47'20"N, 25°45'30"E.

Note.—The above areas are activated with advance warning.

5. **Areas Controlled by the General Staffs**.—The following areas off Crete are utilized for the practice firing of ballistic missiles:

A. **Area A**—Area bounded by lines joining:
a. 35°36'N, 24°07'E.
b. 36°18'N, 24°07'E.
c. 36°18'N, 24°47'E.
d. 35°34'N, 25°08'E.
e. 35°31'N, 24°11'E.

B. **Area A1**—Area bounded by lines joining:
a. 35°32'N, 24°10'E.
b. 35°37'N, 24°10'E.
c. 35°37'N, 24°15'E.
d. 35°32'N, 24°15'E.

C. **Area A2**—Area bounded by lines joining:
a. 35°36'N, 24°07'E.
b. 35°48'N, 24°07'E.
c. 35°48'N, 24°28'E.
d. 35°31'N, 24°28'E.
e. 35°31'N, 24°11'E.

D. **Area B**—Area bounded by lines joining:
a. 35°36'N, 24°07'E.
b. 36°18'N, 24°07'E.
c. 36°18'N, 25°59'E.
d. 35°35'N, 25°58'E.
e. 35°31'N, 24°11'E.

E. **Area C**—Area bounded by lines joining:
a. 35°36'N, 24°07'E.
b. 36°18'N, 24°07'E
c. 36°18'N, 25°59'E.
d. 36°25'N, 26°12'E.
e. 36°16'N, 26°40'E.
f. 35°36'N, 26°41'E.
g. 35°31'N, 24°11'E.

F. **Area R1** (Target Collection)—Defined by a circle with a radius of 1,000m centered at position 35°32'00"N, 24°13'00"E.

G. **Area R2** (Target Collection)—Defined by a circle with a radius of 1,000m centered at position 35°28'00"N, 24°11'45"E.

Note.—Area A, Area B, and Area C are active every Wednesday, Thursday, Friday and Saturday from 0530 until sunset, by announcement. These areas are not active on Saturdays during the period from April 1 to October 31, unless there is a relevant announcement.

Area Al and Area A2 are active daily from 0500Z until sunset, except Saturdays, Sundays and holidays, by announcement.

All ships passing through the above areas, during the days and hours that they are activated, must monitor VHF channel 16 on which the Firing Practice Area of Crete broadcasts information.

6. **Areas Controlled by the Air Force.—**Firing practice by aircraft, ships, and land artillery may be scheduled in the following areas, and are normally activated with advance warning:

A. **Zakynthos**—Area bounded by lines joining:
a. 37°12'N, 20°18'E.
b. 37°56'N, 20°00'E
c. 37°56'N, 20°28'E.
d. 37°15'N, 20°49'E.

B. **Andros** (E of Nisos Andros)—Area bounded by lines joining:
a. 38°02'N, 24°52'E.
b. 38°16'N, 25°21'E
c. 37°48'N, 25°49'E.

d. 37°34'N, 25°23'E.
e. 37°42'N, 25°01'E.
f. 38°00'N, 24°52'E.

Note.—The range is active daily from sunrise to sunset, including Saturdays, Sundays, and holidays, by announcement.

C. **Psathoura** (N of Nisos Psathoura)—Area bounded by lines joining:
a. 39°26'00"N, 23°53'00"E.
b. 39°43'00"N, 23°40'00"E.
c. 40°00'30"N, 24°18'00"E.
d. 39°43'00"N, 24°31'00"E.

Note.—The range is active daily from 0500Z until 1500Z, except Fridays, Saturdays, Sundays, and holidays, by announcement.

D. **Kassandra** (Kolpos Kassandras)—Area bounded by lines joining:
a. 40°14'30"N, 23°20'00"E.
b. 40°16'00"N, 23°20'00"E.
c. 40°16'00"N, 23°29'00"E.
d. 40°10'00"N, 23°30'00"E.
e. 40°08'00"N, 23°25'00"E.

E. **Poteidaia** (Thermaikos Kolpos)—Area bounded by lines joining:
a. 40°13'30"N, 22°58'00"E.
b. 40°23'00"N, 23°04'45"E.
c. 40°16'15"N, 23°31'30"E.
d. 40°04'30"N, 23°23'00"E.

Note.—The range is active daily from 0530Z until 1230Z, except Fridays, Saturdays, Sundays, and holidays, by announcement.

F. **Andravida** (E of Nisos Zakinthos)—Area bounded by lines joining:
a. 37°51'N, 21°15'E.
b. 37°46'N, 21°14'E.
c. 37°46'N, 21°20'E.
d. 37°50'N, 21°19'E.

Note.—The range is active daily for 24 hours, except Saturdays, Sundays, and holidays, by announcement.

G. **Palaiohorion** (E of Nisos Zakinthos)—Area bounded by lines joining:
a. 37°48'30"N, 21°14'48"E.
b. 37°47'50"N, 21°05'45"E.
c. 37°41'50"N, 21°07'50"E.
d. 37°41'25"N, 21°15'45"E.

H. **Messara** (S coast of Kriti)—Area bounded by lines joining:
a. 35°01'N, 24°36'E.
b. 35°06'N, 24°10'E.
c. 35°11'N, 24°10'E.
d. 35°05'N, 24°36'E.

I. **Nisos Karavia**—Area bounded by lines joining:
a. 36°56'N, 23°29'E.
b. 36°42'N, 23°32'E
c. 36°41'N, 23°48'E.
d. 36°47'N, 23°55'E.

J. **Asproneri Zirou** (S coast of Kriti)—Area bounded by lines joining:
a. 35°01'40"N, 26°00'00"E.
b. 34°54'30"N, 26°01'00"E.
c. 34°55'30"N, 25°55'30"E.
d. 34°58'40"N, 25°52'20"E.

K. **Maleme** (Kolpos Khanion)—Area bounded by lines joining:
a. 35°29'N, 23°46'E.
b. 35°29'N, 23°51'E.
c. 35°34'N, 23°55'E.
d. 35°36'N, 23°49'E.
e. 35°36'N, 23°46'E.

Note.—The range is active daily from sunrise until 2100Z, except Fridays, Saturdays, Sundays, and holidays, by announcement.

L. **Nea Anchialos** (Pagasitikos Kolpos)—Defined by a circle with a radius of 5 miles centered on position 39°13'15"N, 22°48'30"E. The range is a prohibited area. It is active daily for 24 hours, except Saturdays, Sundays, and holidays, by announcement.

M. **Pagasitikos** (Pagasitikos Kolpos)—Area bounded by lines joining:
a. 39°18'05"N, 22°48'30"E.
b. 39°10'35"N, 22°48'20"E.
c. 39°17'50"N, 22°58'10"E.
d. 39°10'25"N, 22°57'50"E.

N. **Amalias** (E of Nisos Zakinthos)—Area bounded by lines joining:
a. 37°48'00"N, 21°05'00"E.
b. 37°31'50"N, 21°08'00"E.
c. 37°31'00"N, 21°20'00"E.
d. 37°48'00"N, 21°17'00"E.

Note.—The range is active daily from 0500Z until 2200Z, except Fridays, Saturdays, Sundays, and holidays, by announcement.

O. **Astros** (Argolikos Kolpos)—Area bounded by lines joining:
a. 37°26'15"N, 22°45'20"E.
b. 37°31'20"N, 22°47'55"E.
c. 37°29'35"N, 22°51'00"E.
d. 37°26'30"N, 22°52'00"E.
e. 37°24'10"N, 22°51'40"E.

It has been reported (2007) that a naval firing area is located in the Aegean Sea and is bounded by lines joining the following positions:
a. 37°47'N, 23°17'E.
b. 37°52'N, 23°22'E.
c. 37°50'N, 23°26'E.
d. 37°44'N, 23°22'E.

Note.—The range is active daily from 0500Z until 1300Z, except Saturdays, Sundays, and holidays, by announcement.

Government

Greece is a parliamentary republic. The country is divided into 51 prefectures and one autonomous region.

Greece is governed by a President elected by the Chamber of Deputies for a 5-year term. The unicameral Chamber of Deputies consists of 300 directly-elected members serving 4-year terms.

The legal system is based on codified Roman law.

The capital is Athens.

Flag of Greece

Holidays

The following holidays are observed:

January 1	New Year's Day
January 6	Epiphany
Clean Monday (Start of Lent)	Variable
March 7	Dodecanese Accession (Rhodes only)
March 10	Kathara Deftera
March 25	Independence Day
Good Friday	Variable
Holy Saturday	Variable
Easter Sunday	Variable
Easter Monday	Variable
Easter Tuesday (half day)	Variable
May 1	Labor Day
Holy Ghost	Variable
August 15	Assumption Day
October 4	Liberation of Xanthi (Xanthi only)
October 26	St. Dimitrios Day (Thessaloniki only)
October 28	OXI Day
December 25	Christmas Day
December 26	Second Day of Christmas

Industries

The main industries include tourism, food and tobacco processing, textiles, chemicals, metal products, mining, and petroleum products.

The main exports are food and beverages, manufactured goods, petroleum products, chemicals, and textiles. The main export-trading partners are Germany, Italy, the United Kingdom, Bulgaria, Cyprus, and Turkey.

The main imports are machinery, transport equipment, fuels, and chemicals. The main import-trading partners are Germany, Italy, Russia, France, and the Netherlands.

Languages

Greek is the official language.

Meteorology

Marine bulletins in Greek and English are available from the Hellenic National Meteorological Service (http://www.hnms.gr).

Navigational Information

Enroute Volume

Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

Maritime Claims

The maritime territorial claims of Greece are, as follows:

Territorial Sea	6 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

Maritime Boundary Disputes

Complex maritime, air, and territorial disputes with Turkey in the Aegean Sea.

Pilotage

Pilotage is compulsory for all vessels greater than 500 grt. Greek coastwise vessels, Greek naval vessels, and naval vessels of foreign countries that extend free pilotage to Greek naval vessels are exempt from the payment of pilotage.

The pilots, designated by the government and under the jurisdiction of the navy, serve only in an advisory capacity.

To call a pilot, a vessel should make one of the signals as specified in the International Code of Signals.

The port authority must be notified by the captain or agent of the exact hour of sailing, and the notification must be given at least 2 hours prior to the time of sailing in the case of vessels lying in the port, and 10 hours prior in case of vessels lying outside the port.

Vessels lying in the Gulf of Athens must give such notification 24 hours in advance.

Pollution

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

At most of the important ports vessels are subject to regulations, a copy of which should be obtained on arrival.

Copies of Greek Notices to Mariners may be obtained from local port authorities.

Quarantine

Reports must be submitted upon arrival unless there has been a case of contagious disease on board; in this case, a report should be made by radio prior to arrival. The report should be addressed to "Sanidad (name of port) Olympia Radio," except for the port of Kerkyra, where it should be addressed to "Sanidad Kerkyra Radio."

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The reports can be sent through either of the following methods:

1. By e-mail to ssn@yen.gr.
2. By facsimile to the local Coast Guard authorities. The facsimile numbers should be obtained by the vessel's agent.

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Prohibited Areas to Navigation

Navigation without prior permission from the naval authorities is prohibited in the following areas:

1. **Saronikos Kolpos**

A. **Salamina Naval Base** (Stenon Navstathmou)

Salamina area—Lines joining the following positions:

a. 37°59'51"N, 23°31'19"E.
b. 38°00'03"N, 23°32'53"E.
c. 37°57'55"N, 23°32'42"E.
d. 37°57'54"N, 23°32'36"E.

Skaramanga area—Lines joining the following positions:

a. 37°58'00"N, 23°33'24"E.
b. 37°57'00"N, 23°32'57"E.
c. 38°00'05"N, 23°33'08"E.
d. 38°00'21"N, 23°35'08"E.
e. 38°00'15"N, 23°35'24"E.

Between the above prohibited areas is a channel for navigation with a width of 365m. The W side of the channel is bounded by a line joining the following positions:

a. 38°00'03"N, 23°32'53"E.
b. 37°57'55"N, 23°32'42"E.

The E side of the channel is bounded by a line joining the following positions:

a. 38°00'05"N, 23°33'08"E.
b. 37°57'56"N, 23°32'57"E.

The passage of any non-naval vessel through the above channel as well as through the channel found to the S of it, which has a width of 240m and a maximum allowable draft for passage of 10.9m, is permitted under the following conditions and restrictions:

a. Foreign flag vessels are permitted passage during daytime (sunrise to sunset) after receiving permission from the naval base, which is requested via the Central Harbormaster's Office of Piraievs or Elevsis.
b. Passage during the night (sunset to sunrise) must, in principle, be avoided. However, if it is necessary, passage may be allowed by permission from Salamina Naval Base.

Permission must be requested through the Harbormaster's Office of Piraievs or Elevsis at least 6 hours in advance of the time of passage and in any case not later than 2000. The request for passage must include the following information:

a. Vessel's name.
b. Nationality.
c. Net registered tonnage.
d. Total length.
e. Maximum draft during passage.
f. Type of cargo.
g. Requested time for passage.

Vessels using the channel must monitor VHF channel 12. Vessels without a pilot, regardless of flag, before entering the channel must report their intentions to Piraievs pilot station by RT, or by other means, so as to be notified in the event that passage through the channel is prohibited. Salamina Naval Base has the right to postpone, prohibit, or limit passage due to operational or other conditions.

Pilotage is required 24 hours for foreign flag vessels over 150 nrt.

Towing by one or more tugboats is obligatory during the day for vessels over 120m in length, and during the night for vessels over 75m in length.

In the S channel, the following conditions apply:

a. Southbound vessels have priority of passage over northbound vessels.
b. Small boats and ferries engaged in local traffic must keep clear of vessels entering or exiting the channel.
c. Warships and merchant vessels with pilots have priority of passage over merchant vessels without pilots.
d. The passage of ships sailing in opposite directions through the channel is prohibited.

Passage in both channels is not permitted at a speed greater than 6 knots, except in cases when lower speeds are not sufficient for safe passage. In such cases, only the speed which is absolutely necessary in excess of the limit is permitted.

B. **Ormos Salaminos**—The area bound by the meridians 23°25'57"E and 23°26'36"E, the parallel 37°56'12"N, and the coast to the S.

C. **Nisis Fleves and Nisis Psittalia**—The area up to a distance of 1 mile around the coast of Nisis Fleves and Nisis Psittalia.

2. **Kikladhes Nisoi**

A. **Nisos Siros to Ormos Foinikos**—An area bounded by lines joining the following positions:
a. 37°23'16.14"N, 24°52'39.55"E.
b. 37°23'27.00"N, 24°52'39.55"E.
c. 37°23'27.00"N, 24°52'54.55"E.
d. 37°23'18.14"N, 24°52'54.55"E.

B. **Patraikos Kolpos to Akra Papas**—The area up to a distance of 450m from the coast that extends from point 38°11'32.7"N, 21°22'17.0"E to point 38°11'33.2"N, 21°24'36.9"E.

3. **Kriti (Crete)**

A. **Ormos Soudhas—**The area bounded by lines joining the following positionss:
a. 35°27'53"N, 24°09'34"E.
b. 35°28'46"N, 24°10'10"E.
c. 35°28'46"N, 24°09'24"E.
d. 35°28'46"N, 24°09'09"E.
e. 35°29'40"N, 24°04'46"E.
f. 35°29'25"N, 24°04'38"E.

A second area bounded by lines joining the following positions:
a. 35°30'12"N, 24°10'11"E.
b. 35°30'07"N, 24°11'04"E.
c. 35°28'58"N, 24°10'18"E.
d. 35°28'58"N, 24°09'24"E.
e. 35°29'58"N, 24°09'11"E.
f. 35°30'04"N, 24°03'49"E.
g. 35°30'04"N, 24°03'48"E.

Between the above prohibited areas is a channel for navigation with a width of 365m. The N side of the channel is bounded by a line joining the following positions:
a. 35°28'58"N, 24°10'18"E.
b. 35°28'58"N, 24°09'24"E.
c. 35°28'58"N, 24°09'11"E.
d. 35°29'50"N, 24°04'52"E.

The S side of the channel is bounded by a line joining the following positions:
a. 35°29'40"N, 24°04'46"E.
b. 35°28'46"N, 24°09'09"E.
c. 35°28'46"N, 24°09'24"E.
d. 35°28'46"N, 24°10'10"E.

Permission from the naval authorities, requested through the Khania Harbormaster's Office, is required for passage through the above channel during daytime and at night for all foreign flag vessels.

The area of the port of Soudhas, which is defined by the following positions, is open to navigation and anchorage:
a. 35°29'25"N, 24°04'38"E.
b. 35°29'40"N, 24°04'46"E.
c. 35°29'51"N, 24°04'51"E.
d. 35°30'04"N, 24°03'48"E.

B. **Ormos Kiriamadhi—**The area of the bay E of a line joining the following positions:
a. 35°18'14.95"N, 26°17'24.76"E.
b. 35°18'02.43"N, 26°17'24.57"E.

C. An area bounded by lines joining the following positions:
a. 35°28'17.80"N, 24°14'05.58"E.
b. 35°27'04.15"N, 24°15'33.46"E.
c. 35°27'04.28"N, 24°16'52.34"E.
d. 35°29'11.63"N, 24°16'52.04"E.
e. 35°29'11.33"N, 24°14'05.34"E.

4. **Dhodhekanisos**

A. **Nisos Leros to Limin Lakki—**The area up to a distance of 200m from the coast extending from point 37°06'59.0"N, 26°50'13.0"E to point 37°07'25.5"N, 26°51'28.0"E.

B. **Nisos Leros to Ormos Partheni—**The area up to a distance of 350m from the coast extending from point 37°11'48"N, 26°47'02"E to point 37°11'18"N, 26°47'39"E. The area up to a distance of 100m from the coast extending from point 37°11'18"N, 26°48'18"E to point 37°11'26"N, 26°48'16"E.

C. **Tris Mpoukes—**The area up to a distance of 250m from the coast extending from point 38°47'15"N, 24°36'00"E to point 38°46'00"N, 24°37'00"E.

D. **Pagasitikos Kolpos to Ormos Almirou—**The area of a circle with a radius of 5 miles centered at point 39°13'15"N, 22°48'30"E.

E. Approaching the coasts without prior permission from the naval authorities is prohibited in the following areas:

a. **Piraievs to Ormos Kanellopoulouar—**The entire bay up to the line joining the following positions:
i. 37°56'04.7"N, 23°37'27.1"E.
ii. 37°56'01.0"N, 23°37'28.0"E.
iii. 37°56'00.6"N, 23°37'39.9"E.

b. **Nisos Ayios Yeoryios—**The entire coast of the island.

c. **Nisos Poros—**The area bounded by lines joining the following positions:
i. 37°30'31.4"N, 23°27'10.6"E.
ii. 37°30'13.5"N, 23°27'18.6"E.
iii. 37°30'16.9"N, 23°27'35.9"E.
iv. 37°30'28.1"N, 23°27'36.8"E.

d. **Ormos Ayios Marina—**Approaching and landing at the naval installations on the N shore of the bay are prohibited.

Anchorage and fishing are prohibited up to a distance of 450m from the coast of the same area.

e. **Akra Limnonari—**The area up to a distance of 100m from the coast extending from point 38°48'25.34"N, 24°24'56.29"E to point 38°48'37.69"N, 24°40'30.74"E.

Search and Rescue

The Joint Rescue Coordination Center (JRCC) Pireaus is responsible for coordinating search and rescue operations. JRCC Pireaus can be contacted, as follows:

1. Telephone:	30-210-4112500
	30-210-4220772
	30-210-4191126
	30-210-4191369
	30-210-4191325
	30-210-4191703
	30-210-4191704
2. Facsimile:	30-210-4132398
	30-210-4115798
	30-210-4191561

30-210-4224417
3. E-mail: jrccpgr@yen.gr

The search and rescue area is divided into five subareas, which can be contacted, as follows:

	Telephone	Facsimile
RSC Khania (Southwest Aegean Sea)	30-28210-98888 30-28210-28388	30-28210-28387
RSC Mytilini (Central Aegean Sea)	30-22510-40827 30-22510-20320	30-22510-47888
RSC Patrai (Ionian Sea)	30-2610-341002 30-2610-316400	30-2610-327136
RSC Rodos (Southwest Aegean Sea)	30-22410-22220 30-22410-27365	30-22410-27365
RSC Thessaloniki (North Aegean Sea)	30-2310-531504 30-2310-513675	30-2310-531506

A network of coast radio stations maintains a continuous listening watch for distress traffic on international distrerss frequencies.

Submarine Operating Areas

Diaporion (N of Nisoi Dhiaporioi)—Bounded by a line joining the following positions:
a. 37°50'00"N, 23°10'00"E.
b. 37°50'00"N, 23°22'00"E.
c. 37°56'30"N, 23°22'00"E.
d. 37°56'30"N, 23°10'00"E.

Aiyina (NW of Nisos Aiyina)—Bounded by a line joining the following positions:
a. 37°47'06"N, 23°20'24"E.
b. 37°48'00"N, 23°20'30"E.
c. 37°45'48"N, 23°24'24"E.
d. 37°45'24"N, 23°24'12"E.

Ayios Yeoryios (S of Nisos Yeoryios)—Bounded by a line joining the following positions:
a. 37°12'00"N, 23°50'00"E.
b. 37°12'00"N, 24°05'00"E.
c. 37°23'00"N, 24°05'00"E.
d. 37°23'00"N, 23°50'00"E.

Spetson (S of Nisos Spetsai)—Bounded by a line joining the following positions:
a. 36°55'00"N, 23°05'00"E.
b. 36°55'00"N, 23°20'00"E.
c. 37°12'00"N, 23°20'00"E.
d. 37°12'00"N, 23°05'00"E.

Drepanon (N of Kriti off Akra Drapanon)—Bounded by a line joining the following positions:
a. 35°45'00"N, 24°00'00"E.
b. 35°45'00"N, 24°30'00"E.
c. 35°26'00"N, 24°30'00"E.
d. 35°26'00"N, 24°19'00"E.
e. 35°35'30"N, 24°19'00"E.
f. 35°35'30"N, 24°00'00"E.

Khios (S of Khios)—At position 37°56'N, 26°10'E.

Lesvos (S of Lesvos)—At position 38°50'N, 26°00'E.

Nisos Karpathos (SE of Nisos Karpathos)—In the vicinity of a line joining position 38°15.6'N, 27°20.6'E and position 35°15.6'N, 27°29.0'E.

Khersonisos Akrotiri (N and E of Khersonisos Akrotiri)—An area extending about 10 miles N and 15 miles E of Khersonisos Akrotiri (35°35'N., 24°10'E.) between the meridians of 24°00'E and 24°30'E.

Greek submarines operating on the surface display an all round orange light showing about 80 flashes per minute.

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time (CHARLIE (-3)) is observed from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes in Greece are, as follows:
1. Saronikos Kolpos (IMO-adopted).
2. Approaches to Thessaloniki (IMO-adopted).

U.S. Embassy

The U.S. Embassy is situated at 91 Vasilissis Sophias Avenue, 10160 Athens.

The mailing address is PSC 108, APO AE (09842-0108).

U. S. Embassy Greece Home Page
http://athens.usembassy.gov

Vessel Traffic Service

The purpose of a Vessel Traffic Service (VTS) center is to collect, manage, assess, and promulgate any information relating to marine vessel traffic, the safety of life at sea, the safety of navigation, the protection of the marine environment, search and rescue, and marine transport in general. VTS centers operate on a 24-hour basis.

Greek VTS centers are located, as follows:
1. Igoumenitsa (39°30'N., 20°16'E.).
2. Kerkira (Corfu) (39°38'N., 19°55'E.).
3. Lavrion (Laurium) (37°42'N., 24°04'E.).
4. Patrai (38°15'N., 21°44'E.).
5. Piraeus (Peiraias) (37°57'N., 23°36'E.).
6. Rafina (36°01'N., 24°01'E.).
7. Stenon Riou-Andirriou (38°19'N., 21°46'E.).

Further information on each VTS can be found in the appropriate Sector of Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

All VTS centers provide the following services:
1. **Information services.**—Providing and distributing information of interest to shipping, when judged necessary or on request from a vessel. This information may include:
   a. A report on the position or identity of a vessel.
   b. The speed of a vessel.
   c. The destination or intended movement of a vessel.
   d. Information regarding weather conditions.

2. **Navigational assistance services.—**Providing information, as follows:

a. Adverse meteorological conditions.

b. Situations where pilotage is difficult.

c. Situations where a vessel's equipment is missing, inadequate, or malfunctioning, in order to assist the master or pilot with making correct decisions.

3. **Traffic organization services.—**Providing the following:

a. Management and control of vessel traffic.

b. Control of priority sequencing of vessels entering or leaving a harbor.

c. Forward planning of vessel movements in an area to avoid high levels of congestion.

The following vessels, when in a VTS area, are required to maintain a listening watch on the prescribed VHF channel and to report to the appropriate VTS center:

1. Any cargo vessel of 300 grt and over.

2. Any passenger vessel capable of carrying more than 50 passengers.

3. Any vessel carrying dangerous cargo.

4. Any vessel characterized as, according to the International Rules for the Prevention of Collisions at Sea, a vessel restricted in its ability to maneuver.

5. Any power-driven vessel with a length of 40m and over.

The following reports are made by vessels sailing within a VTS area:

1. **Initial Report.—**Submitted at least 15 minutes prior to, and no earlier than 30 minutes before, entry of the vessel into the VTS area. The report should contain the following information:

a. Vessel name, flag, call sign, MMSI number, type of vessel, and IMO identification number.

b. Position.

c. Destination and ETA.

d. Speed, course, and changes that will take place.

e. Time and point of entry into the VTS area.

f. Cargo. For dangerous cargo, indicate the quantity, location within the vessel, and IMO classification.

g. Draft and maximum height above the waterline.

h. Quantity and type of fuels and petroleum residues.

i. Number of crew.

j. Number of passengers and vehicles, by category.

k. Owner's agent or representative.

Scheduled passenger ferries or passenger/vehicle ferries need only submit the vessel name and the information contained in c, e, f, and j above.

The Initial Report is considered to be the vessel's sailing plan and must be followed exactly.

2. **Arrival Report.—**Submitted no later than15 minutes after the mooring, berthing, or anchoring of the vessel. The report should contain the following information:

a. Vessel name and call sign.

b. Position and time of mooring or anchoring.

3. **Departure Report.—**Submitted no earlier than 15 minutes prior to departure from the vessel's moored or anchored position. The report should contain the following information:

a. Vessel name and call sign.

b. ETD.

c. Cargo. For dangerous cargo, indicate the quantity, location within the vessel, and IMO classification.

d. Quantity and type of fuels and petroleum residues.

Scheduled passenger ferries or passenger/vehicle ferries need only submit the vessel name and the number of passengers and vehicles, by category.

If a Departure Report has been submitted, no Initial Report is required.

4. **Final Report.—**Submitted no earlier than 15 minutes prior to the vessel leaving the VTS area. The report should contain the following information:

a. Vessel name, flag, and call sign.

b. Position.

c. Destination.

5. **Interim Report.—**Submitted only on request from a VTS Center and includes such information as requested by the VTS Center.

6. **Correction Report.—**Submitted to the VTS Center, as follows:

a. When the vessel intends to maneuver differently from what has previously been reported.

b. When there is a substantial deviation from information that has previously been reported.

7. **Special Report.—**Submitted to the VTS Center, including the name, flag, and call sign of the vessel, when any of the following occur:

a. Any situation which affects in any way the normal sailing of the vessel (fire, mechanical defect, steering casualty, etc.).

b. Another vessel in difficulty or which has been involved in an accident.

c. Any hazard to navigational in the area.

d. The malfunctioning, failure, absence, or incorrect position of an aid to navigation.

e. Unexpected changes in weather conditions.

f. Pollution.

g. Any substantial change to information that has previously been reported in relation to the above.

Note.—Vessels which are required to carry Automatic Identification (AIS) equipment are not required to report the details of their position, course, and speed, unless specified otherwise by the VTS center. These vessels are not exempt from other provisions of these regulations.

GRENADA

General	**265**
Buoyage System	**265**
Cautions	**265**
Currency	**265**
Government	**265**
Holidays	**266**
Industries	**266**
Languages	**266**
Navigational Information	**266**
Pilotage	**266**
Search and Rescue	**266**
Ship Reporting System	**266**
Signals	**266**
Time Zone	**266**
U.S. Embassy	**267**

General

Grenada is located in the Caribbean Sea, N of Trinidad and Tobago.

The climate is tropical, tempered by the Northeast Trade Winds, although at times it may be uncomfortable. The dry season lasts from January to May.

The terrain is volcanic in origin, with central mountains forming a ridge running down the center of the island.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Navigational lights and buoys in the Grenadines should be used with caution. Past problems have included the following:

1. Range lights may not be as charted or are poorly situated.
2. Lights are unreliable and frequently not lit.
3. Buoys may be poorly positioned relative to the danger they mark. When removed, it may be a long time before they are replaced.

Cautions

Extensive local fishing takes place around the island.

Currency

The official unit of currency is the East Caribbean dollar, consisting of 100 cents.

Government

Flag of Grenada

Grenada is an independent commonwealth of the United

Kingdom. The country is divided into six parishes and one dependency.

Elizabeth II, recognized as the Chief of State, appoints a Governor-General. The bicameral Parliament consists of an appointed 13-member Senate and a directly-elected 15-member House of Representatives, serving 5-year terms.

The legal system is based on English common law.

The capital is Saint George's.

Holidays

The following holidays are observed:

January 1	New Year's Day
February 7	Independence Day
Good Friday	Variable
Holy Saturday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
Whitsunday	Variable
Whitmonday	Variable
Corpus Christi	Variable
First Monday and Tuesday in August	Emancipation Day
Second Monday and Tuesday in August	Carnival
October 25	Thanksgiving Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries include food and beverages, textiles, light assembly operations, tourism, and construction.

The main exports are bananas, cocoa, nutmeg, fruits and vegetables, clothing, and mace. The main export-trading partners are Saint Lucia, the United States, Antigua and Barbuda, Saint Kitts and Nevis, and Dominica.

The main imports are food, manufactured goods, machinery, chemicals, and fuels. The main import-trading partners are Trinidad and Tobago and the United States.

Languages

English is the official language. French is also spoken.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Grenada are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	200 miles.

* Requires advance permission or notification for innocent passage of warships in the territorial sea.

Pilotage

Pilotage is compulsory for vessels of more than 200 grt. Pilots meet vessels NE of Annas Shoal and will take a vessel in at night.

Search and Rescue

The Grenada Coast Guard operates the Maritime Rescue Coordination Subcenter (MRSC) Grenada and is responsible for the coordination of search and rescue operations. MRSC Grenada can be contacted, as follows:

1. Telephone: 1-473-4441931
   1-473-4441932
2. Facsimile: 1-473-4442839

Ship Reporting System

CARICOM (Caribbean Community) Advance Passenger Information System (APIS)

CARICOM APIS is a mandatory reporting system providing Advance Passenger Information (API) about passengers and crew to the Joint Regional Communications Center (JRCC) Barbados for vessels bound for or departing from a port in the CARICOM area. Further information can be found in **Caribbean Sea—Ship Reporting System**.

Signals

Visual storms signals are displayed by day, in St. George's Harbor, as follows:

Signal	Meaning
One red triangular flag	Winds of 28 to 33 knots expected.
One square red flag, with a centered black square	Winds of 34 to 63 knots expected.
Two square red flags, with a centered black square, vertically disposed	Winds over 63 knots expected.
Note.—At night, two red lights,vertically disposed, are shown when winds over 63 knots are expected.	

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

The U>S> Ambassador to Barbados is accredited to Grenada The embassy is situated in Wildey Business Park, Wildey, St. Michael, Bridgetown, Barbados.

The mailing addresses are, as follows:

1. Barbados address—
   P.O. Box 302
   Bridgetown 11000
2. U. S. address—
   CMR 1014
   APO AA (34055)

U. S. Embassy Barbados Home Page
http://barbados.usembassy.gov

GUADELOUPE

General	**269**
Buoyage System	**269**
Currency	**269**
Firing Areas	**269**
Government	**269**
Holidays	**270**
Industries	**270**
Languages	**270**
Navigational Information	**270**
Regulations	**270**
Search and Rescue	**270**
Ship Reporting System	**270**
Time Zone	**270**
U.S. Embassy	**270**

General

Guadeloupe is an archipelago of nine inhabited islands located in the central portion of the Leeward Islands. Basse-Terre is volcanic in origin and contains interior mountains; an active volcano, from which smoke is always visible and flames are frequently visible, lies on the S end of the island. Grande-Terre is a low limestone formation surrounded by coral reefs. Most of the remaining islands are volcanic in origin.

Saint Barthelemy and Saint Martin lie about 135 miles NW of Guadaloupe. The S half of the island of Saint Marten is part of the Netherlands Antilles.

The subtropical climate of the islands is moderated by the trade winds. Rainfall is abundant in the mountains of Basse-Terre but is sparse over Grande-Terre. There are three distinct seasons, as follows:

1. November to April—Cool season.
2. April to July—Warm and dry season.
3. July to November—Warm and wet season.

Guadeloupe lies in the hurricane belt. The hurricane season is from July until November.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Firing Areas

A firing practice area established NW of Basse-Terre extends about 3.5 miles from the coast between latitude 16°04'N on the N and latitude 16°00'N on the S.

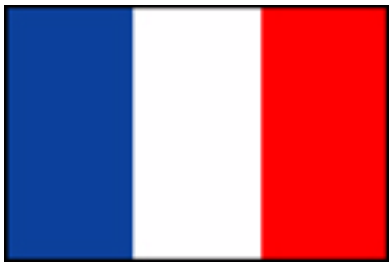
Government

Guadeloupe is an overseas department of France. The island elects two senators to the French Senate and four deputies to the French National Assembly.

Guadeloupe is administered by the directly-elected General Council, consisting of 42 members serving 6-year terms, and the directly-elected Regional Council, consisting of 41 members serving 6-year terms.

The legal system is based on French law.

The capital is Basse-Terre.



Flag of Guadeloupe

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
May 8	World War II Victory Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
July 14	Bastille Day
August 15	Assumption Day
November 1	All Saints' Day
November 11	Armistice Day
December 25	Christmas Day

Industries

The main industries include sugarcane and pineapple production, sugar refining, tourism, food processing, rum, and cement.

The main exports are bananas, sugar, rum, melons, and spring water. The main export-trading partners are France and Martinique.

The main imports are foodstuffs, fuels, vehicles, clothing and other consumer goods, and construction materials. The main import-trading partner is France.

Languages

French is the official language; however, a majority of the population speaks a Creole dialect.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Guadeloupe are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines.

Regulations

Vessels in transit or stationary within the territorial waters, except when alongside in port, should maintain a continuous listening watch on VHF channel 16 and respond to calls by official vessels and French coast radio stations.

Vessels over 1,600 grt must remain at least 10 miles off the coast of Guadaloupe, Saint Barthelemy, and Saint Martin, except when in waiting areas or when using approach or access channels.

Search and Rescue

See **Martinique—Search and Rescue**.

Ship Reporting System

The SURNAV system is intended to prevent accidental pollution in the territorial waters of Guadeloupe and Martinique as well as in the waters within 50 miles of the coast of Guadeloupe and Martinique.

For further information, see **Martinique—Ship Reporting System**.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

Guadeloupe is an overseas department of France. There is no diplomatic representation.

GUATEMALA

General	**271**
Buoyage System	**271**
Currency	**272**
Fishing Areas	**272**
Government	**272**
Holidays	**272**
Industries	**272**
Languages	**272**
Navigational Information	**272**
Search and Rescue	**272**
Time Zone	**273**
U.S. Embassy	**273**

General

Guatemala, the northernmost Central American country, is bordered by Mexico to the N and W, by Belize to the NE, and by Honduras and El Salvador to the E. It has about 70 miles of coast on the Caribbean side and 220 miles on the Pacific side. San Jose is the largest port on the Pacific coast.

The climate is tropical; hot and humid in the lowlands, and cooler in the highlands.

The terrain is mostly mountains with narrow coastal plains and rolling limestone plateaus.

The entire Pacific coast is bordered by a 30 mile wide belt of tropical lowland backed inland by high mountainous country of volcanic origin. Many of the peaks of this range rise to elevations in excess of 3,658m.

The Pacific slope of this range is the most densely-populated section of the country. Violent earthquakes are a frequent occurrence and in the past have caused considerable damage to the capital city of Guatemala.

The N part of the country contains the great plain of Peten, a low, humid, and heavily-forested area which comprises about one-third of the total territory of the state.

The greater part of this region is uncultivated, although many districts have extremely fertile soils and an abundance of water.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the quetzal, consisting of 100 centavos.

Fishing Areas

The coastal areas along the Caribbean Sea are extensively fished by local vessels working out of small harbors and rivers.

Government

Flag of Guatemala

Guatemala is a republic with a traditionally dominant executive. The country is divided into 22 departments.

Guatemala is governed by a directly-elected President who serves a 4-year term. The unicameral Congress consists of 158 directly-elected members serving 4-year terms.

The legal system is based on civil law.

The capital is Guatemala City.

Holidays

The following holidays are observed:

January 1	New Year's Day
Holy Thursday	Variable
Good Friday	Variable
Holy Saturday	Variable
Easter Sunday	Variable
May 1	Labor Day
June 30	Army Day
August 15	Assumption Day
September 15	Independence Day
October 20	Revolution Day
November 1	All Saints' Day
December 24	Christmas Eve (half day)
December 25	Christmas Day
December 31	New Year's Eve (half day)

Industries

The principal industries are sugar, textiles and clothing, furniture, chemicals, petroleum, metals, rubber, and tourism.

The main exports are coffee, sugar, petroleum, clothing, bananas, fruits and vegetables, and cardamom. The main export-trading partners are the United States, El Salvador, and Honduras, and Mexico.

The main imports are fuels, machinery and trasportation equipment, construction materials, grain, fertilizers, and electricity. The main import-trading partners are the United States, Mexico, China, and El Salvador.

Languages

The languages of the country are Spanish and Amerindian.

Navigational Information

Enroute Volumes

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2.

Pub. 153, Sailing Directions (Enroute) West Coasts of Mexico and Central America.

Maritime Claims

The maritime territorial claims of Guatemala are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims Bahia de Amatique as a historic bay.

Search and Rescue

A Maritime Rescue Coodination Center is located at the Joint Operations Center, Guatemala City, for both the Atlantic coast and the Pacific coast and can be contacted, as follows:

Telephone	Facsimile
MRCC Atlantic Naval Base	
502-79483102	502-79483127
502-79483848	
MRCC Pacific Naval Base	
502-7881056	502-7881057
502-7881057	

Guatemala is part of the Corporacion Centroamericana de Servicios de Navegacion Aerea (COCESNA), the Central American aeronautical search and rescue network. Rescue Sub-Center (RSC) Guatemala works with RCC Centro America and can be contacted, as follows:

1. Telephone: 502-226-06538
   502-226-06379
2. Facsimile: 502-226-06538
   502-226-06379

Further information on COCESNA can be found in **Honduras—Search and Rescue**.

Time Zone

The Time Zone description is SIERRA (+6). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at 7-01 Avenida Reforma, Zone 10, Guatemala City.

The mailing address is APO AA (34024).

U. S. Embassy Guatemala Home Page
http://guatemala.usembassy.gov

GUINEA

General	**275**
Buoyage System	**275**
Cautions	**275**
Currency	**275**
Government	**275**
Holidays	**276**
Industries	**276**
Languages	**276**
Navigational Information	**276**
Time Zone	**276**
U.S. Embassy	**276**

General

Guinea lies on the W coast of Africa between Guinea-Bissau and Sierra Leone and has a coastline of 170 miles on the Atlantic Ocean. The coastal plain has an irregular and swampy shoreline and extends inland for 50 miles.

All parts of Guinea have a humid tropical climate. Temperature ranges at Conakry from a daily high of 30°C to a low of 23°C. Rainfall is heavy and is more than 3,810mm along the coast.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation in Guinea are unreliable. Lights may be extinguished; buoys and beacons may be missing, unlit, or out of position.

Cautions

Fishing vessels, many of which may be unlit, may be encountered off the entire coast of Guinea.

Currency

The official unit of currency is the Guinean franc, consisting of 100 centimes.

Government

Flag of Guinea

Guinea is a republic. The country is divided into 33 prefectures and one special zone.

Guinea is governed by a directly-elected President who serves a 7-year term. The Prime Minister and the Council of Ministers are appointed by the President. The unicameral 114-member People's National Assembly is directly-elected to serve 5-year terms.

The legal system is based on French civil law, customary law, and decree.

The capital is Conakry.

Holidays

The following holidays are observed:

January 1	New Year's Day
April 3	Second Republic Day
Easter Monday	Variable
May 1	Labor Day
May 25	OAU Anniversary
August 15	Assumption Day
October 2	Independence Day

Islamic holidays, which are subject to the appearance of the moon, include Eid Al-Fitr (End of Ramadan), Tabaski, and the Prophet's Birthday.

Industries

The main industries are mining (bauxite, gold, iron, and diamonds), alumina refining, light manufacturing, and agricultural processing.

The main exports are bauxite, alumina, gold, diamonds, coffee, fish, and agricultural products. The main export-trading partners are Russia, South Korea, Spain, Ukraine, the United States, France, and Germany.

The main imports are petroleum products, metals, machinery, transport equipment, textiles, grain, and foodstuffs. The main import-trading partners are China and France.

Languages

French is the official language. Each ethnic group has its own language.

Navigational Information

Enroute Volume

Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Maritime Claims

The maritime territorial claims of Guinea are, as follows:

Territorial Sea	12 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

Time Zone

The Time Zone description is ZULU. Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at Koloma, E of Hamdallaye Circle, Conakry.

The mailing address is P. O. Box 603, Transversale No. 2, Centre Administratif de Koloma, Commune de Ratoma, Conakry.

U. S. Embassy Guinea Home Page
http://conakry.usembassy.gov

GUINEA-BISSAU

General	**277**
Buoyage System	**277**
Cautions	**277**
Currency	**277**
Government	**277**
Holidays	**278**
Industries	**278**
Languages	**278**
Navigational Information	**278**
Time Zone	**278**
U.S. Embassy	**278**

General

Guinea-Bissau lies on the W coast of Africa. Its neighbors are Senegal on the N, Guinea on the E and SE, and the Atlantic Ocean on the W and NW.

The climate is hot and humid, with a monsoonal-type rainy season (June to November) with SW winds and a dry season (December to May) with NE harmattan winds. The annual rainfall ranges from 1,270 to 3,050mm.

The coast is heavily indented by deep inlets or gulfs. Off the coast, many islands are separated from the mainland by creeks.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation in Guinea-Bissau are unreliable. Lights may be extinguished; buoys and beacons may be missing, unlit, or out of position.

Cautions

Fishing vessels may be encountered off the entire coast of Guinea-Bissau.

Currency

The official unit of currency is the Communaute Financiere Africaine franc (CFAF), consisting of 100 centimes.

Government

Flag of Guinea-Bissau

Guinea-Bissau is a multi-party republic. The country is divided into nine regions.

Guinea-Bissau is governed by a directly-elected President who serves a 5-year term. The unicameral National People's Assembly consists of 100 directly-elected members serving 4-year terms.

The legal system is based on French civil law.

The capital is Bissau.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 20	Death of Amilcar Cabral
March 8	International Women's Day
May 1	May Day
August 3	Pidjiguiti Day
September 24	Independence Day
December 25	Christmas Day

Islamic holidays, which are subject to the appearance of the moon, include Eid Al-Fitr (End of Ramadan) and Eid Al-Adha.

Industries

The main industries are agriculture, beer, and soft drinks.

The main exports are cashew nuts, shrimp, peanuts, palm kernals, and swan lumber. The main export-trading partners are India and Nigeria.

The main imports are foodstuffs, machinery and transport equipment, and petroleum products. The main import-trading partners are Italy, Senegal, and Portugal.

Languages

Portuguese is the official language. Crioulo,and other indigenous African languages are also spoken.

Navigational Information

Enroute Volume

Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Maritime Claims

The maritime territorial claims of Guinea-Bissau are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Claims straight baselines.

Time Zone

The Time Zone description is ZULU. Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy suspended operations on 14 June 1998.

The U. S. Ambassador to Senegal is accredited to Guinea-Bissau. The U.S. Embassy is situated at Avenue Jean XXIII at the corner of Rue Kleber, Dakar, Senegal.

The mailing address is B. P. 49, Dakar.

U. S. Embassy Senegal Home Page
http://dakar.usembassy.gov

HAITI

General	**279**
Buoyage System	**279**
Currency	**279**
Government	**279**
Holidays	**280**
Industries	**280**
Languages	**280**
Navigational Information	**280**
Regulations	**280**
Search and Rescue	**281**
Time Zone	**281**
U.S. Embassy	**281**

General

Haiti, occupying the western third of the island of Hispaniola, is composed mostly of mountains which reach the coast in many places. The highest of the three major mountain ranges is about 2,680m.

There are several large fertile plains among the mountains. The coast line is quite irregular producing numerous small bays and coves.

The largest river, the Riviere de I'Artibonite, is navigable by small craft for about 100 miles.

The tropical climate produces annual coastal temperature extremes between 20°C and 37°C. Rainfall patterns vary throughout the island but at the capital city annual rainfall averages 1,372mm.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation along the coasts of Haiti have occasionally been reported to be unreliable.

Currency

The official unit of currency is the gourde, consisting of 100 centimes.

Government

Flag of Haiti

Haiti is a republic. The country is divided into ten departments.

Haiti is governed by a directly-elected President who serves a 5-year term. The bicameral National Assembly is composed of a directly-elected 30-member Senate, who serve 6-year terms, and a directly-elected 99-member Chamber of Deputies, who serve 4-year terms.

The legal system is based on Roman civil law.
The capital is Port-au-Prince.

Holidays

The following holidays are observed:

January 1	New Year's Day/Independence Day
January 2	Ancestor's Day
April 7	Death of Toussaint Louverture
April 14	Americas Day
Carnival	Variable
Good Friday	Variable
Easter Sunday	Variable
May 1	Labor Day
May 18	Flag Day and University Day
May 22	Sovereignty and Thanksgiving Day
Ascension Day	Variable
Corpus Christi	Variable
August 15	Assumption Day
October 8	Death of Henri Christophe
October 17	Death of Jean-Jacques Dessalines
October 24	United Nations Day
November 1	All Saints' Day
November 2	All Souls' Day
November 18	Vertieres Day (Armed Forces Day)
December 5	Discovery of Haiti
December 25	Christmas Day

Industries

The main indstries are agriculture, sugar refining, flour milling, textiles, cement, and light assembly industries based on imported parts.

The main exports are reassembled manufactured goods, coffee, oils, cocoa, and mangoes. The main export-trading partners are the United States and the Dominican Republic.

The main imports are food, manufactured goods, machinery and transport equipment, fuels, and raw materials. The main import-trading partners are the United States and the Netherlands Antilles.

Languages

French and Creole are the official languages.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Haiti are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone **	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Limit of Exploitation.

* Draws the territorial sea limits in a manner which implies straight baselines, including across the mouth of the Golfe de la Gonave.

** Also considered a security zone.

Maritime Boundary Disputes

Claims U.S.-administered Navassa Island (18°24'N., 75°01'W.).

Regulations

General

Vessels are prohibited from entering Haitian ports between the hours of 1800 and 0600.

Notice of Arrival Procedures

Shipping companies engaged in international trade with Haiti are requested to have their vessel masters provide a report to the Autorite Portuaire Nationale (APN) in accordance with the Notice of Arrival procedures contained in the APN web site, using the links *Telechargements* and *Notice of Arrival*.

APN Home Page
http://apn.gouv.ht

Vessels bound for Haitian ports shall comply with the APN 72-hour notification requirements. Vessels arriving from ports in the greater Caribbean need to submit this information 24 hours prior to arrival. The notification form and instructions for completion can be found at the APN web site. To minimize congestion, all ETA information should be sent by e-mail, as follows:

1. Director of Operations direxpl@yahoo.com
2. Designated Authority cnanp_ad@hotmail.com

Search and Rescue

The Maritime Rescue Coordination Center (MRCC) Semanah of the Haitian Maritime Navigation Service is responsible for coordinating search and rescue operations and can be contacted by telephone (509-2222-6336, 509-2222-7048, or 509-2222-8858).

Time Zone

The Time Zone description is ROMEO (+5). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at Tabarre 41, Boulevard 15 Octobre, Port-au-Prince.

The mailing address is the same.

U. S. Embassy Haiti Home Page
http://haiti.usembassy.gov

HONDURAS

General	**283**
Buoyage System	**283**
Cautions	**283**
Currency	**283**
Fishing Areas	**283**
Government	**283**
Holidays	**284**
Industries	**284**
Languages	**284**
Navigational Information	**284**
Search and Rescue	**284**
Time Zone	**284**
U.S. Embassy	**284**

General

Honduras is located in Central America, bordering the Caribbean Sea, between Guatemala and Nicaragua and bordering the North Pacific Ocean, between El Salvador and Nicaragua.

Honduras has a 400 mile coastline along the Caribbean Sea and a short 40 mile Pacific outlet in the Golfo de Fonseca. It shares borders with Nicaragua, Guatemala and El Salvador.

The terrain is predominately mountainous, with a narrow plain on the Pacific side and a wide coastal plain on the Caribbean side. The high mountain ranges in the interior rise to elevations of about 3,048m in places, but elsewhere, the heights rarely exceed 1,524m.

Both coastal areas are typically tropical with a hot, humid climate. The climate is temperate in the mountains.

Buoyage System

The IALA Buoyage System (Region B) is in effectt. See Chart No. 1 for further IALA Buoyage System information.

Cautions

It was reported (1998) that, due to a severe hurricane hitting the coast, all aids to navigation were either destroyed or are unreliable. Local authorities should be consulted.

Currency

The official unit of currency is the lempira, consisting of 100 centavos.

Fishing Areas

The coastal areas on the Caribbean Sea coast are extensively fished by local vessels working out of small harbors and rivers. Fishing vessels are also found on Miskito Bank (14°28'N., 82°42'W.).

Government

Honduras is a democratic constitutional republic. The country is divided into 18 departments.

Honduras is governed by a directly-elected President who serves a 4-year term. The unicameral National Congress is composed of 128 members, serving 4-year terms, elected by proportional representation.

The legal system is based on Roman civil law, Spanish civil law, and English common law.

The capital is Tegucigalpa.

Flag of Honduras

Holidays

The following holidays are observed:

January 1	New Year's Day
Holy Thursday	Variable
Good Friday	Variable
Holy Saturday	Variable
Easter Sunday	Variable
April 14	Panamerican Day
May 1	Labor Day
September 15	Independence Day
October 3	Francisco Morazan's Birthday
October 12	Columbus Day (Dia de la Raza)
October 21	Armed Forces Day
December 25	Christmas Day

Industries

The main industries are sugar, coffee, textiles, clothing, wood products, and cigars.

The main exports are apparel, coffee, shrimp, wire harnessing, bananas, gold, palm oil, fruit, lobster, and lumber. The main export-trading partners are the United States, and El Salvador, and Guatemala.

The main imports are machinery and transportation equipment, industrial raw materials, chemicals, fuels, and foodstuffs. The main import-trading partners are the United States, Guatemala, El Salvador, and Mexico.

Languages

The languages of the country are Spanish and Amerindian dialects.

Navigational Information

Enroute Volumes

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2.

Pub. 153, Sailing Directions (Enroute) West Coasts of Mexico and Central America.

Maritime Claims

The maritime territorial claims of Honduras are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Claims straight baselines. Claims Golfo de Fonseca as a historic bay.

Maritime Boundary Disputes

Advised by the ICJ to adopt a triparite resolution with El Salvador and Nicaragua to establish a maritime boundary in Golfo de Fonseca which considers Honduran access to the Pacific Ocean.

Conejo Island, in Golfo de Fonseca, claimed by El Salvador.

Claims Sapodilla Cays (16°07'N., 88°16'W.) off the coast of Belize. This area is being run as a joint ecological park between thre two countries.

Search and Rescue

The aeronautical search and rescue agency responsible for all countries in Central America is RCC Centro America, which can be contacted, as follows:

1. Telephone: 504-2343360 ext. 1318 and 1310
2. Facsimile: 504-2342488

The following countries are part of the Corporacion Centroamericana de Servicios de Navegacion Aerea (COCESNA), the Central American aeronautical search and rescue network:

1. Belize.
2. Costa Rica.
3. El Salvador.
4. Guatemala.
5. Honduras.
6. Nicaragua.

Each country has a rescue sub-center (RSC) working in conjunction with RCC Centro America. The preferred languages for inter-RSC communication are English and Spanish.

Time Zone

The Time Zone description is SIERRA (+6). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at Avenida La Paz, Tegucigalpa.

The mailing addresses are, as follows:

1. Honduras address—
   Avenida La Paz
   Apartado Postal Number 3453

Tegucigalpa
2. U.S. address—

APO AA (34022)

U. S. Embassy Honduras Home Page
http://honduras.usembassy.gov

IRELAND

General	**287**
Buoyage System	**287**
Cautions	**287**
Currency	**288**
Firing Areas	**288**
Fishing Areas	**288**
Government	**288**
Holidays	**288**
Industries	**289**
Languages	**289**
Meteorology	**289**
Navigational Information	**289**
Pilotage	**289**
Regulations	**289**
Search and Rescue	**290**
Ship Reporting System	**291**
Signals	**291**
Submarine Operating Areas	**291**
Time Zone	**292**
Traffic Separation Schemes	**292**
U.S. Embassy	**292**
Vessel Traffic Service	**292**

General

Ireland is located in Western Europe, occupying almost 85 per cent of the island of Ireland in the North Atlantic Ocean, W of Great Britain.

The climate is temperate maritime modified by the North Atlantic Current. The winters are mild and the summers cool. The climate is consistently humid, and overcast about half the time.

The terrain is mostly level with rolling interior plain surrounded by rugged hills and low mountains terminating in sea cliffs on the W coast.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

The general direction of lateral buoyage along the S and E coasts of Ireland is, as follows:

1. East from The Bull (51°35.5'N., 10°18.0'W.) along the S coast to Tuskar Rock (52°20'N., 6°12.4'W.).
2. North through the Irish Sea and the North Channel.
3. West along the N coast as far as Malin Head (53°22.6'N., 7°23.9'W.).

The general direction of lateral buoyage along the W and N coasts of Ireland is, as follows:

1. North from The Bull along the W coast.
2. East along the N coast as far as Malin Head.

Cautions

High Speed Craft

High speed craft operate between the coast of Ireland and the coast of the United Kingdom. For further information on high speed craft, see **United Kingdom—Cautions—High Speed Craft.**

Offshore Oil Exploration

The continuing exploration of offshore waters for oil and gas has led to the establishment of a variety of floating and fixed vessels and structures off the coast of Ireland, particularly in the Celtic Sea. The main facilities in this area are:

1. Kinsale Head Gas Field (51°22'N., 7°59'W.).
2. Ballycotton Gas Field (51°27'N., 8°08'W.).
3. Seven Heads Gas Field (51°12'N., 8°20'W.).

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Firing Areas

Firing danger areas are located off the coast of Ireland, as follows:

1. **Gormanston Danger Area D1.—**Extends 10 miles offshore from Benhead (53°39'N., 6°13'W.).
2. **Irish Naval Service Firing Practice Area D13.—**Extends 15 miles offshore between Galley Head (51°32'N., 8°57'W.) and Seven Heads (51°34'N., 8°43'W.).
3. **Firing Practice Area D14.—**Extends 20 miles SW from a line joining The Bull (51°35'N., 10°18'W.) and Great Skellig, 14 miles NW, at the mouth of the Kenmare River.
4. **Bear Island Firing Practice Area.—**Extends 1 mile E from the rifle range located about 0.15 mile N of Leahern's Point (51°38'N., 9°48'W.). The extremities of the area are marked by three lighted buoys.

Fishing Areas

Southwest Coast

Trawlers fish for a considerable distance off the SW coast of Ireland, principally in the autumn, however, such vessels may be encountered here at any time of year. The fishing grounds are limited to within depths of 550m and extend from off Fastnet Rock to a position in 51°10'N, 14°30'W, and then N to Porcupine Bank. These deep sea fishing grounds also extend S from off Fastnet Rock to 49°00'N.

Drift nets may be met with off the SW coast of Ireland far offshore from April to June and inshore during September and October.

British and French mackerel drifters may be encountered during the months of April to June between the latitudes of the Fastnet and the Scilly Isles, and between the meridians of 11°00'W and 6°00'W. Mackerel drifters normally lie to their nets, which may extend up to 3.5 miles and are only marked by a can buoy at the end and occasional floats. The usual lights for a drift net vessel are exhibited by the drifters. It is not possible to steam over the drift nets without doing damage as they lie on the surface.

South Coast

Trawling is carried out year round on Nymphe Bank.

East and North Coasts

From Tuscar Rock to Inishtrahull, trawling is carried on throughout the year, mostly between Dublin Bay and Lough Strangford, off Larne, and E of Inishtrahull and in the approaches to North Channel.

Nets may be encountered off Waterford and South Wexford coast, up to 30 miles off, from February to June; close off the E coast of Wexford and the coasts of Wicklow and Dublin, nets may be encountered from October to January; from 10 to 25 miles offshore between E and NE of Howth, from June to August; off Ardglass, from May to August; close inshore off Kilkeel, during September and October.

West Coast

Some trawling is carried on in Dingle Bay, from October to June, and in Galway Bay and Donegal Bay throughout the year.

Drift nets are also employed in Galway Bay during September and October; off the N coast of Mayo and N and W coasts of Donegal, not far offshore, from July to September; and up to 40 miles W of Inishtrahull, during January, February, May, and June.

Northwest Coast

Trawling is carried out on the NW coast, on and E of Vidal Bank, and NW of Tory Island, in depths of 200 to 550m. These deep sea grounds extend N to St. Kilda and beyond.

Government

Flag of Ireland

Ireland is a republic. The country is divided into 29 counties and five cities.

Ireland is governed by a directly-elected President who serves a 7-year term. The Prime Minister is nominated by the House of Representatives and appointed by the President. The bicameral Parliament composed of the appointed 60-member Senate, serving 5-year terms, and the 166-member House of Representatives, directly elected using a proportional representation system, serving 5-year terms.

The legal system is based on English common law, substantially modified by indigenous concepts.

The capital is Dublin.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 6	Epiphany
March 17	Saint Patrick's Day (except when this date falls on a Sunday, when the feast is kept on March 18)
Good Friday	Variable
Easter Sunday	Variable

Easter Monday	Variable
First Monday in May	Bank Holiday
Ascension Day	Variable
Corpus Christi	Variable
First Monday in June	Bank Holiday
First Monday in August	Bank Holiday
August 15	Assumption Day
Last Monday in October	Bank Holiday
November 1	All Saints' Day
December 8	Immaculate Conception
December 25	Christmas Day
December 26	St. Stephen's Day

Industries

The main industries include metal and mineral processing (steel, lead, silver, zinc, aluminum, barite, and gypsum), food products, brewing, textiles, clothing, chemicals, pharmaceuticals, machinery, rail transportation equipment, vehicles, ship contruction and repair, glass and crystal, software, and tourism.

The main exports are machinery and equipment, computers, chemicals, pharmaceuticals, livestock, and animal products. The main export-trading partners are the United States, the United Kingdom, Belgium, Germany, and France.

The main imports are data processing equipment, other machinery and equipment, chemicals, petroleum and petroleum products, textiles, and clothing. The main import-trading partners are the United Kingdom, the United States, and Germany.

Languages

Irish is the first official language. English is recognized as the second official language.

Meteorology

Gale warnings, 24-hour sea area forecasts, coastal reports, marine observations, and Atlantic Ocean weather charts are available in English from Met Eireann (http://www.met.ie).

Navigational Information

Enroute Volume

Pub. 142, Sailing Directions (Enroute) Ireland and the West Coast of England.

Maritime Claims

The maritime territorial claims of Ireland are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	No specified limit.

* Claims straight baselines

Maritime Boundary Disputes

Dispute with Denmark, the United Kingdom, and Iceland over the Faroe Islands' continental shelf boundary outside 200 miles.

Pilotage

In addition to signals of the International Code, any vessel requiring a pilot at night should show a blue light every 15 minutes, and a bright white light, flashed or shown just above the bulwarks at short or frequent intervals, for about 1 minute at a time.

Deep Sea Pilotage

For information concerning Deep Sea Pilotage in the North Sea, the English Channel, and Skagerrak, see **United Kingdom—Pilotage**.

Regulations

Particularly Sensitive Sea Areas (PSSA)

The waters off the W coast of the United Kingdom, Ireland, Belgium, France, Spain, and Portugal, from the Sheltand Islands in the N to Cabo San Vicente in the S, including the English Channel, were granted (2004) the status of PSSA by the International Maritime Organization.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

The Western Europe Tanker Reporting System (WETREP) was instituted to help protect the environment of the PSSA.

Protection of Whales and Dolphins

Since 1981, all Irish waters have been declared a whale and dolphin sanctuary. Regulations prohibit the deliberate disturbance of these marine mammals.

Irish Whale and Dolphin Group

Mail:	Dr. Simon Berrow Irish Whale and Dolphin Group Merchants Quay Kilrush, County Clare Ireland
Telephone:	353-86-8545450
E-mail:	sightings@iwdg.ie
Web address:	http://www.iwdg.ie

National Parks and Wildlife Service

Mail:	7 Ely Place Dublin 2, Ireland
Telephone:	353-1-8882000

Facsimile	353-1-8883272
E-mail:	natureconservation@environ.ie
Web address:	http://www.npws.ie http://www.environ.ie

There are definite risks associated with engaging these mammals, particularly the larger whales. Generally they are present some distance offshore, in open waters, and late in the year when weather conditions are not suitable for small craft. As wild animals, their actions are unpredictable if they feel their young are at risk and, considering their size, are capable of causing damage to small craft.

The following guidelines are to be followed in case of interaction with large mammals within Irish waters:

1. When whales or dolphins are first sighted, vessels should maintain a steady course.
2. Vessels should be maintained below 7 knots.
3. Do not attempt to pursue any whales or dolphins encountered.
4. In the case of dolphins, they will often approach craft and may engage in "bow riding." Always allow dolphins to approach a vessel rather than attempt to go after them.
5. Maintain a distance of at least 100m from whales.
6. Maintain a distance of 200m between other vessels in the vicinity.
7. Attempt to take a course parallel to the direction the whales or dolphins are taking.
8. Do not corral whales or dolphins between vessels.
9. Special care must be taken when young calves are seen. Do not come between a mother and her calf.
10. Successive vessels must follow the same course.
11. Vessels should not spend more than 30 minutes with the whales or dolphins.
12. Do not attempt to swim with the whales or dolphins.

Vessels that do encounter any species are encouraged to log all sightings and to advise the Irish Whale and Dolphin Group or the National Parks and Wildlife Service.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The reports should be sent through SafeSeasIreland. Vessels unable to utilize this system (vessels under 300 gross tons without an IMO Number or an MMSI Number or vessels not fitted with a functionaing AIS) may contact the Marine Survey Office (MSO), as follows:

1. By e-mail to the MSO (mso@transport,ie) and copied to the Chief Surveyor (brianhogan@transport.ie) and the Deputy Chief Surveyor (jamessnelgrove@transport.ie).
2. Telephone: 353-1-678-3400
3. Facsimile: 353-1-678-3409

These arrangements may also be utilized by other vessels but only if SafeSeasIreland is unavailable due to technical reasons. Such reasons should be sent via e-mail (ssisupport@transport.ie) for a possible resolution before these alternative arrangements are used.

Vessels should provide the following information:

1. Vessel's name and call sign.
2. Port of destination.
3. Planned duration of the call.
4. Planned operations at the port or anchorage of destination (loading, unloading, other).
5. Planned statutory survey inspections and substantial maintenance and repair work to be carried out at the port of destination.
6. Date of last EI in the Paris MoU region.

If SafeSeasIreland is unavailable due to technical reasons, tankers should provide the following additional information:

1. Configuration (single hull, single hull with segregated ballast tanks, double hull).
2. Condition of the cargo and ballast tanks (full, empty, inerted).
3. Volume and nature of cargo.

Owners, operators, and agents must provide the MSO with the actual time of arrival (ATA) and the actual time of departure (ATD) of vessels calling at ports and anchorages in Ireland. SafeSeasIreland will collect this information automatically from vessels equipped with an approved AIS. Operators, agents, or masters of non-AIS equipped vessels are required to provide the MSO with the following information:

1. Vessel's name and call sign.
2. ATA/ATD.
3. Port of destination/departure.

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Search and Rescue

The Irish Coast Guard is responsible for conducting search and rescue operations through the Maritime Rescue Coordination Center (MRCC) and Maritime Rescue Coordination Subcenters (MRSC), as follows:

1. MRCC Dublin.
2. MRSC Valentia.
3. MRSC Malin Head.

These facilities maintain a continuous listening watch for distress traffic on 2187.5 kHz, VHF channel 16, and VHF channel 70 and can be contacted, as follows:

1. MRCC Dublin
   a. Telephone: 353-1-6620922
353-1-6620923
   b. Facsimile: 353-1-6620795
   c. E-mail: mrccdublin@irishcoastguard.ie
2. MRSC Valentia
   a. Telephone: 353-66-9476109
   b. Facsimile: 353-66-9476289
   c. E-mail: mrscvalentia@irishcoastguard.ie
3. MRSC Malin Head
   a. Telephone: 353-74-9370103
   b. Facsimile: 353-74-9370221

c. E-mail: mrscmalin@irishcoastguard.ie

The Royal National Lifeboat Institution (RNLI), which is a private organization supported entirely by voluntary contributions, maintains 230 lifeboats of various types at 211 lifeboat stations around the coast of the United Kingdom, the Republic of Ireland, the Isle of Man and the Channel Islands; 19 all-weather lifeboats are located in the Republic of Ireland, as follows:

1. Castletownbere (51°39'N., 9°54'W.).
2. Baltimore (51°29'N., 9°23'W.).
3. Courtmacsherry (51°38'N., 8°43'W.).
4. Ballycotton (51°50'N., 8°00'W.).
5. Dunmore East (52°09'N., 7°00'W.).
6. Kilmore Quay (52°10'N., 6°35'W.).
7. Rosslare (52°15'N., 6°20'W.).
8. Arklow (52°48'N., 6°09'W.).
9. Wicklow (52°59'N., 6°02'W.).
10. Dun Laoghaire (53°18'N., 6°08'W.).
11. Howth (53°23'N., 6°04'W.).
12. Clogher Head (Port Oriel) (53°48'N., 6°13'W.).
13. Valentia (51°56'N., 10°19'W.).
14. Fenit (52°16'N., 9°52'W.).
15. Aran Islands (Kilronan) (53°07'N., 9°38'W.).
16. Achill Sound (53°52'N., 9°57'W.).
17. Ballyglass (54°15'N., 9°53'W.).
18. Aranmore (54°59'N., 8°30'W.).
19. Buncrana (Lough Swilly) (53°08'N., 7°28'W.).

All-weather lifeboats are between 12 and 17m long, with maximum speeds of 16 to 25 knots and a maximum range of up to 250 miles. Every all-weather lifeboat is equipped the following:

1. VHF radiotelephone and DSC equipment.
2. Medium frequency radiotelephone and DSC equipment.
3. High frequency radiotelephone and DSC equipment
4. VHF direction-finding equipment capable of detecting EPIRB and PLB transmissions on marine VHF frequencies and on 121.5 MHz.
5. Radar capable of activating and detecting SART transponders.

The Community Inshore Rescue Service, a locally-funded rescue service manned by volunteers, maintains ten lifeboats around the coast of Ireland, as follows:

1. Bantry (51°40'N., 9°29'W.).
2. Schull (51°31'N., 9°33'W.).
3. Bonmahon (58°02'N., 7°22'W.).
4. Tramore (52°09'N., 7°09'W.).
5. Cahore (52°34'N., 6°12'W.).
6. Darrynane (51°46'N., 10°08'W.).
7. Banna (52°20'N., 9°50'W.).
8. Ballybunnion (52°32'N., 9°46'W.).
9. Limerick (52°39'N., 8°39'W.).
10. Kilkee (52°41'N., 9°41'W.).

The Irish Coast Guard, a volunteer organization, maintains 51 coastal units whose primary function is to assist craft in distress on or near the coast. These stations are located, as follows:

1. Malin Head Division (NW coast)—10 stations.
2. Valentia Division (W and SW coasts)—21 stations.
3. Dublin Division (E and SE coasts)—20 stations.

Ship Reporting System

SafeSeasIreland (SSI)

SafeSeasIreland (SSI) is the Irish implementation of the European Council Directive 2002/59/EC, which requires all vessels over 300 gross tons carrying dangerous or polluting cargo bound to or leaving from European Union ports to report to the relevant port authority 24 hours in advance.

SSI is the Irish link into SafeSeaNet, the EU Community Vessel Traffic Monitoring and Information System and provides for the electronic notification of the following:

1. Vessel arrival and departure notifications.
2. Dangerous or polluting cargo notifications.
3. ISPS notifications.
4. Waste notifications.
5. Reporting requirements in the event of an accident or incident.

The following vessels are not required to participate in SSI:

1. Warships, naval auxiliaries, and other vessels owned or operated by a Member State and used for non-commercial public service.
2. Fishing vessels, traditional vessels, and recreational craft of less than 45m loa.
3. Bunkers below 5,000 tons, vessel stores, and equipment for use on board vessels.

Port authorities, operators, agents, and owners are requested to contact the Marine Survey Office (MSO) or the SSI contact, who will process the application for access to SSI. The MSO and the SSI can be contacted, as follows:

Contact Information		
	Telephone	**E-mail**
MSO	353-1-6783400	mso@dttas.ie
SSI	353-1-6783400	greghoulihan@dttas.ie

Western Europe Tanker Reporting System (WETREP).

The Western Europe Tanker Reporting System (WETREP), a mandatory reporting system, is in effect. The Reporting Area covers the waters off Belgium; the W coast and English Channel coasts of France; Ireland; Portugal; the N and W coasts of Spain; and the English Channel and W coasts of the United Kingdom, including the Shetland Isles.

Further information on WETREP can be found in North Atlantic Ocean—Ship Reporting System.

Signals

Storm warnings are only broadcast by radio. No visual storm signals are shown.

Submarine Operating Areas

Submarines frequently exercise in areas located N and S of Ireland. Submarines, both surfaced and underwater, may also be encountered in North Channel and in the Irish Sea.

Time Zone

The Time Zone description is ZULU. Daylight Savings Time (ALFA (-1)) is maintained from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

A Traffic Separation Scheme has been established by the Government of Ireland in the approaches to Dublin. This scheme is not IMO adopted.

U.S. Embassy

The U.S. Embassy is situated at 42 Elgin Road, Ballsbridge, Dublin 4. The mailing address is the same.

U. S. Embassy Ireland Home Page
http://dublin.usembassy.gov

Vessel Traffic Service

A Vessel Traffic Service is in operation in Dublin (53°21'N., 6°11'W.). For further information, see Pub. 142, Sailing Directions (Enroute) Ireland and the West Coast of England.

ISRAEL

General 294
Buoyage System 294
Cautions 294
Currency 294
Firing Areas 294
Government 295
Holidays 295
Industries 296
Languages 296
Navigational Information 296
Pollution 296
Regulations 296
Search and Rescue 297
Ship Reporting System 297
Time Zone 298
Traffic Separation Schemes 298
U.S. Embassy 298

General

Israel, located in the Middle East, is bordered on the NW side by the Mediterranean Sea, on the N side by Lebanon, on the NE side by Syria, on the SE side by Jordan and the Gulf of Aqaba, and on the SW side by Egypt. The country extends about 260 miles in a N/S direction and varies from 10 to 65 miles in width. The Sinai Peninsula was formerly occupied by Israel after the 1967 Six Day War until 1982. The Gaza Strip, the westernmost coastal area, is now largely administered by the Palestinian Authority. The Dead Sea, lying on the E side of the country, is 400m below sea level and the lowest point on the earth's surface. The terrain consists of low, coastal plains, central mountains, and the Negev Desert in the S.

The climate is primarily temperate, although it is hot and dry in the S and E areas.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Special Warning 121 (Issued 20 March 2003)

Information on Special Warning 121 can be found in **North Atlantic Ocean—Cautions**.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

General

Oil rigs and drilling platforms may be encountered off the coast.

Gaza Blockade

The Israeli Navy is currently (2011) enforcing a blockade in the Gaza Maritime Area. The area, which is closed to all maritime traffic, is bound by lines joining the following positions:

a. 31°46'48.0"N, 34°10'00.6"E.
b. 31°35'42.6"N, 34°29'27.6"E.
c. 31°19'23.4"N, 34°13'06.6"E.
d. 31°33'43.8"N, 33°56'40.8"E.

Currency

The official currency is the Israeli shekel, consisting of 100 agorot.

Firing Areas

Firing and bombing practices may take place off the coast of Israel in the exercise areas, as follows:

1. **Area 69A.—**An area bounded by lines joining the following positions:
   a. 33°05'40"N, 35°06'13"E.
   b. 33°05'40"N, 34°52'00"E.
   c. 33°08'52"N, 34°52'54"E.
   a. 33°05'41"N, 35°06'13"E.
2. **Area 69B.—**An area bounded by the coast and lines joining the following positions:
   a. 33°05'24"N, 34°59'10"E.
   b. 33°05'24"N, 35°06'19"E.
   c. 33°03'42"N, 35°06'17"E.
   d. 33°03'42"N, 34°59'10"E.
3. **Area 69C.—**An area bounded by lines joining the following positions:
   a. 33°05'38"N, 35°06'13"E.
   b. 33°05'40"N, 34°59'10"E.
   c. 33°05'30"N, 34°59'10"E.
   d. 33°05'30"N, 35°06'13"E.
4. **Area 601.—**An area bounded by lines joining the following positions:
   a. 32°58'20"N, 35°04'42"E.
   b. 32°59'58"N, 35°00'43"E.
   c. 32°56'51"N, 34°59'27"E.
   d. 32°57'14"N, 35°04'30"E.
5. **Area 602.—**An area bounded by lines joining the following positions:
   a. 32°50'12"N, 34°58'47"E.
   b. 32°52'13"N, 34°54'49"E.
   c. 32°53'44"N, 34°56'23"E.
   d. 32°54'08"N, 34°59'04"E.
   e. 32°50'09"N, 34°59'04"E.
6. **Area 602A.—**An area bounded by lines joining the following positions:
   a. 32°54'08"N, 34°59'04"E.
   b. 32°53'44"N, 34°56'23"E.
   c. 32°52'13"N, 34°54'49"E.
   d. 32°54'07"N, 34°51'06"E.
   e. 32°56'50"N, 34°54'17"E.
   f. 32°57'55"N, 34°59'05"E.
7. **Area 602B.—**An area bounded by lines joining the following positions:
   a. 33°00'14"N, 34°59'04"E.
   b. 32°58'44"N, 34°52'53"E.
   c. 32°55'18"N, 34°48'46"E.
   d. 32°54'07"N, 34°51'06"E.
   e. 32°56'50"N, 34°54'17"E.
   f. 32°57'55"N, 34°59'05"E.
8. **Area 603.—**An area bounded by lines joining the following positions:
   a. 32°53'35"N, 35°04'43"E.
   b. 32°53'46"N, 35°04'12"E.
   c. 32°51'44"N, 35°03'23"E.
   d. 32°51'33"N, 35°03'59"E.
9. **Area 30.—**An area bounded by lines joining the following positions:
   a. 32°42'55"N, 34°56'35"E.
   b. 32°42'56"N, 34°52'59"E.
   c. 32°40'54"N, 34°52'05"E.
   d. 32°40'54"N, 34°55'39"E.
10. **Area 24.—**An area bounded by lines joining the following positions:
   a. 31°59'38"N, 34°43'49"E.
   b. 32°00'20"N, 34°35'11"E.
   c. 31°54'56"N, 34°31'59"E.
   d. 31°55'38"N, 34°41'49"E.
   e. 31°56'08"N, 34°41'59"E.
   f. 31°56'08"N, 34°42'18"E.
11. **Area 82.—**An area bounded by lines joining the fol-

lowing positions:
a. 31°54'56"N, 34°41'27"E.
b. 31°55'02"N, 34°41'05"E.
c. 31°55'36"N, 34°41'22"E.
d. 31°55'07"N, 34°34'29"E.
e. 31°52'38"N, 34°34'29"E.
f. 31°51'08"N, 34°37'41"E.
g. 31°51'07"N, 34°39'33"E.

12. **Area 608.—**An area bounded by lines joining the following positions:
a. 31°44'26"N, 34°35'47"E.
b. 31°44'59"N, 34°34'28"E.
c. 31°42'39"N, 34°33'01"E.
d. 31°42'42"N, 34°34'42"E.

13. **Area 608A.—**An area bounded by lines joining the following positions:
a. 31°44'59"N, 34°34'28"E.
b. 31°45'56"N, 34°32'11"E.
c. 31°42'38"N, 34°32'11"E.
d. 31°42'39"N, 34°33'01"E.

14. **Area 610.—**An area bounded by lines joining the following positions:
a. 31°41'20"N, 34°30'20"E.
b. 31°38'29"N, 34°28'04"E.
c. 31°40'41"N, 34°31'35"E.
d. 31°38'50"N, 34°31'51"E.
e. 31°37'05"N, 34°29'45"E.
f. 31°37'11"N, 34°30'32"E.
g. 31°38'55"N, 34°31'46"E.

15. **Area 609.—**An area bounded by lines joining the following positions:
a. 31°38'44"N, 34°27'46"E.
b. 31°37'43"N, 34°27'03"E.
c. 31°35'51"N, 34°29'33"E.
d. 31°36'44"N, 34°30'10"E.

16. **Area 615.—**An area bounded by lines joining the following positions:
a. 32°12'26"N, 34°48'39"E.
b. 32°12'29"N, 34°48'32"E.
c. 32°12'20"N, 34°48'29"E.
d. 32°12'20"N, 34°48'18"E.
e. 32°11'47"N, 34°48'07"E.
f. 32°11'44"N, 34°48'13"E.
g. 32°11'38"N, 34°48'10"E.
h. 32°11'36"N, 34°48'18"E.

17. **Area 605.—**An area bounded by lines joining the following positions:
a. 31°42'30"N, 34°17'35"E.
b. 31°35'43"N, 34°29'28"E.
c. 29°31'03"N, 34°55'58"E.
d. 29°31'01"N, 34°56'00"E.
e. 29°30'56"N, 34°55'54"E.
f. 29°30'58"N, 34°55'51"E.

18. **Area 611.—**An area bounded by lines joining the following positions:
a. 31°35'50"N, 34°29'35"E.
b. 31°37'43"N, 34°27'03"E.
c. 31°38'44"N, 34°27'46"E.
d. 31°43'57"N, 34°18'41"E.
e. 31°42'30"N, 34°17'35"E.
f. 31°35'42"N, 34°29'28"E.

19. **Area 611A.—**An area bounded by lines joining the following positions:
a. 31°41'39"N, 34°22'41"E.
b. 31°40'25"N, 34°21'45"E.
c. 31°37'35"N, 34°26'51"E.
d. 31°38'50"N, 34°27'35"E.

Vessels should approach with caution and avoid crossing firing danger areas. Such danger areas, dates and hours of these practices are broadcast by Haifa Radio (4XO) at least 24 hours in advance and repeated every 4 hours until the end of the practice.

Though every effort will be made to broadcast the navigational warnings related to firing practices at least 24 hours in advance, mariners are warned that a firing practice may take place at short notice.

Mariners are requested to listen to Haifa Radio at the time of the last transmission of warnings prior to their departure from an Israeli port.

Government

Flag of Israel

Israel is a parliamentary democracy. The country is divided into six districts.

The Knesset, directly elected for a 4-year term, is a 120-member Parliament. The system of election is by proportional representation. Executive power lies in the Cabinet, headed by the directly-elected Prime Minister. The President of the Knesset, who serves as chief of state for a 7-year term, is chosen by the Knesset.

The legal system is based on English common law, British Mandate regulations, and, in personal matters, Jewish, Christian, and Muslim traditions.

The capital, as proclaimed in 1950, is Jerusalem. The United States, like nearly all other countries, does not recognize this status and maintains its Embassy in Tel Aviv.

Holidays

The following holiday is observed:

Labor Day	May 1

Other holidays, which are dependent on the appearance of the moon, include Passover, Independence Day, Pentecost, Rosh Hashana (Jewish New Year), Yom Kippur (Day of Atonement), and the Feast of the Tabernacles.

Industries

The main industries are high-technology products, wood and paper products, potash and phosphates, food, beverages, tobacco, caustic soda, cement, construction, metal products, chemical products, plastics, diamond cutting, textiles, and footwear.

The main exports are machinery and equipment, software, cut diamonds, agricultural products, chemicals, textiles, and clothing. The main export-trading partners are the United States, Belgium, and Hong Kong.

The main imports are raw materials, military equipment, invesment goods, rough diamonds, fuels, grain, and consumer goods. The main import-trading partners are the United States, Belgium, Germany, the United Kingdom, Switzerland, and China.

Languages

The official language is Hebrew. Arabic is the official language of the Arab minority. English is also widely used.

Navigational Information

Enroute Volumes

Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

Pub. 172, Sailing Directions (Enroute) Red Sea and the Persian Gulf.

Maritime Claims

The maritime territorial claims of Israel are, as follows:

Territorial Sea	12 miles. *
Continental Shelf	Limit of Exploitation.

* Reduced to 3 miles off Gaza.

Pollution

Ballast Water Exchange

In order to prevent the import of non-native aquatic organisms into the waters of the ports of Israel from ships' ballast water discharges, all ships destined for Israeli ports must exchange any ballast water that has not been taken on in open ocean.

The best method of protecting harbor waters from foreign organisms that may exist in the ballast water collected in foreign harbors and near shore areas is for the ballast water to be exchanged in open ocean, beyond any continental shelf or fresh water current effect.

For vessels calling at Israeli Mediterranean ports, ballast exchange must be carried out in the Atlantic Ocean when practicable.

Vessels failing to comply with the above procedure will not be permitted to pump out their ballast water during their stay in the port or while navigating along the coast of Israel.

A record of the location, date, and time of the ballast water exchange should be entered in the ship's log book, or in other suitable documentation, such as an official ballast water record book. Masters of vessels will be requested to provide ship's inspectors (pilots) with a completed ballast water exchange report.

Pollution Reports

All vessels navigating in Israeli waters should report any pollution, grounding, or dangerous situation to the Marine and Coastal Pollution Division through RCC Haifa. Reports should include the following details:

1. Date and time in UTC.
2. Position of pollution/dangerous vessel.
3. Spread and direction of spillage from polluting vessel.
4. Visible sheen or color of water surface.
5. Any other information concerning the type of pollution, including length and breadth of surface area covered.

The Oil Pollution Response Center is co-located with RCC Haifa and can be contacted, as follows:

1. Telephone: 972-4-8632072
   972-4-8632074
2. Facsimile: 972-4-8632117

Civil Liability

From 20 February 1997, entry to the territorial waters of Israel by oil tankers will be permitted only by those holding an insurance policy covering civil liability for oil pollution damage issued by their flag state.

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Vessel Entrance Limitations

Vessels over a certain age carrying persistent oils (as stated in Regulation 15a of Israeli Regulations of Shipping and Ports) will not be allowed to enter Israeli territorial waters, as follows:

1. Mediterranean Sea—Vessels 25 years of age and older.
2. Gulf of Eilat—Vessels 20 years of age and older.

Regulations

General

Normal international courtesies, such as flying the flag of Israel at the foremast, should be carefully observed while in the waters and ports of Israel.

A maritime zone known as Security Area L extends 20 miles seaward from the coast of the Gaza Strip. In accordance with agreements between Israel and the Palestinian Authority, foreign vessels are prohibited from entering this zone. Vessels approaching this area are requested to maintain radio contact with the Israeli Navy on VHF channel 16 and will be subject to supervision and inspection.

Approaches

All vessels bound for any Israeli Mediterranean port (Haifa, Hadera, Ashdod, Ashkelon, and Gaza) are advised to approach the Israeli coast only through the charted approach corridors.

All coastal traffic transiting along the Israeli coast must transit within the charted coastal route. Vessels navigating within Israeli territorial waters are advised not to exceed a maximum speed of 15 knots.

Communications

Within Israeli territorial waters, all vessels are forbidden to transmit by radiotelephone or radiotelegraph except in accordance with the following conditions:

1. Carry out communications with or through an Israeli coastal radio station on its authorized frequency of 26.96 MHz.
2. Use the minimum power possible.
3. Do not cause interference with other authorized stations.
4. Stop transmitting when requested by Israeli coastal stations.

Security Areas

A security area, designated "K," has been established off the coast of Israel and is bounded by lines joining the following positions:

K1	31°34'04"N, 34°28'09"E.
K2	31°44'28"N, 34°10'00"E.
K3	31°46'26"N, 34°10'00"E.
K4	31°35'19"N, 34°29'08"E.

Vessels may cross the security area only upon complying with the following requirements:

1. Request and obtain permission for crossing the area from the Israeli navy on VHF channel 16.
2. Cross at right angles to the line joining position K1 to position K3 and the line joining position K2 to position K4, keeping a minimum distance of not less than 3 miles from the coastline.

Another security area, designated "L," has been established off the coast of Gaza and is bounded by lines joining the following positions:

L1	31°19.4'N, 34°12.7'E.
L2	31°33.5'N, 33°56.5'E.
L3	31°45.0'N, 34°08.9'E.
L4	31°34.1'N, 34°28.2'E.

Vessels are advised to remain clear off this security area. Vessels approaching this area are requested to maintain radio contact with the Israeli navy on VHF channel 16 and will be subject to supervision and inspection.

Winter Restrictions

Any vessel bound for an Israeli port shall not be permitted to enter the territorial waters of Israeli from 1 November until 30 April if, by certification, it is constrained by the sea state, wind force, maximum distance from land, port of refuge, or length of voyage.

Quarantine

The Maritime Declaration of Health form should be forwarded to the Port Authority, including a copy to the vessel's agent, 12 hours prior to arrival. No contact with the shore is allowed until free pratique is granted by the Quarantine Authorities.

Search and Rescue

Rescue Coordination Center (RCC) Haifa can be contacted, as follows:

1.	Telephone:	972-4-8632145 972-4-8632073 972-4-8632075
2.	Facsimile:	972-4-8632117 972-4-8590919
3.	E-mail:	rcc@mot.gov.il

Ship Reporting System

Vessels bound for Israeli ports are required to report the following information through the Israeli navy to the Israeli Ministry of Transport (IMOT) when 100 miles off the Israeli coast (25 miles for small craft):

1. Vessel name (and previous name).
2. Call sign.
3. Flag and port of registry.
4. IMO number.
5. MMSI.
6. Telex number and satellite telephone number.
7. Mobile telephone number.
8. Year when vessel was built.
9. Gross tonnage.
10. Vessel type and cargo on board.
11. Number of crew/passengers.
12. Agent's name, telephone number, and facsimile.
13. Name of owner and operator.
14. Is the ship holding a valid International Ships Security Certificate (ISPS)?
15. What is the security level on board (Level 1, Level 2, or Level 3)?
16. Are there any guns or weapons on board? If yes, state type and quantity.
17. Last port/previous port and date of departure.
18. Destination.
19. Present position, course, and speed.
20. ETA (UTC).
21. Crew list, including name, rank, nationality, residence (country and city), age, gender, seniority in company, date of signing-on, passport number, and S.B. number.
22. AIS is activated.

Vessels which do not report according to the above IMOT procedures will not be allowed to enter Israeli territorial waters.

The vessel's agent may be requested to furnish additional details to be submitted 48 hours prior to arrival according to the nature of the last port of call.

The IMOT report must be sent to the Israeli navy by one of the following methods:

1. Facsimile: 972-3-6064567
2. E-mail: shipping@idf.gov.il

shipping@yam.netvision.net.il

The Israeli navy will confirm receipt of the IMOT report via INMARSAT-C.

If the vessel is not equipped with INMARSAT-C, or if communication fails, the IMOT report should be sent through RCC Haifa.

All vessels shall contact the Israeli navy on VHF channel 16 when 25 miles off the coast. The report shall include the following information:

1. Vessel's name and call sign.
2. Present position, course, and speed.
3. ETA.

Note.—This contact with the Israeli navy is not a substitute for the required IMOT report.

All vessels entering and leaving Israeli ports and proceeding to them must do so via the recommended route and approach channels which may best be seen on the chart.

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time (CHARLIE (-3)) is maintained from the middle of March/beginning of April until the middle of September/beginning of October; the exact changeover date should be obtained from local authorities.

Traffic Separation Schemes

A Traffic Separation Scheme has been established by the Government of Israel in the approaches to Ashdod. The scheme is not IMO adopted.

U.S. Embassy

The U.S. Embassy is situated at 71 Hayarkon Street, Tel Aviv.

The mailing addresses are, as follows:

1. Israel address—
   71 Hayarkon Street
   Tel Aviv 63903

2. U.S. address—
   PSC 98, Box 100
   APO AE (09830)

U. S. Embassy Israel Home Page
http://telaviv.usembassy.gov

ITALY

General	**299**
Areas to be Avoided	**299**
Buoyage System	**300**
Cautions	**300**
Currency	**300**
Firing Areas	**300**
Fishing Areas	**311**
Government	**312**
Holidays	**312**
Ice	**312**
Industries	**312**
Languages	**312**
Meteorology	**312**
Mined Areas	**312**
Navigational Information	**316**
Offshore Drilling	**316**
Pilotage	**317**
Pollution	**317**
Regulations	**317**
Search and Rescue	**319**
Ship Reporting System	**319**
Signals	**321**
Submarine Operating Areas	**321**
Time Zone	**322**
Traffic Separation Schemes	**322**
U.S. Embassy	**323**
Vessel Traffic Service	**323**
Appendix I—Adriatic Traffic Reporting System (ADRIREP)	**325**
Appendix II—Italian Automated Search and Rescue System (ARES)	**327**

General

Italy, located in Southern Europe, is a peninsula extending into the central Mediterranean Sea NE of Tunisia.

The climate is predominantly Mediterranean, although it becomes Alpine in the far N, and hot and dry in the S.

The terrain is mostly rugged and mountainous. There are some plains extending to coastal lowlands.

The island of Sardinia lies in the Mediterranean Sea and is an autonomous region of Italy. The main towns are Cagliari and Sassari.

Areas to be Avoided

Two IMO-adopted Areas to be Avoided have been established between the E and W parts of the In the North Adriatic Sea Traffic Separation Scheme. These Areas to be Avoided

protect the Barbara Oil Field and the Ivana Oil Field, as follows:

1. **Ivana Oil Field Area to be Avoided**—Bounded by lines joining the following positions:
   a. 44°12'48.0"N, 13°37'30.0"E.
   b. 44°17'00.0"N, 13°43'46.2"E.
   c. 44°25'18.0"N, 13°37'28.2"E.
   d. 44°34'30.0"N, 13°25'28.2"E.
   e. 44°41'54.0"N, 13°24'58.2"E.
   f. 44°52'00.0"N, 13°17'04.2"E.
   g. 44°52'00.0"N, 13°05'46.2"E.
   h. 44°37'42.0"N, 13°07'54.0"E.
   i. 44°23'00.0"N, 13°14'18.0"E.

   This area must be avoided by all vessels greater than 200 grt.

2. **Barbara Oil Field Area to be Avoided**—Bounded by lines joining the following positions:
   a. 43°58'24.0"N, 13°52'42.0"E.
   b. 44°01'24.0"N, 13°56'48.0"E.
   c. 44°09'00.0"N, 13°40'30.0"E.
   d. 44°06'24.0"N, 13°37'90.0"E.

   This area must be avoided by all vessels greater than 200 grt.

A third IMO-adopted Area to be Avoided has been established W of the approaches to the Gulf of Venice Traffic Separation Scheme. The area is bounded by a circle with a radius of 1.5 miles centered on position 45°05.3'N, 12°35.1'E. Anchoring is prohibited in this area.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Along the Italian coast cable landing sites and the limits of the associated prohibited anchorage areas are indicated by special marks displayed on masts in the vicinity of buildings associated with the cable landing, as follows:

1. Power cables—Balls, with the upper half painted yellow and the lower half painted black, displaying the letter E.
2. Telephone cables—Balls, with the upper half painted yellow and the lower half painted black, displaying the letter T.

Cautions

Marine Exploitation

Oil and gas fields are located off the Adriatic coast of Italy N of about 42°00'N, as well as off the coast WNW of Promontorio del Gargano (41°50'N., 16°12'E.). Associated structures and installations may be found as much as 32 miles offshore, but most lie within about 16 miles of the coast. There are no special fairways through these fields.

Vessels engaged in seismic surveys and other research projects may be encountered in the Adriatic Sea, normally inside the 200m depth curve.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Firing Areas

Firing danger areas off the coast of Italy are subject to special regulations. Within territorial waters regulations may prohibit navigation or give notice of danger. Outside the territorial limits notices of danger may be promulgated.

These regulations and notices of danger may be published in local Notices to Mariners and Port Authority Orders or broadcast by coastal radio stations.

Warning signals for gunnery or torpedo launching exercises consist of the flag hoist "B." In addition, the appropriate International Code Signal can be shown. Aircraft flying in the vicinity of a prohibited or danger area will be warned by a series of rockets, launched at 10-second intervals, which explode in red or green lights. These signals may be made from shore or another aircraft. Each area is indicated by a letter of the alphabet followed by three numbers. The significance of each is, as follows:

1. The identifying letter indicates the type of activity which is responsible for the prohibition or danger in the area.
2. The first of the three numbers identifies the type of area and is the same for all areas of the same type. The second number identifies the area which has jurisdiction (0 for La Spezia, 1 for Cagliari, 2 for Messina, 3 for Taranto, and 4 for Ancona). The third number identifies the specific area.
3. The letters identifying the area and the corresponding first number are:
   T8—Areas used for firing exercises.
   E3—Areas used for firing exercises.
   M5—Areas in which submarine obstacles are present.
   S7—Areas used for submarine exercises.

In addition to the areas mentioned above, there are zones of restricted airspace identified by the letters P, R, or D. These zones, used for air to air and/or air to surface firing practice, extend from the water surface, and therefore may constitute a hazard to surface navigation.

Maritime Department—La Spezia

D5—Bounded by a line joining the following positions:
   a. 43°42'07"N, 7°50'15"E.
   b. 43°57'00"N, 8°20'00"E.
   c. 43°56'27"N, 8°37'28"E.
   d. 43°51'06"N, 8°38'57"E.
   e. 43°29'35"N, 8°36'06"E.
   f. 43°26'05"N, 8°28'41"E.
   g. 43°32'26"N, 8°03'34"E.

Hazardous air space due to intense military aircraft activity. Scheduled continuously from 0900 to 2400 Monday to Friday.

D29—Bounded by a line joining the following positions:
   a. 43°10'00"N, 9°45'00"E.
   b. 43°10'00"N, 9°55'00"E.
   c. 43°00'00"N, 10°02'00"E.
   d. 42°40'00"N, 10°02'00"E.
   e. 42°40'00"N, 10°20'00"E.

f. 42°19'00"N, 10°34'00"E.
g. 42°07'00"N, 10°25'00"E.
h. 42°20'00"N, 9°45'00"E except for an area with a radius of 4 miles centered on position 42°35'00"N, 10°05'00"E.

Hazardous air space due to intense military aircraft activity.

D37—Bounded by a line joining the following positions:
a. 44°00'40"N, 9°35'00"E.
b. 44°03'32"N, 9°51'10"E.
c. 43°50'00"N, 9°59'00"E.
d. 43°50'00"N, 9°47'00"E.

Hazardous air space from surface to unlimited ceiling for firing practice. Scheduled continuously from 0001Z Monday to 2400Z Friday.

D67—Bounded by a line joining the following positions:
a. 42°18'00"N, 9°42'00"E.
b. 42°19'00"N, 9°47'00"E.
c. 42°07'00"N, 10°26'00"E.
d. 41°34'00"N, 10°42'00"E.
e. 41°14'00"N, 9°42'00"E.

Hazardous airspace from an altitude of 13,500m for air-to-air firing practice. Scheduled Monday through Friday from 0530Z to 1530Z.

D91—Bounded by a line joining the following positions:
a. 43°43'00"N, 7°52'00"E.
b. 43°57'00"N, 8°20'00"E.
c. 43°55'00"N, 9°20'00"E.
d. 43°31'00"N, 9°30'00"E.
e. 43°17'00"N, 9°30'00"E.

Hazardous air space due to intense military aircraft activity. Scheduled continuously from 0900 to 2400 Monday to Friday.

D91A—Bounded by a line joining the following positions:
a. 43°43'00"N, 7°52'00"E.
b. 43°57'00"N, 8°20'00"E.
c. 43°56'27"N, 8°37'28"E.
d. 42°29'06"N, 8°45'00"E.

Hazardous air space due to intense military aircraft activity. Scheduled continuously from 0900 to 2400 Monday to Friday.

E301—Bounded by the parallels 43°45'30"N and 43°48'30"N, the meridian 10°10'00"E and the coast.

E302—Bounded by the parallels 43°03'00"N and 43°00'00"N, the meridian 10°27'18"E, and the coast.

E303—Bounded by a line joining the following positions:
a. 43°41'50"N, 10°16'48"E.
b. 43°41'00"N, 10°14'00"E.
c. 43°41'00"N, 10°13'00"E.
d. 43°44'00"N, 10°13'00"E.
e. 43°44'00"N, 10°15'00"E.

E304—Bounded by a line joining the following positions:
a. 42°16'30"N, 11°39'40"E.
b. 42°17'16"N, 11°33'29"E.
c. 42°12'38"N, 11°33'24"E
d. 42°10'05"N, 11°40'15"E.
e. 42°15'05"N, 11°40'58"E.

E305—Bounded between the bearings of 175° and 280° from the point 4.5 miles NW of Torre Flavia, extending for a distance of 6 miles.

M501—Bounded by the parallels 44°08'00"N and 44°00'00"N, and the meridians 9°30'00"E and 9°50'00"E. The area is further subdivided into the following zones:
1. Parallels 44°00'00"N and the coast, and the meridians 9°42'45" and 9°50'00"E.
2. Parallels 44°08'00"N and 44°00'00"N, and the meridians 9°36'00"E and 9°42'45"E.
3. Parallels 44°08'00"N and 44°00'00"N, and the meridians 9°30'00"E and 9°36'00"E.

The Naval Units present in this zone have on their stern equipment for mechanical and magnetic sweeping or underwater wire-guided craft.

M502—Bounded by a line joining the following positions:
a. 44°03'18"N, 9°53'20"E.
b. 44°00'04"N, 9°58'14"E.
c. 44°00'40"N, 9°59'00"E.
d. 44°03'54"N, 9°54'00"E.

Naval Units present in this zone have on their stern equipment for mechanical and magnetic sweeping or wire-guided underwater craft.

M503—Bounded by a line joining the following positions:
a. 44°01'00"N, 9°58'06"E.
b. 44°01'00"N, 10°05'00"E.
c. 43°57'24"N, 10°10'00"E.
d. 43°50'00"N, 10°06'00"E.
e. 43°54'00"N, 9°54'00"E.

The area is further subdivided into the following zones bounded by lines joining the following positions:
A. 44°01'00"N, 9°58'06"E.
44°01'00"N, 10°05'00"E.
43°56'00"N, 10°02'18"E.
43°58'00"N, 9°56'24"E.
B. 44°01'00"N, 10°05'00"E.
43°57'24"N, 10°10'00"E.
43°54'00"N, 10°08'12"E.
43°56'00"N, 10°02'18"E.
C. 43°58'00"N, 9°56'24"E.
43°54'00"N, 10°08'12"E.
43°50'00"N, 10°06'00"E.
43°54'00"N, 9°54'00"E.

The Naval Units present in this zone have on their stern equipment for mechanical and magnetic sweeping or wire-guided underwater craft.

P2—Bounded by a line joining the following positions:
a. 44°11'50"N, 9°40'00"E.
b. 44°08'00"N, 10°01'00"E.
c. 44°00'20"N, 10°01'00"E.
d. 44°03'32"N, 9°51'10"E.
e. 44°01'30"N, 9°40'00"E.

Airspace prohibited from the surface up to an altitude of 7,450m.

P3—Bounded by a line joining the following positions:
a. 44°03'32"N, 9°51'10"E.

b. 43°54'06"N, 10°06'40"E.
c. 43°50'00"N, 9°59'00"E.

Prohibited airspace from the surface up to unlimited ceiling for firing practice. Scheduled continuously from 0700Z to 1600Z Monday through Friday from 1 September to 30 June.

R42—Bounded by a line joining the following positions:
a. 42°16'30"N, 11°39'40"E.
b. 42°17'16"N, 11°33'29"E.
c. 42°12'38"N, 11°33'24"E.
d. 42°10'05"N, 11°40'15"E.
e. 42°15'05"N, 11°40'48"E.

Regulated air space from the surface up to an altitude of 900m from sunrise to sunset for firing practice. Scheduled from 30 minutes prior to sunrise and 30 minutes after sunset.

R14—Bounded by a lines joining the following positions:
a. 42°00'57"N, 11°58'26"E.
b. 41°59'10"N, 12°02'00"E.
c. 41°55'00"N, 11°57'30"E.
d. 41°58'30"N, 11°55'12"E.
e. 42°00'28"N, 11°58'06"E.

R70—A circle with a radius of 4,000m centered on position 43°17'00"N, 10°31'08"E.

T801—Bounded by a line joining the following positions:
a. 44°00'00"N, 9°28'00"E.
b. 44°00'00"N, 9°53'00"E.
c. 43°45'00"N, 9°53'00"E.
d. 43°45'00"N, 9°39'00"E.

T802—Bounded by a line joining the following positions:
a. 44°04'30"N, 9°45'00"E.
b. 43°59'00"N, 9°37'00"E.
c. 43°53'30"N, 9°45'00"E.
d. 43°59'00"N, 9°53'00"E.

T803—Bounded by a line joining the following positions:
a. 44°03'40"N, 9°51'54"E.
b. 44°02'45"N, 9°55'18"E.
c. 43°53'30"N, 10°06'30"E.
d. 43°50'30"N, 10°00'00"E.
e. 44°00'36"N, 9°52'00"E.

Also included is an area extending a distance of 15 miles from Buoy B1, near the center of Diga Foranea, between the bearings of 135° and 155°. Scheduled daily from 1 September until 30 June.

Autonomous Maritime Command—Cagliari

D40A—Bounded by a line joining the following positions:
a. 40°20'00"N, 8°10'00"E.
b. 38°40'00"N, 8°10'00"E.
c. 38°40'00"N, 7°38'00"E.
d. 39°00'00"N, 7°38'00"E.
e. 39°00'00"N, 7°34'00"E.
f. 39°13'00"N, 7°30'00"E.
g. 39°47'02"N, 7°38'58"E.
h. then a circular arc with a radius of 15 miles centered on position 39°46'44"N, 7°50'29"E up to position 39°57'58"N, 7°37'32"E and ending at position 40°20'00"N, 8°10'00"E.

Hazardous zone due to air-to-air firing and air combat training. Scheduled from 30 minutes prior to sunrise to 30 minutes after sunset, from Monday through Friday, except Italian holidays.

D40B—Bounded by a line joining the following positions:
a. 39°57'58"N, 7°38'00"E.
b. then a circular arc with a radius of 15 miles centered on 39°46'44"N, 7°50'29"E then counterclockwise to position 39°47'02"N, 7°30'59"E.
c. 39°13'00"N, 7°30'00"E.
d. 39°00'00"N, 7°34'00"E.
e. 39°10'00"N, 7°10'00"E.
f. 39°30'00"N, 7°10'00"E.
g. 39°57'58"N, 7°37'32"E.

Hazardous zone due to air-to-air firing and air combat training. Scheduled from 30 minutes prior to sunrise to 30 minutes after sunset, from Monday through Friday, except Italian holidays.

D111A—Bounded by a line joining the following positions:
a. 40°00'00"N, 10°00'00"E.
b. 40°00'00"N, 10°30'00"E.
c. 39°10'00"N, 10°30'00"E.
d. 39°10'00"N, 10°00'00"E.
e. 39°26'00"N, 9°38'00"E.
f. 39°38'00"N, 9°38'00"E.

Regulated air space from the surface to an altitude of 7,400m due to intensive military aircraft activity and firing exercises. The area is operational Monday to Friday from 0700 to 1700, except for bank holidays.

D111B—Bounded by a line joining the following positions:
a. 40°00'00"N, 10°00'00"E.
b. 40°00'00"N, 10°30'00"E.
c. 39°10'00"N, 10°30'00"E.
d. 39°10'00"N, 10°00'00"E.
e. 39°26'00"N, 9°38'00"E.
f. 39°38'00"N, 9°38'00"E.

Regulated air space above an altitude of 7,400m due to intensive military aircraft activity and firing exercises. The area is operational from September 21 to June 20, Monday to Friday from 0700 to 1700, except for bank holidays.

D112A/B—Bounded by a line joining the following positions:
a. 40°15'00"N, 10°39'00"E.
b. 40°15'00"N, 11°38'00"E.
c. 40°11'00"N, 11°42'00"E.
d. 39°32'00"N, 11°53'00"E.
e. 38°52'00"N, 11°54'00"E.
f. 39°10'00"N, 10°54'00"E.
g. 39°28'00"N, 9°54'00"E.
h. 39°43'00"N, 9°44'00"E.

Regulated air space due to intensive military aircraft activity and firing exercises. The area is operational from September 21 to June 20, Monday to Friday from 0700 to 1700, except for bank holidays.

D113A/B—Bounded by a line joining the following positions:
a. 40°37'00"N, 9°50'00"E.
b. 40°40'00"N, 10°35'00"E.
c. 40°40'00"N, 10°50'40"E.
d. 39°20'00"N, 10°50'30"E.
e. 39°20'00"N, 9°47'00"E.
f. 39°24'00"N, 9°40'00"E.
Regulated air space due to intensive military aircraft activity and firing exercises. The area is operational from September 21 to June 20, Monday to Friday from 0700 to 1700, except for bank holidays.

D114A/B—Bounded by a line joining the following positions:
a. 40°37'00"N, 9°54'00"E.
b. 40°42'00"N, 11°17'00"E.
c. 40°11'00"N, 11°33'00"E.
d. 39°46'00"N, 11°36'00"E.
e. 39°02'00"N, 10°17'00"E.
f. 39°04'00"N, 10°08'00"E.
g. 39°26'00"N, 9°38'00"E.
Regulated air space due to intensive military aircraft activity and firing exercises. The area is operational from September 21 to June 20, Monday to Friday from 0700 to 1700, except for bank holidays.

D115A/B—Bounded by a line joining the following positions:
a. 40°39'25"N, 10°31'48"E.
b. 40°42'00"N, 11°17'00"E.
c. 40°11'00"N, 11°33'00"E.
d. 39°32'00"N, 11°38'00"E.
e. 38°52'00"N, 11°28'00"E.
f. 39°03'49"N, 10°30'32"E.
Regulated air space due to intensive military aircraft activity. The area is operational Monday to Friday from 0700 to 1700, except for bank holidays..

D115C—Bounded by a line joining the following positions:
a. 40°39'25"N, 10°31'48"E.
b. 39°03'49"N, 10°30'32"E.
c. 39°10'00"N, 10°00'00"E.
d. 39°24'00"N, 9°40'00"E.
e. 40°37'00"N, 9°54'00"E.
Regulated air space due to intensive military aircraft activity. The area is operational Monday to Friday from 0700 to 1700, except for bank holidays..

E311—Bounded by a line joining the following positions:
a. 38°55'10"N, 8°42'30"E.
b. 38°50'00"N, 8°48'00"E.
c. 38°46'15"N, 8°48'00"E.
d. 38°43'30"N, 8°41'15"E.
e. 38°49'00"N, 8°26'00"E.
f. Isolotta la Vacca.
g. 38°57'00"N, 8°37'06"E.

C311—Bounded by a line joining the following positions:
a. 38°57'00"N, 8°37'06"E.
b. 38°56'00"N, 8°31'42"E.
c. 38°54'00"N, 8°30'42"E.
d. 38°51'48"N, 8°31'24"E.
e. 38°50'00"N, 8°32'48"E.
f. 38°49'00"N, 8°37'00"E.
g. 38°48'54"N, 8°41'18"E.
h. 38°50'36"N, 8°44'42"E.
i. 38°52'18"N, 8°45'48"E.
j. 38°55'10"N, 8°42'30"E.
Note.—This area is a subzone of Area E311.

R39—Bounded by a line joining the following positions:
a. 39°54'40"N, 9°44'20"E.
b. 40°08'00"N, 9°52'50"E.
c. 40°00'00"N, 10°08'00"E.
d. 39°48'00"N, 10°00'00"E.
e. 39°26'30"N, 9°37'00"E.
f. 39°34'27"N, 9°24'35"E.
g. 39°39'55"N, 9°21'54"E.
Regulated air space due to intensive military aircraft activity and firing exercises. The area is operational from September 21 to June 20, Monday to Friday from 0700 to 1700, except for bank holidays.

P17—Bounded by a line joining the following positions:
a. 41°18'30"N, 9°19'00"E.
b. 41°18'30"N, 9°34'00"E.
c. 41°11'00"N, 9°34'00"E.
d. 41°07'00"N, 9°19'00"E.

R46—Bounded by a line joining the following positions:
a. 39°05'00"N, 8°29'00"E.
b. 38°57'00"N, 8°43'00"E.
c. 38°50'00"N, 8°51'00"E.
d. 38°41'00"N, 8°51'00"E.
e. 38°41'00"N, 8°45'00"E.
f. 38°50'00"N, 8°23'00"E.
Regulated air space from the surface up to an altitude of 6,100m. Scheduled continuously from 0001 Monday to 2400 Saturday, except holidays.

R54—Bounded by a line joining the following positions:
a. 40°20'00"N, 8°10'00"E.
b. 40°20'00"N, 8°15'00"E.
c. 40°09'00"N, 8°27'30"E.
d. 39°35'02"N, 8°49'49"E.
e. 39°19'00"N, 8°51'00"E.
f. 39°06'00"N, 8°26'14"E.
g. 38°45'00"N, 8°10'00"E.
Regulated air space from the surface up to an altitude of 18,200m. Scheduled continuously, from Monday to Friday, except holidays.

R59—A circle with a radius of 5 miles centered on position 39°46'00"N, 8°27'00"E.
Regulated air space from the surface up to an altitude of 4,500m due to air-to-ground firing practice. Scheduled continuously from 0001 Sunday to 1200 Saturday, except holidays.

T811—Bounded by a line joining the following positions:
a. 38°55'10"N, 8°42'30"E.
b. 38°50'00"N, 8°50'00"E.

c. 38°40'00"N, 8°50'00"E.
d. 38°40'00"N, 8°39'00"E.
e. 38°40'00"N, 8°24'30"E.
f. Isola del Toro.
g. Isola La Vaca.
h. 39°00'00"N, 8°29'00"E.
i. 39°00'00"N, 8°32'00"E.
j. Punta Menga.

The area is further subdivided into the following zones bounded by lines joining the following positions:

A. Punta Menga.
39°00'00"N, 8°32'00"E.
39°00'00"N, 8°29'00"E.
Isola La Vacca.
Isola del Toro.
38°40'00"N, 8°24'30"E.
38°40'00"N, 8°39'00"E.
Capo Teulada.

B. Capo Teulada.
38°40'00"N, 8°39'00"E.
38°40'00"N, 8°50'00"E.
38°50'00"N, 8°50'00"E.
38°55'10"N, 8°42'30"E.

T812—Bounded by a line joining the following positions:
a. 39°42'48"N, 8°26'48"E.
b. 39°42'48"N, 8°23'12"E.
c. 39°44'18"N, 8°22'30"E.
d. 39°46'00"N, 8°22'42"E.
e. 39°47'30"N, 8°23'48"E.
f. 39°48'30"N, 8°25'12"E.
g. 39°49'00"N, 8°28'00"E.
h. 39°48'06"N, 8°30'00"E.
i. 39°44'12"N, 8°28'54"E.

Anchorage, navigation, fishing, and related activities are prohibited Monday through Friday, from 0730 until 1730 (local time), from 7 January until 30 June and again from 1 September until 21 December.

* An area bounded by a line joining the following positions:
a. 40°30'00"N, 8°20'25"E.
b. 40°29'48"N, 8°21'30"E.
c. 40°29'00"N, 8°22'00"E.
d. 40°29'00"N, 8°19'00"E.
e. 40°30'00"N, 8°19'00"E.

The area may be temporarily prohibited to navigation due to the presence of submerged and surface obstacles and firing practice with portable arms.

Autonomous Maritime Command—Augusta

D13—Bounded by a line joining the following positions:
a. 37°54'00"N, 11°30'00"E.
b. 37°54'00"N, 12°00'00"E.
c. 37°25'00"N, 12°25'00"E.
d. 37°12'00"N, 13°10'00"E.
e. 36°35'00"N, 13°10'00"E.
f. 36°35'00"N, 12°22'00"E.
g. 36°57'00"N, 12°22'00"E.
h. 37°11'19"N, 12°08'30"E.
i. 37°11'19"N, 11°30'00"E.

Regulated air space from the surface up to 2,250m due to intense firing activities. Scheduled continuously from Monday to Friday.

D20—Bounded by a line joining the following positions:
a. 37°15'00"N, 13°30'00"E.
b. 36°45'00"N, 14°30'00"E.
c. 36°35'00"N, 14°30'00"E.
d. 36°35'00"N, 13°30'00"E.

Regulated air space due to intense firing activities. Scheduled continuously from Monday to Friday.

D44—A circle with a radius of 35 miles centered on position 37°05'00"N, 16°20'00"E.

Hazardous air space from sea to an altitude of 900m due to ASW exercises and firing practice.

D75—Bounded by a line joining the following positions:
a. 36°30'00"N, 15°30'00"E.
b. 37°00'00"N, 15°30'00"E.
c. 36°55'00"N, 17°00'00"E.
d. 36°30'00"N, 17°08'00"E.

E321—A circle with a radius of 2,700m centered on position 36°39'11.4"N, 15°00'31.2"E. A lighted buoy is anchored in the center of the zone.

* A circle with a radius of 1.5 miles centered on position 36°39'21.0"N, 15°00'51.0"E.

E322—Bounded by a line joining the following positions:
a. 39°46'36"N, 15°47'31"E.
b. 39°46'37"N, 15°47'45"E.
c. 39°46'19"N, 15°47'56"E.
d. 39°46'16"N, 15°47'35"E.

M521—Bounded by a line joining the following positions:
a. 37°48'00"N, the coast.
b. 37°42'00"N, 12°15'00"E.
c. 37°42'00"N, 12°00'00"E.
d. 38°08'00"N, 12°00'00"E.
e. 38°08'00"N, 12°30'00"E.
f. the coast, 12°30'00"E.

The area is further subdivided into the following zones:

1. Bounded by the parallels 38°08'00"N and 37°55'00"N and the meridians 12°00'00"E and 12°15'00"E.
2. Bounded by the parallels 38°08'00"N and 37°55'00"N and the meridians 12°15'00"E and 12°30'00"E.
3. Bounded by the parallels 37°55'00"N and 37°42'00"N and the meridians 12°00'00"E and 12°15'00"E.
4. Bounded by a line joining the following positions:
37°48'00"N, the coast.
37°42'00"N, 12°15'00"E.
37°55'00"N, 12°15'00"E.
37°55'00"N, the coast.

Naval units present in this zone may have on their stern equipment for mechanical, magnetic-sweeping, or wire-guided underwater craft.

M522—Bounded by a line joining the following positions:
a. The coast, 15°17'00"E.
b. 38°14'00"N, 15°17'00"E.

c. 38°20'00"N, 15°30'00"E.
d. 38°20'00"N, 15°37'00"E.
e. The coast, 15°37'00"E.

The area is further subdivided into the following zones bounded by lines joining the following positions:

A. The coast, 15°17'00"E.
38°14'00"N, 15°17'00"E.
38°17'12"N, 15°24'00"E.
The coast, 15°24'00"E.

B. The coast, 15°24'00"E.
38°17'12"N, 15°24'00"E.
38°20'00"N, 15°30'00"E.
The coast, 15°30'00"E.

C. The coast, 15°30'00"E.
38°20'00"N, 15°30'00"E.
38°20'00"N, 15°37'00"E.
The coast, 15°37'00"E.

The Naval Units present in this zone have on their stern equipment for mechanical, magnetic-sweeping, or wire-guided underwater craft.

R105—Bounded by a line joining the following positions:
a. 38°45'00"N, 13°41'00"E.
b. 38°32'32"N, 13°39'27"E.
c. 38°08'00"N, 13°27'00"E.
d. 37°53'00"N, 14°17'00"E.
e. 38°45'00"N, 14°04'00"E.

Regulated air space due to intense military aircraft activity. Scheduled Monday to Friday from 0500 to 2300, except bank holidays.

R106—Bounded by a line joining the following positions:
a. 37°43'00"N, 13°34'30"E.
b. 37°42'00"N, 13°25'00"E.
c. 37°09'00"N, 13°25'00"E.
d. 36°35'00"N, 13°55'00"E.
e. 36°35'00"N, 14°09'00"E.
f. 37°32'00"N, 14°17'30"E.

Regulated air space due to ntense military aircraft activity. Scheduled Monday Friday from 0500 to 2300, except bank holidays.

R38—A circle with a radius of 15 miles centered on position 36°40'12.0"N, 15°00'31.8"E, and bounded on the S by a line joining the following positions:
a. 36°30'00"N, 14°47'03"E.
b. 36°30'00'N, 15°14'26"E.

Regulated air space from the surface up to ceiling unlimited due to intense air-to-ground firing.

T821—Bounded by a line joining the following positions:
a. 37°22'18.0"N, 15°20'00.0"E.
b. 37°22'18.0"N, 15°29'00.0"E.
c. 37°04'18.0"N, 15°29'00.0"E.
d. 37°04'18.0"N, 15°21'14.4"E.
e. 37°14'10.4"N, 15°15'09.0"E.

T822—Bounded by the parallels 37°11'00"N and 36°51'00"N, and the meridians 15°25'00"E and 15°53'00"E.

T823—Bounded by the parallels 37°25'00"N and 37°15'00"N, and the meridians 15°35'00"E and 15°48'00"E.

T824—Bounded by the parallels 37°11'00"N and 37°00'00"N, and the meridians 15°25'00"E and 15°43'00"E.

* Bounded by the parallels 37°14'15"N and 37°18'21"N and the meridians 15°15'18"E and 15°17'51"E.

Firing range facing the sea for firing practice with small arms.

Messina—Tono—Bounded by a line joining the following positions:
a. 38°17'39"N, 15°34'06"E.
b. 38°17'35"N, 15°34'35"E.
c. 38°17'20"N, 15°34'18"E.
d. 38°17'23"N, 15°34'05"E.

Firing range facing the sea for firing practice with small arms.

Milazzo—Rio Rosso—Bounded by a line joining the following positions:
a. 38°12'00"N, 15°11'30"E.
b. 38°12'30"N, 15°12'00"E.
c. 38°12'00"N, 15°13'20"E.
d. 38°11'15"N, 15°13'20"E.

Firing range facing the sea for firing practice with small arms.

Trapani—Fassino Custonaci—Bounded by a line joining the following positions:
a. 38°08'30"N, 12°40'54"E.
b. 38°08'40"N, 12°43'02"E.
c. 38°06'20"N, 12°42'27"E.
d. 38°07'10"N, 12°39'30"E.

Firing range facing the sea for firing practice with small arms.

Arigento—Drasi (Zone A)—Bounded by a line joining the following positions:
a. 37°12'00"N, 13°40'00"E.
b. 37°11'00"N, 13°39'00"E.
c. 37°12'30"N, 13°37'40"E.
d. 37°12'20"N, 13°39'18"E.

Firing range facing the sea for firing practice with small arms.

Arigento—Drasi (Zone B)—Bounded by a line joining the following positions:
a. 37°14'00"N, 13°37'18"E.
b. 37°09'45"N, 13°32'36"E.
c. 37°07'48"N, 13°35'24"E.
d. 37°11'35"N, 13°39'45"E.

Firing range facing the sea for firing practice with small arms.

Gela—Montelungo—Bounded by a line joining the following positions:
a. 37°05'06"N, 14°11'12"E.
b. 37°02'35"N, 14°11'12"E.
c. 37°02'35"N, 14°12'36"E.
d. 37°04'36"N, 14°12'36"E.

Firing range facing the sea for firing practice with small arms.

Locri—Torrente Gerace—Bounded by a line joining the following positions:
a. 38°10'30"N, 16°15'43"E.
b. 38°13'03"N, 16°15'10"E.
c. 38°13'24"N, 16°15'30"E.
d. 38°13'00"N, 16°18'38"E.
e. 38°11'35"N, 16°17'50"E.
Firing range facing the sea for firing practice with small arms.

Pantellaria—Pinta Spadillo—Bounded by a line joining the following positions:
a. 36°49'26"N, 12°00'43"E.
b. 36°49'22"N, 12°00'23"E.
c. 36°50'20"N, 11°59'45"E.
d. 36°50'13"N, 12°01'02"E.
Firing range facing the sea for firing practice with small arms.

Maritime Department—Taranto

D15—Bounded by a line joining the following positions:
a. 39°40'00"N, 18°00'00"E.
b. 39°40'00"N, 18°40'00"E.
c. 39°32'00"N, 19°00'00"E.
d. 38°53'00"N, 19°00'00"E.
e. 38°53'00"N, 17°50'00"E.
Hazardous air space due to intense military aircraft activity.

D25A—Bounded by a line joining the following positions:
a. 40°45'00"N, 18°37'30"E.
b. 40°40'00"N, 18°37'30"E.
c. 40°40'00"N, 18°21'20"E.
d. 40°45'00"N, 18°13'30"E.
Hazardous air space from the surface up to 3,200m due to intense air-to-ground firing.

D25B—Bounded by a line joining the following positions:
a. 40°45'00"N, 18°37'30"E.
b. 40°45'00"N, 18°13'30"E.
c. 40°47'00"N, 18°10'00"E.
d. 40°53'04"N, 18°10'53"E.
e. 40°53'04"N, 18°28'58"E.
Hazardous air space from the surface up to ceiling unlimited due to intense air-to-ground firing.

D25C—Bounded by a line joining the following positions:
a. 40°53'04"N, 18°10'53"E.
b. 41°05'00"N, 18°12'30"E.
c. 41°05'00"N, 18°16'30"E.
d. 40°53'04"N, 18°28'58"E.
Hazardous air space from the surface up to ceiling unlimited due to intense air-to-ground firing.

D28A—Bounded by a line joining the following positions:
a. 40°17'00"N, 17°00'00"E.
b. 40°17'00"N, 17°15'00"E.
c. 40°10'00"N, 17°30'00"E.
d. 39°50'00"N, 17°17'00"E.
e. 40°00'04"N, 17°00'00"E.
Hazardous air space from the surface up to ceiling unlimited due to intense air-to-ground firing.

D28B—Bounded by a line joining the following positions:
a. 40°10'00"N, 17°30'00"E.
b. 40°02'00"N, 17°37'00"E.
c. 39°50'00"N, 17°37'00"E.
d. 39°50'00"N, 17°17'00"E.
Hazardous air space from the surface up to ceiling unlimited due to intense air-to-ground firing.

D84—Bounded by a line joining the following positions:
a. 40°34'30"N, 12°19'47"E.
b. 40°24'19"N, 12°49'30"E.
c. 39°59'28"N, 12°49'30"E.
d. 39°13'26"N, 11°22'13"E.
e. 39°24'02"N, 11°51'16"E.
f. 39°43'59"N, 11°51'16"E.
Hazardous air space due to in-flight refueling operations. In operation 24 hours.

D117—Bounded by a line joining the following positions:
a. 40°21'00"N, 19°00'00"E.
b. 39°32'00"N, 19°00'00"E.
c. 39°40'00"N, 18°40'00"E.
d. 40°00'00"N, 18°44'00"E.
e. 40°12'30"N, 18°30'00"E.
f. 40°21'00"N, 18°30'00"E.

E332—Bounded by a line joining the following positions:
a. 41°27'16"N, 12°40'55"E.
b. 41°22'00"N, 12°36'00"E.
c. 41°16'00"N, 12°55'00"E.
d. 41°21'50"N, 12°56'56"E.

E333—Bounded by a line joining the following positions:
a. 41°27'20"N, 12°39'20"E.
b. 41°24'30"N, 12°35'30"E.
c. 41°13'00"N, 12°41'30"E.
d. 41°08'30"N, 12°50'00"E.
e. 41°13'00"N, 12°56'40"E.
f. 41°21'40"N, 12°56'50"E.

E334—Bounded by a line joining the following positions:
a. 41°18'16"N, 13°00'18"E.
b. 41°15'50"N, 12°59'40"E.
c. 41°17'30"N, 12°56'15"E.
d. 41°20'30"N, 12°56'00"E.
e. 41°19'40"N, 12°59'08"E.

E335—Bounded by the parallels 40°48'00"N, and 40°59'00"N, the meridians 13°48'00"E, and the coast.

E337—Bounded by a line joining the following positions:
a. 38°49'49"N, 16°38'29"E.
b. 38°50'15"N, 16°38'45"E.
c. 38°48'37"N, 16°39'17"E.
d. 38°47'53"N, 16°41'11"E.
e. 38°47'53"N, 16°39'59"E.
f. 38°49'49"N, 16°37'45"E.

E338—Bounded by a line joining the following positions:
a. 40°25'31"N, 18°15'30"E.
b. 40°30'20"N, 18°16'30"E.
c. 40°29'25"N, 18°19'03"E.
d. 40°27'45"N, 18°20'58"E.
e. 40°25'55"N, 18°22'28"E.
f. 40°23'05"N, 18°23'18"E.
g. 40°23'54"N, 18°17'30"E.

E339—Bounded by a line joining the following positions:
a. 41°09'05"N, 16°47'18"E.
b. 41°11'20"N, 16°47'08"E.
c. 41°10'57"N, 16°48'59"E.
d. 41°09'40"N, 16°50'12"E.
e. 41°09'03"N, 16°47'34"E.

E3310—Bounded by a line joining the following positions:
a. 41°21'45"N, 16°12'16"E.
b. 41°26'00"N, 16°13'29"E.
c. 41°24'00"N, 16°19'09"E.
d. 41°21'20"N, 16°16'23"E.
e. 41°20'30"N, 16°14'08"E.

M531—Bounded by a line joining the following positions:
a. 40°46'00"N, 13°51'00"E.
b. 40°43'00"N, 13°50'00"E.
c. 40°44'00"N, 13°40'00"E.
d. 40°46'00"N, 13°42'00"E.

M532—Bounded by a line joining the following positions:
a. 40°26'00"N, 16°56'00"E.
b. 40°26'00"N, 17°05'30"E.
c. 40°21'00"N, 17°05'30"E.
d. 40°21'00"N, 16°52'00"E.

The Naval Units present in this zone have on their stern equipment for mechanical, magnetic-sweeping, or wire-guided underwater craft.

M533—Bounded by a line joining the following positions:
a. The coast, 17°12'20"E.
b. 40°24'00"N, 17°12'20"E.
c. 40°23'54"N, 17°13'24"E.
d. The coast, 17°13'24"E.

The Naval Units present in this zone have on their stern equipment for mechanical, magnetic-sweeping, or wire-guided underwater craft.

M534—Bounded by a line joining the following positions:
a. 40°38'24"N, 18°01'30"E.
b. 40°39'12"N, 18°04'00"E.
c. 40°36'12"N, 18°06'30"E.
d. 40°35'13"N, 18°04'00"E.

The Naval Units present in this zone have on their stern equipment for mechanical, magnetic-sweeping, or wire-guided underwater craft.

P8—Bounded by a line joining the following positions:
a. 41°28'00"N, 12°44'15"E.
b. 41°23'10"N, 12°53'30"E.
c. 41°15'00"N, 12°54'00"E.
d. 41°10'25"N, 12°50'00"E.
e. 41°15'00"N, 12°44'00"E.
f. 41°24'25"N, 12°39'00"E.

Prohibited air space (hazardous outside territorial waters) from the surface to unlimited ceiling due to firing practice and airborne target towing.

P55—Bounded by a line joining the following positions:
a. 40°25'31"N, 18°15'30"E.
b. 40°30'20"N, 18°16'30"E.
c. 40°29'25"N, 18°19'03"E.
d. 40°27'45"N, 18°20'58"E.
e. 40°25'55"N, 18°22'28"E.
f. 40°23'05"N, 18°23'18"E.
g. 40°23'54"N, 18°17'30"E.

Regulated air space due to firing exercises and intense military aircraft activities.

P97—A circle with a radius of 1 mile centered on position 41°25'27"N, 12°48'23"E..

R7—Bounded by a line joining the following positions:
h. 41°24'25"N, 12°39'00"E.
a. 41°25'50"N, 12°38'00"E.
b. 41°28'55"N, 12°42'40"E.
c. 41°23'10"N, 12°53'30"E.
d. 41°15'00"N, 12°54'00"E.
e. 41°10'25"N, 12°50'00"E.
f. 41°15'00"N, 12°44'00"E.

Regulated air space from surface up to unlimited ceiling due to intensive firing practice. The area is operational from September 1 to June 30, except for bank holidays, according to the following schedule:
- Monday, Tuesday, Wednesday, and Friday—from 0730 to 1700.
- Thursday—From 0730 to 2200.

R24—Bounded by a line joining the following positions:
a. 40°32'27"N, 14°54'36"E.
b. 40°30'18"N, 14°49'12"E.
c. 40°24'54"N, 14°52'30"E.
d. 40°27'21"N, 14°57'42"E.

Regulated air space from surface to 1,500m (hazardous outside territorial waters) due to firing exercise.

P27A—A circle with a radius of 1,500m centered on position 40°29'06"N, 17°15'16"E. Scheduled on Monday/Wednesday/Friday from 0700 to 1700.

R60—Bounded by a line joining the following positions:
a. 40°26'00"N, 17°41'00"E.
b. 40°26'00"N, 17°53'00"E.
c. 40°15'00"N, 18°27'00"E.
d. 40°00'00"N, 18°44'00"E.
e. 39°40'00"N, 18°40'00"E.
f. 39°40'00"N, 17°41'00"E.
g. 40°15'00"N, 17°34'00"E.

Regulated air space due to firing exercise. Scheduled Monday to Thursday from 0600 to 2300 and Friday from 0600 to 1800, except bank holidays.

R66 (Zone A)—Bounded by a line joining the following positions:
a. 40°20'32"N, 16°16'00"E.
b. 40°26'00"N, 16°50'00"E.
c. 40°26'00"N, 17°10'00"E.
d. 40°09'00"N, 17°35'00"E.

e. 39°21'41"N, 17°44'28"E.
f. 39°10'00"N, 17°10'00"E.
g. 40°00'00"N, 16°00'00"E.
Regulated air space due to intense military aircraft activity. Scheduled Monday to Friday from 0500 to 2200 and Saturday from 0600 to 1300, except bank holidays.

R66 (Zone B)—Bounded by a line joining the following positions:
a. 40°26'00"N, 17°10'00"E.
b. 40°26'00"N, 17°53'00"E.
c. 40°20'00"N, 18°07'00"E.
d. 39°51'00"N, 18°42'00"E.
e. 39°40'00"N, 18°40'00"E.
f. 39°21'41"N, 17°44'28"E.
g. 40°09'00"N, 17°35'00"E.
Regulated air space due to firing exercise. Scheduled Monday to Thursday from 0600 to 2300 and Friday from 0600 to 1800, except bank holidays.

R88A—Bounded by a line joining the following positions:
a. 40°35'30"N, 17°41'00"E.
b. 40°40'45"N, 18°53'43"E.
c. 40°35'40"N, 18°27'58"E.
d. 40°31'00"N, 17°34'00"E.
Regulated air space due to intense firing activity. Scheduled Monday to Friday from 0700 to 1500, except bank holidays.

R88B—Bounded by a line joining the following positions:
a. 40°35'30"N, 17°56'00"E.
b. 40°40'00"N, 18°05'43"E.
c. 40°34'00"N, 18°11'00"E.
d. 40°22'00"N, 18°03'00"E.
e. 40°25'00"N, 17°53'00"E.
f. 40°29'00"N, 17°53'00"E.
Regulated air space due to intense firing activity. Scheduled Monday to Friday from 0700 to 1500, except bank holidays.

R116 (Zone A)—Bounded by a line joining the following positions:
a. 41°34'00"N, 16°00'00"E.
b. 41°42'16"N, 16°11'55"E.
c. 41°34'22"N, 16°30'10"E.
d. 41°23'00"N, 16°17'30"E.
e. 41°27'22"N, 16°02'15"E.

R116 (Zone B)—Bounded by a line joining the following positions:
a. 41°42'16"N, 16°11'55"E.
b. 41°54'00"N, 16°29'03"E.
c. 41°41'00"N, 16°46'00"E.
d. 41°36'00"N, 16°32'00"E.
e. 41°34'22"N, 16°30'10"E.

T831—Bounded by a line joining the following positions:
a. 41°20'30"N, 12°56'00"E.
b. 41°16'00"N, 12°55'00"E.
c. 41°15'50"N, 12°59'40"E.
d. 41°17'30"N, 12°56'15"E.
Zone set aside for firing practice by Coast Guard units and is an extension of E334.

T832—Bounded by the parallels 39°58'00"N and 40°17'00"N, the meridian 16°51'00"E, and the coast.

T833—Bounded by a line joining the following positions:
a. the coast, 17°12'20"E.
b. 40°07'00"N, 17°12'20"E.
c. 40°00'00"N, 17°30'00"E.
d. the coast, 17°30'00"E.

T833-ALFA—Bounded by a line joining the following positions:
a. 40°16'30"N, 17°30'00"E.
b. 40°21'45"N, 17°16'12"E.
c. 40°23'06"N, 17°16'12"E.
d. Coast at 17°12'20"E.
e. 40°17'00"N, 17°12'00"E.
f. 40°17'00"N, 17°15'00"E.
g. 40°10'00"N, 17°30'00"E.
Note.—This area is a subzone of Area T833.

T833-BRAVO—Bounded by a line joining the following positions:
a. 40°17'00"N, 17°12'00"E.
b. 40°17'00"N, 17°15'00"E.
c. 40°10'00"N, 17°30'00"E.
d. 40°00'00"N, 17°30'00"E.
e. 40°07'00"N, 17°12'00"E.
Note.—This area is a subzone of Area T833.

T834—Bounded by a line joining the following positions:
a. 40°03'00"N, 17°13'00"E.
b. 39°52'00"N, 17°38'00"E.
c. 39°34'00"N, 17°38'00"E.
d. 39°34'00"N, 17°13'00"E.
The area is further subdivided into the following zones:
A. 40°03'00"N, 17°13'00"E.
39°52'00"N, 17°38'00"E.
39°47'00"N, 17°38'00"E.
39°47'00"N, 17°13'00"E.
B. Bounded by the parallels 39°47'00"N and 39°34'00"N and the meridians 17°13'00"E and 17°38'00"E.

T835—Bounded by a line joining the following positions:
a. 41°07'00"N, 17°41'00"E.
b. 41°07'00"N, 17°53'00"E.
c. 40°51'00"N, 17°53'00"E.

T836—Bounded by a line joining the following positions:
a. 40°36'00"N, 18°32'00"E.
b. 40°39'00"N, 18°44'00"E.
c. 40°21'00"N, 18°44'00"E.

d. 40°32'00"N, 18°32'00"E.

In operation Monday through Friday, from 0800 to 1600 local time.

T—Bounded by a line joining the following positions:
a. 41°30'00"N, 16°10'00"E.
b. 41°27'00"N, 16°17'00"E.
c. 41°24'00"N, 16°20'00"E.
d. 41°22'00"N, 16°20'00"E.
e. 41°25'00"N, 16°10'00"E.

* Bounded by a line joining the following positions:
a. 40°24'13"N, 17°13'49"E.
b. 40°22'30"N, 17°11'30"E.
c. 40°21'42"N, 17°12'42"E.
d. 40°21'32"N, 17°14'30"E.
e. 40°22'00"N, 17°16'00"E.
f. 40°24'05"N, 17°14'10"E.

Firing range facing the sea for firing practice with small arms.

* An area bounded by a line joining the following positions:
a. 40°35'32"N, 18°02'26"E.
b. 40°36'18"N, 18°02'06"E.
c. 40°39'41"N, 18°02'08"E.
d. 40°36'05"N, 18°06'21"E.

Firing range facing the sea for firing practice with small arms.

* An area bounded by a line joining the following positions:
a. 40°38'40"N, 18°01'12"E.
b. 40°39'58"N, 18°03'35"E.
c. 40°39'02"N, 18°04'24"E.
d. 40°37'51"N, 18°04'27"E.
e. 40°36'39"N, 18°03'22"E.
f. 40°38'08"N, 18°01'12"E.

Firing range facing the sea for firing practice with small arms.

R88A—Bounded by a line joining the following positions:
a. 40°35'30"N, 17°56'00"E.
b. 40°40'45"N, 18°05'43"E.
c. 40°35'40"N, 18°09'58"E.
d. 40°31'00"N, 17°59'00"E.

Regulated air space from surface to 3,500m (hazardous outside territorial waters) due to firing exercise.

Maritime Department—Ancona

D10—Bounded by a line joining the following positions:
a. 44°42'00"N, 12°26'00"E.
b. 44°37'00"N, 12°31'00"E.
c. 44°31'00"N, 12°28'00"E.
d. 44°34'00"N, 12°15'00"E.
e. 44°37'00"N, 12°15'00"E.

Hazardous air space from surface to 10,600m due to firing practice. In operation 24 hours.

D87—Bounded by a line joining the following positions:
a. 44°36'40"N, 12°53'35"E.
b. 43°48'06"N, 13°31'47"E.
c. 43°46'27"N, 13°13'11"E.
d. 43°53'48"N, 12°34'58"E.
e. 44°26'25"N, 12°09'42"E.

Hazardous air space due to in-flight refueling operations. In operation 24 hours.

E341—Bounded by the parallel 42°07'00"N, the coast, and the meridians 14°44'00"E and 14°47'00"E.

E342—Bounded by a line joining the following positions:
a. 43°39'30"N, 13°20'00"E.
b. 43°41'00"N, 13°20'00"E.
c. 43°41'00"N, 13°24'00"E.
d. 43°38'30"N, 13°22'00"E.

E343—Bounded by the parallels 43°50'00"N and 43°53'00"N, and the meridians 13°02'00"E and 13°06'00"E.

E344—Bounded by the parallel 43°58'25"N, the coast, and the meridians 12°50'00"E and 12°54'00"E.

The area is further subdivided into the following zones:
a. West of the meridian 12°53'00"E.
b. East of the meridian 12°53'00"E.

E345—Bounded by the parallels 44°01'00"N and 44°02'00"N, the meridian 12°44'00"E, and the coast.

E346—Bounded by a line joining the following positions:
a. 44°43'00"N, 12°32'00"E.
b. 44°34'00"N, 12°32'00"E.
c. 44°33'40"N, 12°26'35"E.
d. 44°32'00"N, 12°26'36"E.
e. 44°33'00"N, 12°17'10"E.
f. 44°39'00"N, 12°15'00"E.

The area is further subdivided into the following zones:
a. West of the meridian 12°22'00"E.
b. East of the meridian 12°22'00"E.

The area is permanently prohibited to sailing and fishing due to firing practice from 0700 until 2400 on Monday through Thursday and from 0700 to 1200 each Friday.

E347—Bounded by a line joining the following positions:
a. 45°10'50"N, 12°19'07"E.
b. 45°12'11"N, 12°21'46"E.
c. 45°12'11"N, 12°23'08"E.
d. 45°09'00"N, 12°23'08"E.
e. 45°09'00"N, 12°19'53"E.

E348—Bounded by a line joining the following positions:
a. 45°26'43"N, 12°28'00"E.
b. 45°27'43"N, 12°32'00"E.
c. 45°26'20"N, 12°33'54"E.
d. 45°25'15"N, 12°30'06"E.

E349—Bounded by the parallels 45°39'00"N and 45°31'00"N, and the meridians 12°59'00"E and 13°17'00"E.

The area is further subdivided into the following zones:

A. Bounded by the parallels 45°39'00"N and 45°36”00"N, and the meridians 12°59'00"E and 13°09'00"E.

B. Bounded by the parallels 45°39'00"N and 45°36'00"N, and the meridians 13°09'00"E and 13°17'00"E.

C. Bounded by the parallels 45°36'00"N and 45°31'00"N,

and the meridians 13°09'00"E and 13°17'00"E.

D. Bounded by the parallels 45°36'00"N and 45°31'00"N, and the meridians 12°59'00"E and 13°09'00"E.

M541—Bounded by a line joining the following positions:
a. Senigallia Light.
b. 43°51'00"N, 13°27'00"E.
c. 43°47'00"N, 13°32'00"E.
d. the coast, 13°20'00"E.

The area is further subdivided into the following zones:

A. 43°41'00"N, the coast
43°40'48"N, 13°18'00"E.
43°40'12"N, 13°21'12"E.
The coast, 13°20'00"E.

B. Senigallia Light.
43°43'48"N, 13°14'30"E.
43°40'48"N, 13°18'00"E.
43°41'00"N, the coast.

C. 43°43'48"N, 13°14'30"E.
43°47'30"N, 13°21'00"E.
43°45'18"N, 13°23'36"E.
43°40'48"N, 13°18'00"E.

D. 43°40'48"N, 13°18'00"E.
43°45'18"N, 13°23'36"E.
43°43'15"N, 13°26'00"E.
43°40'12"N, 13°21'12"E.

E. 43°47'30"N, 13°21'00"E.
43°51'00"N, 13°27'00"E.
43°49'00"N, 13°29'30"E.
43°45'18"N, 13°23'36"E.

F. 43°45'18"N, 13°23'36"E.
43°49'00"N, 13°29'30"E.
43°47'00"N, 13°32'00"E.
43°43'15"N, 13°26'00"E.

The Naval Units present in this zone have on their stern equipment for mechanical, magnetic-sweeping, or wire-guided underwater craft.

M542—Bounded by a line joining the following positions:
a. 43°38'20"N, 13°31'26"E.
b. 43°39'06"N, 13°32'30"E.
c. 43°37'00"N, 13°35'24"E.
d. 43°36'14"N, 13°34'20"E.

The Naval Units present in this zone have on their stern equipment for mechanical, magnetic-sweeping, or wire-guided underwater craft.

M543—Bounded by a line joining the following positions:
a. 43°41'33"N, 13°17'08"E.
b. 43°42'48"N, 13°18'18"E.
c. 43°41'03"N, 13°21'42"E.
d. 43°39'48"N, 13°20'30"E.

The Naval Units present in this zone have on their stern equipment for mechanical, magnetic-sweeping, or wire-guided underwater craft.

M544—Bounded by the parallels 43°47'00"N and 43°37'00"N, and the meridians 13°33'00"E and 13°50'00"E.

The Naval Units present in this zone have on their stern equipment for mechanical, magnetic-sweeping, or wire-guided underwater craft.

R21—Bounded by a line joining the following positions:
a. 44°54'00"N, 12°20'25"E.
b. 44°54'00"N, 12°40'00"E.
c. 43°48'06"N, 13°31'47"E.
d. 43°46'27"N, 13°13'11"E.
e. 44°00'16"N, 11°58'50"E.
f. 44°16'00"N, 11°56'00"E.

Regulated air space due to intensive military aircraft activity. The area is operational according to the following schedule:

- Monday and Wednesday—from 0700 to 2200.
- Tuesday, and Thursday—from 0700 to 1700.
- Friday—from 0700 to 1300.

R26—Bounded by a line joining the following positions:
a. 44°53'10"N, 12°12'57"E.
b. 43°56'19"N, 12°58'12"E.
c. 43°50'25"N, 12°54'28"E.
d. 43°54'59"N, 12°30'52"E.
e. 44°17'37"N, 11°55'36"E.
f. 44°44'04"N, 11°50'01"E.

Regulated air space due to intensive military aircraft activity. The area is operational, except for bank holidays, according to the following schedule:

- Monday to Friday—from 0500 to 2200.
- Saturday—from 0500 to 1300.

R118—Bounded by a line joining the following positions:
a. 41°40'00"N, 15°16'00"E.
b. 42°00'00"N, 14°42'00"E.
c. 42°17'00"N, 14°50'00"E.
d. 42°20'00"N, 15°04'00"E.
e. 42°02'00"N, 15°28'00"E.

T841—Bounded by the parallels 43°47'00"N and 43°37'00"N, and the meridians 13°33'00"E and 13°50'00"E.

T842—Bounded by a line joining the following positions:
a. 43°13'00"N, 14°19'00"E.
b. 43°25'00"N, 14°33'00"E.
c. 43°11'00"N, 14°55'00"E.
d. 42°59'00"N, 14°41'00"E.

Missile Exercise Zones

The following sea zones of the Tyrrhenian Sea are prohibited to navigation, anchorage, fishing, and related activities within the limits of the territorial waters, and are declared dangerous outside of these limits due to missile firing exercises:

Zone 1
a. 40°00'N, 10°00'E.
b. 40°00'N, 10°30'E.
c. 39°10'N, 10°30'E.
d. 39°10'N, 10°00'E.
e. 39°26'N, 9°38'E.
f. 39°38'N, 9°38'E.

Zone 2
a. 40°15'N, 10°00'E.
b. 40°15'N, 11°31'E.
c. 40°11'N, 11°33'E.
d. 39°32'N, 11°38'E.
e. 38°52'N, 11°28'E.

f. 39°10'N, 10°00'E.
g. 39°28'N, 9°38'E.
h. 39°43'N, 9°40'E.

Zone 3

a. 40°37'N, 9°50'E.
b. 40°40'N, 10°35'E.
c. 40°40'N, 10°50'E.
d. 39°20'N, 10°50'E.
e. 39°20'N, 9°47'E.
f. 39°24'N, 9°40'E.

Zone 4

a. 40°38'N, 9°54'E.
b. 40°00'N, 11°17'E.
c. 40°47'N, 11°33'E.
d. 39°00'N, 11°36'E.
e. 39°00'N, 10°17'E.
f. 39°26'N, 10°08'E.
g. 39°26'N, 9°38'E.

These zones are in use from 0800 to 2000 on Monday through Friday, excluding holidays, from 21 July through 21 September.

On the above days and times, vessels that must navigate through the prohibited zone to reach the coast, and particularly the port of Arbatax, must be explicitly authorized to do so by the local maritime authority.

Explosives Dumping Areas

Explosives dumping areas have been reported (1999) in the Adriatic Sea and off the coast of Italy. These areas, which may best be seen on the chart, are situated, as follows:

1. Within 4 miles of 42°03'58"N, 17°22'02"E.
2. Within 9 miles of 41°55'57"N, 17°25'13"E.
3. Within 5 miles of 40°48'32"N, 18°51'09"E.
4. Within 5 miles of 39°49'00"N, 19°00'00"E.
5. Within 4 miles of 42°03'32"N, 17°22'01"E.
6. Within 5 miles of 41°20'00"N, 18°44'00"E.
7. Within 1 mile of 41°26'00"N, 16°32'00"E.
8. Within 4 miles of 41°46'30"N, 16°32'18"E.
9. Within 5 miles of 40°41'00"N, 18°29'36"E.
10. Within 3 miles of 42°00'00"N, 17°00'00"E.
11. Within 5 miles of 41°20'00"N, 18°30'00"E.
12. Within 5 miles of 41°41'00"N, 17°48'00"E.
13. Within 5 miles of 41°18'24"N, 18°38'15"E.
14. Within an area bounded by lines joining the following positions:
    a. 41°45'N, 18°05'E.
    b. 41°45'N, 18°20'E.
    c. 41°28'N, 18°31'E.
    d. 41°28'N, 18°19'E.
15. Within an area bounded by lines joining the following positions:
    a. 41°48'24"N, 16°52'40"E.
    b. 41°48'22"N, 16°54'13"E.
    c. 41°44'30"N, 16°54'37"E.
    d. 41°44'11"N, 16°53'17"E.
16. Within 5 miles of 45°15.0'N, 13°00.0'E.
17. Within 5 miles of 42°30.0'N, 15°20.0'E.
18. Within an area bounded by lines joining the following positions:
    a. 44°05.0'N, 13°40.0'E.
    b. 44°20.0'N, 13°20.0'E.
    c. 44°24.0'N, 13°28.0'E.
    d. 44°09.0'N, 13°48.0'E.
19. Within 5 miles of 44°47'16"N, 13°08'02"E.
20. Within 5 miles of 44°30'00"N, 13°30'00"E.
21. Within 5 miles of 43°58'18"N, 14°14'59"E.
22. Within 4 miles of 42°03'58"N, 17°22'02"E.
23. Within an area bounded by lines joining the following positions:
    a. 41°20.0'N, 12°06.0'E.
    b. 38°17.0'N, 12°14.0'E.
    c. 38°12.0'N, 12°06.0'E.
    d. 38°20.0'N, 11°56.0'E.
    e. 38°25.0'N, 12°06.0'E.
24. An explosive ordnance hazard is reported to exist in the vicinity of the following positions:
    a. 40°41'N, 18°30'E.
    b. 41°20'N, 18°30'E.
    c. 42°35'N, 17°36'E.
    d. 41°48'N, 17°25'E.
    e. 42°00'N, 17°00'E.
    f. 44°30'N, 13°16'E.

Waters around the coast of Albania

It is reported a mine was caught in a fishing net at position 41°49'N, 18°36'E.

Fishing Areas

Tunny fishing in Italian waters occurs from March to November and usually takes place in depths of 15 to 40m within 10 miles of the coast. On dark nights, small vessels may be encountered fishing by the light of flares. The motion the these vessels may give the flares the appearance of flashing lights. Care should be taken not to confuse the flares with navigational lights.

Tunny nets on the coasts of Italy are being marked in accordance with the IALA special marks. These signals are arranged on boats or floats in the central outer part of the tunny nets. The mark could also be equipped with a radar reflector. Particularly wide tunny nets may be marked by two distinct signals, placed at the corners of the enclosed sea area. For general information on tunny fishing, see **Spain—Fishing Areas**.

Small fishing boats engaged in sardine net fishing, and extending in close formation for 4 miles or more, may be encountered at a distance of 8 miles off the coast of Sicilia; these boats carry no special marks or lights to indicate that they are using nets.

Night fishing takes place off the coast of Sicilia during the summer months in the area between Taormina and Capo Murro di Porco up to 30 miles offshore. Fishing is carried out by staked nets, marked on the surface by a long line of white lights. Mariners are cautioned to keep a lookout for small craft which are difficult to see against the background of lighted nets.

When trawlers are working in pairs and it is necessary to warn an approaching vessel not to pass between them, a flare will be shown on the same side of the trawl, in addition to the lights prescribed by the COLREGS.

Government

Flag of Italy

Italy is a democratic republic. The country is divided into 15 regions and five autonomous regions.

Italy is governed by a President, elected by an electoral college composed of both houses of Parliament and 58 regional representatives, serving a 7-year term. The Prime Minister is appointed by the President. The bicameral Parliament is composed of a 315-member Senate, who are directly elected under a system of regional proportional representation (the winning coalition in each region receives 55 per cent of the seats from that region), serving 5-year terms, and a 630-member Chamber of Deputies, who are directly elected under a national system of proportional representation (the winning national coalition receives 54 per cent of the chamber seats), serving 5-year terms.

The legal system is based on civil law.

The capital is Rome

Holidays

The following holidays are observed:

January 1	New Year's Day
January 6	Epiphany
Easter Sunday	Variable
Easter Monday	Variable
April 25	Anniversary of the Liberation
May 1	Labor Day
June 2	Foundation of the Italian Republic
June 24	St. John's Day (Florence only)
June 29	St. Peter and St. Paul's Day (Rome only)
August 15	Assumption Day
September 19	St. Gennaro's Day (Naples only)
November 1	All Saints' Day
Sunday nearest November 4	World War I Victory Anniversary Day
December 7	St. Ambrogio's Day (Milan only)
December 8	Immaculate Conception
December 25	Christmas Day
December 26	St. Stephen's Day

Ice

Ice thay may hinder navigation forms in the Golfo de Venezia during severe winters. River ice has flowed into the Po delta many times during severe winters.

Industries

The main industries include tourism, machinery, iron and steel, chemicals, food processing, textiles, motor vehicles, clothing, footwear, and ceramics.

The main exports are engineering products, textiles and clothing, production machinery, motor vehicles, transport equipment, chemicals, food, beverages, tobacco, minerals, and non-ferrous metals. The main export-trading partners are Germany, France, the United States, Spain, and the United Kingdom.

The main imports are engineering products, chemicals, transport equipment, energy products, minerals, non-ferrous metals, textiles and clothing, food, beverages, and tobacco. The main import-trading partners are Germany, France, the Netherlands, and China.

Languages

Italian, German (parts of the Trentino-Alto Adige region are predominately German speaking), French (small French-speaking minority in the Valle d'Aosta region), and Slovene (Slovene-speaking minority in the Trieste-Gorizia area) are in common usage.

Meteorology

Marine weather forecasts for the western Mediterranean Sea are available in Italian and English from the Aeronautica Militare Italiana Servizio Meteorologico (http://www.meteoam.it).

Mined Areas

In the areas indicated below, search is constantly in progress and the presence on the bottom is probable, of magnetic mines, torpedoes, or projectiles, or other explosive objects constituting danger to navigation.

Western Mediterranean

1. **Sardinia—Golfo di Oristano—**Due to the presence of explosive devices on the bottom, anchoring and fishing are permanently prohibited in an area bounded by the following positions:

a. 39°44.2'N, 8°28.9'E.
b. 39°48.1'N, 8°30.0'E.
c. 39°47.3'N, 8°31.3'E.
d. 39°46.5'N, 8°31.4'E.

2. **Capo Frasca—**Navigation, tourism, fishing, and other occupations are permanently prohibited along the coast of Capo Frasca in an area bounded by lines joining the following positions:

a. 39°42.8'N, 8°26.8'E.
b. 39°42.8'N, 8°26.3'E.
c. 39°46.2'N, 8°26.5'E.
d. 39°46.6'N, 8°27.9'E.
e. 39°44.7'N, 8°29.2'E.
f. 39°44.2'N, 8°28.9'E.

An additional area where unexploded ordnance lies on the sea bed, is bounded by lines joining the following positions:

a. 39°48.1'N, 8°30.0'E.
b. 39°47.3'N, 8°31.5'E.
c. 39°46.5'N, 8°31.4'E.
d. 39°44.2'N, 8°28.9'E.

3. **Sardinia—Giglio Point—**Anchoring, fishing, mooring, and underwater diving are prohibited in a circular zone with a radius of 150m centered on position 40°34'04"N, 8°12'14"E due to the presence of explosive devices on the bottom

4. **Sardinia—Capo Caccia—**Anchoring, fishing, and related activities are prohibited in a circular zone with a radius of 150m centered on position 40°33'36"N., 8°09'44"E due to explosive devices on the bottom.

Ligurian Sea

1. **Isola Gallinara—**Fishing, diving, and any underwater activity are prohibited within an area extending 500m around Isola Gallinara due to the occasional prsence of unexploded ordnance.

2. **Celle Ligure—**Fishing is prohibited in a circular zone with a radius of 500m, centered on position 44°17.6'N, 8°36.1'E, due to the presence of an explosive device on the bottom in a depth of 280m.

3. **Genova—**Anchoring and fishing are prohibited in a circular zone with a radius of 0.5 mile lying nearly 1 mile SSW of Punta Vagno, due to the presence of a mine on the bottom.

4. **Bonassola—**About 1 mile offshore of Bonassola, at a depth of 40 to 45m, lies a wreck containing explosive ordnance.

5. **Punta Moneglia—**The water zone comprised between the parallel 44°13'30"N, the meridian 9°25'00"E, and the coast, is dangerous to underwater fishing due to the presence on the bottom of explosive ordnance.

6. **La Spezia Passages—**Navigating, fishing, and stopping are dangerous due to the presence of explosive ordnance in an area bounded by lines joining the following positions:

a. 44°02'36"N, 9°36'42"E.
b. 43°57'42"N, 9°41'30"E.
c. 43°56'30"N, 9°39'18"E.
d. 44°01'24"N, 9°34'30"E.

7. **San Vincenzo—**Sunken hulls containing explosive ordnance lie on the bottom at the following positions centered on circles with a 0.5 mile radius:

a. 43°07'18"N, 10°30'42"E.
b. 43°07'24"N, 10°30'04"E.
c. 43°09'00"N, 10°29'06"E.

8. **Isola Capraia—**A mine is reported to exist NW of the island in the vicinity of La Manza.

9. **Punta Ferraione—**A circular zone with a radius of 0.25 mile, lying about 550m N of Punta Ferraione, is dangerous due to the presence of an explosive device lying at a depth of 60m.

Tyrrhenian Sea

1. **Piombino—**The sea area, opposite the center of Enel (a small private harbor), 1 mile from Torre de Sale, is dangerous due to the presence of unexploded munitions lying at a depth of 15m.

2. **Isola Pianosa—**A mine is reported to exist near Isolotto La Scola at a depth of 80m.

Unexploded ordnance is reported to lie 20m from Punta del Marchese.

3. **Follonica.—**A wreck containing explosives lies in position 42°54'02.4"N, 10°44'29.4'E. Vessels shall not navigate within 0.5 mile of this position.

4. **Waters around Follonica—**An area that is dangerous due to the presence of an explosive device on the bottom is located within the area bounded by lines joining the following positions:

a. 42°52.5'N, 10°45.1'E.
b. 42°52.8'N, 10°45.6'E.
c. 42°53.5'N, 10°44.6'E.
d. 42°53.1'N, 10°44.7'E.

5. **Talamone—**A wreck lies approximately 1 mile W of the tower Cala Forno. It is reported to contain unexploded ordnance which has been dispersed on the bottom.

It is prohibited to anchor or fish within 1.5 miles of the coast between the tower on Cala Forno and the mouth of the Ombrone River.

6. **Civitavecchia—**Entry is prohibited due to the presence of possibly explosive devices on the bottom of the sea areas to the NW of the harbor within an area bounded by lines joining the following positions:

a. 42°21.3'N, 11°26.0'E.
b. 42°18.4'N, 11°33.0'E.
c. 42°16.6'N, 11°32.4'E.
d. 42°19.0'N, 11°24.2'E.

An explosive device is found within 150m of position 42°07.8'N, 11°07.7'E.

7. **Capo d'Anzio**—In the vicinity of Arco Muto, unmarked explosive devices are locted in a depth of 4m about 100m off the coast.

8. **Anzio—**An explosive device lies about 1 mile E of the end of Molo Innocenziano at a depth of 7m. Vessels in transit should navigate with caution.

9. **Sardinia—Maddalena Archipelago—Roads of Mezzo Schifo—**Anchorage and fishing are prohibited in Mezzo Schifo Roads due to explosive devices on bottom.

10. **Sardinia—Maddalena Archipelago—Waters surrounding the island of Spargi—**Anchoring, fishing, and related activities are prohibited at all times due to explosive ordnance in a circular zone, with a radius of 200m, centered on position 41°13'54"N, 9°21'25"E.

Hazardous operations may be carried out in the vicinity of

the above area from 15 January to 15 June and from 15 October to 22 December. When these hazardous operations are in progress, the radius of the restricted area will be enlarged, as follows:

a. 1,000m—All activities, including transiting, are prohibited.

b. 4,000m—All underwater activites.

11. **Sardinia—Maddalena Archipelago—Island of Caprera—Port Palma—**Anchorage and fishing are prohibited in an area centered on position 41°10.88'N, 9°26.98'E, due to projectiles and other devices and other explosive devices that could be in the area.

12. **Capo San Lorenzo—**The following areas are dangerous to navigation and fishing due to the presence of explosive devices:

A. The area between the parallels 39°30'30"N, 39°32'30"N, and the meridian 9°41'00"E.

B. The area bounded by lines joining the following positions:

a. 39°29'30"N, 9°38'30"E.
b. 39°29'30"N, 9°39'30"E.
c. 39°31'30"N, 9°39'30"E.
d. 39°31'30"N, 9°38'00"E.

C. The sea area within 1 mile of position 39°30'45"N, 9°40'39"E.

D. The circular zone with a radius of 2 miles centered on position 39°29'N, 9°42'E is prohibited to anchoring and fishing due to the presence of an explosive device at a depth of 90m.

13. **Capo Teulada—**Anchoring and fishing are permanently prohibited due to the presence of unexploded devices on the bottom in an area bounded by lines joining the following positions:

a. 38°56'52"N, 8°37'12"E.
b. 38°56'18"N, 8°32'24"E.
c. 38°52'54"N, 8°35'30"E.
d. 38°51'30"N, 8°39'00"E.
e. 38°53'48"N, 8°42'06"E.
f. 38°54'00"N, 8°44'14"E.
g. 38°55'22"N, 8°42'38"E.

However, transit through the above area is prohibited only during periods of firing practice, for which specific orders are periodically issued.

14. **Mondragone—**Anchoring, fishing and other related activities are prohibited in the locality of Sinuessa due to the presence of numerous explosive devices on the bottom in an area bounded by lines joining the following positions:

a. 41°09.0'N, 13°49.5'E.
b. 41°09.0'N, 13°50.0'E.
c. 41°07.0'N, 13°51.5'E.
d. 41°07.0'N, 13°51.0'E.

15. **Gaeta—**The presence of numerous devices of a military wartime nature has been reported in the area off the locality of Monte Orlando (Grotta del Turco) at a distance of 100m and for a stretch of 100m parallel to the coast. (This point is within the area of the Monte Orlando Preserve).

16. **Canale di Procida—**Explosive ordnance lies scattered on the bottom, on the E edge of the 26m shoal, at approximate position 40°45.2'N, 14°05.5'E (about 1.3 miles S of Capo Miseno).

17. **Golfo di Pozzuoli—Miseno—**Navigation, anchorage, and all other activity are prohibited in the sea area extending 300m to the E of the mussel bed due to the presence of an explosive device on the bottom

18. **Penisola Sorrentina—Marina di Lobra—**The stopping and mooring of ships and all craft in general, fishing, and all underwater activity are prohibited in a 400m wide stretch of water which extends SE from Scoglio Vervece and connects the head of Molo Foraneo with the landing place at Marina di Lobra due to the presence of explosive devices contained within a submerged fishing net.

19. **Punta Baccoli to Capri—**The probable presence of explosive devices in depths of about 70m has been reported in the area bounded by lines joining the following positions:

a. 40°36'12"N, 14°19'00"E.
b. 40°36'12"N, 14°19'12"E.
c. 40°36'00"N, 14°19'12"E.
d. 40°36'00"N, 14°19'00"E.

Navigating, fishing, anchoring, and any marine or underwater activities are prohibited in this area.

20. **Capri—**Unexploded ordnance lies in a depth of 70m in position 40°32'55.8"N, 14°15'46.4"E.

21. **Forio d'Ischia—**Unexploded ordnance lies in a depth of 50m in position 40°44'31.74"N, 13°50'24.18"E.

Navigating, fishing, anchoring, and any marine or underwater activities are prohibited in this area.

22. **Scoglio Vetara—**Unexploded ordnance lies in a depth of 60m in position 40°44'31.74"N, 13°50'24.18"E.

Navigating, fishing, anchoring, stopping, and any marine or underwater activities are prohibited within 100m of this position.

23. **Golfo di Policastro—Villamare—**The sea area along the coastal strip of Via Torre-Vibonati-Villamare, extending for a length of 0.2 mile and up to 100m off the coast, is dangerous to navigation and prohibited to fishing and anchorage due to the presence of explosive devices on the bottom.

24. **Golfo di Policastro—Scario—**Explosive devices are located, in depths of 9 to 11m, in the vicinity of position 40°03.0'N, 15°29.7'E.

25. **Golfo di Policastro—Maratea—**Unexploded ordnance lies about 150m offshore from the Acquafredda District. A prohibited entry area, with a radius of 500m, is centered on position 40°02.2'N, 15°40.1'E.

26. **Golfo di Policastro—Scalea—**The circular zone offshore of Torre Lao (Scalea), with a radius of 300m centered on position 39°48'54"N, 15°47'48"E is prohibited to transiting, mooring, stopping, and fishing due to the existence of explosive devices on the bottom. The center of the area is marked by two red buoys.

Operations to remove and dispose of these explosive devices may occur in this area. The salvaged explosive devices are transported to position 39°48'42"N, 15°44'24"E and are destroyed. When these operations are in progress transiting, mooring, stopping, fishing and all other underwater activities are prohibited within 1 mile of this position. Vessels are also prohibited from coming within 500m of the Italian naval vessels transporting the explosive devices to this position. During the transport of these explosive devices, the transport vessel will display Flag B of the International Code of Signals.

A prohibited entry area, with a radius of 1 mile, established due to unexploded ordnance on the sea bed, lies cen-

tered on position 39°48.9'N, 15°47.0'E.

27. **Waters around Sant' Eufemia Lamezia—**The sea area off the coast, bounded by the parallels 38°50'N and 38°53'N and up to 0.5 mile off this same coast, is dangerous to navigation and prohibited to fishing and anchorage due to the presence of explosive devices on the sea bottom.

28. **Golfo di Sant' Eufemia Lamezia—**A wreck, covered with mud and containing explosive ordnance, lies on the bottom at position 38°45'30"N, 16°11'30"E, about 0.3 mile N of the Tonnara chimney

The area within a 0.5 mile radius from the above position is prohibited to anchorage and any underwater operations.

29. **Capo Cozzo**—A device dangerous to navigation lies at a depth of about 12m, about 100m from the coast in the vicinity of Zambrone.

30. **Sicily—Formiche Shoals—**Anchoring, sailing, fishing, and other related activities of any kind are prohibited in the area of the seawall of Argo Capo d'Orlando up to 250m from land due to the presence of numerous explosive devices on the bottom.

31. **Sicily—Golfo di Castellammare—**Anchoring, sailing, and stopping by any vessel or craft, along with any other related water activities, are prohibited due to the presence of a wartime device in the area bounded by lines joining the following positions:

a. 38°06.0'N, 12°47.9'E.
b. 38°06.2'N, 12°48.4'E.
c. 38°05.8'N, 12°48.7'E.
d. 38°05.6'N, 12°48.3'E.

Stay clear a distance of no less than 0.5 mile from this area.

Anchoring, sailing, and fishing are prohibited, until further notice, and navigation is dangerous in the area of Cala dei Muletti, about 3.2 miles SSE of Capo di Rama, due to the presence of explosive ordnance on the sea bottom.

32. **Sicily—Northwest of Trapani—**Unexploded ordnance may be found in the area bounded by lines joining the following positions:

a. 38°25'N, 12°06'E.
b. 38°17'N, 12°14'E.
c. 38°12'N, 12°06'E.
d. 38°20'N, 11°56'E.

33. **Sicily—Trapani—**Unexploded ordnance may be found within 1 mile of position 37°46.5'N, 11°58.5'E.

Strait of Sicily

Sicily—Porto Empedocle—Unexploded ordnance may be found within 1 mile of position 37°13'21'"N, 13°17'07"E.

Ionian Sea

1. **Sicily—Stazzo—**Due to the presence of unexploded ordnance, in depths of 8 to 30m, in the waters off the marina, vessels or barges are prohibited from navigating or stopping in the sea area 500m wide between the head of the outer breakwater and a point 450m from it. Fishing and other underwater activities are also prohibited in this area.

2. **Waters around Magnisi Peninsula—**The zone contained between the parallels 37°09'48"N, 37°09'15"E and the meridians 15°17'05"E and 15°15'55"E, is permanently prohibited for mooring and fishing and is dangerous to navigation due to submerged ordnance.

3. **Reggio Calabria—**Unexploded ordnance lies in a depth of 290m in position 36°06'15.24"N, 15°36'55.20"E. Trawling and other sea bed activities are prohibited in this area.

4. **Capo Spartivento—**A wreck containing unexploded ordnance lies in position 37°53'49.2"N, 16°00'43.5"E. Vessels are prohibited from navigating or stopping within 0.5 mile of this position.

5. **Waters around Crotone—**An unexploded mine is located in position 39°03.2'N, 17°11.0'E. Vessels should give this position a berth of at least 0.5 mile.

6. **Punta Alice—**A wreck containing unexploded ordnance lies about 20m from shore in position 40°24'20.0"N, 17°07'13.8"E.

7. **Waters around Taranto—**Explosive ordnance is reported to lie in an area SW of Isola San Pietro and Isolotto San Paolo, bounded by the bearing of 270° from Punta La Forca, the line of the dike which joins the two islands, and the bearing of 180° from the red light of San Paolo, in depths between the 40m and 140m curves.

8. **Taranto—**The following areas are prohibited to anchoring and fishing due to the presence of unexploded ordnance:

Area 1—Bound by lines joining the following positions:

a. 40°28.0"N, 17°05.7'E.
b. 40°27.2"N, 17°06.6'E.
c. 40°27.7"N, 17°09.7'E.
d. 40°28.5"N, 17°10.4'E.

Area 2—Bound by lines joining the following positions:

a. 40°25.2'N, 17°10.6'E.
b. 40°25.7'N, 17°11.6'E.
c. 40°24.2'N, 17°11.5'E.

9. **Porto Cesareo—**Unexploded ordnance, in depths of 15 to 20m, lies within 100m of Torre Chianca.

10. **Punta del Pizzo—**Due to the presence of explosive ordnance on the bottom, in a depth of about 70m, navigation is dangerous within a radius of 1 mile of the point situated 5.5 miles S of Punta del Pizzo.

Adriatic Sea

1. **Capo d'Otranto—**Navigating and fishing are prohibited within 200m of Isolotto Sant'Emiliano, about 1.1 miles SW of Capo d'Otranto, due to the presence of unexploded ordnance.

2. **Punta San Cataldo—**Anchoring and fishing are prohibited, and navigation is dangerous, due to the presence of explosive ordnance on the sea bottom in an area bounded by a line joining the following points:

a. 40°25'31"N, 18°15'30"E.
b. 40°30'20"N, 18°16'30"E.
c. 40°29'25"N, 18°19'03"E.
d. 40°27'45"N, 18°20'58"E.
e. 40°25'55"N, 18°22'28"E.
f. 40°23'05"N, 18°23'18"E.
g. 40°23'54"N, 18°17'30"E.

3. **Bari—**Unexploded ordnance lies in position 41°16'48"N, 16°58'18"E. Vessels are prohibited from transiting within 200m of this position.

4. **Waters around Molfetta—**Explosive ordnance lies 7.1 miles, bearing 051°, from Molfetta Light.

Unexploded ordnance lies within an area bounded by lines

joining the following positions:
a. 41°48'30"N, 16°52'07"E.
b. 41°48'49"N, 16°54'47"E.
c. 41°43'52"N, 16°55'50"E.
d. 41°43'33"N, 16°53'10"E.

5. **Molfetta—**Unexploded ordnance lies within an area bounded by lines joining the following positions:
a. 41°12'55.44"N, 16°36'42.66"E.
b. 41°12'36.78"N, 16°36'42.66"E.
c. 41°12'34.26"N, 16°36'09.36"E.
d. 41°12'55.44"N, 16°36'08.22"E.

6. **Fiume Ofanto (Barletta)—**Navigation and fishing are prohibited due to the presence of explosive ordnance on the bottom, in an area at the mouth of the Ofanto River, near the Barletta coast, bounded by lines joining the following points:
a. 41°21'45"N, 16°12'16"E.
b. 41°23'48"N, 16°13'28"E.
c. 41°23'00"N, 16°15'16"E.
d. 41°21'20"N, 16°16'23"E.
e. 41°20'30"N, 16°14'08"E.

7. **Isole di Tremiti—Isola Pianosa—**The sea area surrounding Isola Pianosa, up to 0.3 mile from the coast, is prohibited to navigation, anchorage, underwater fishing, and stopping due to the presence of residual unexploded ordnance on the bottom within approximately l00m of the coast.

8. **Cattolica—**Anchoring and fishing are permanently prohibited due to the presence of explosive ordnance on the sea bottom in the area bounded by lines joining the following positions:
a. 43°58'18"N, 12°45'15"E.
b. 43°58'18"N, 12°45'24"E.
c. 43°58'12"N, 12°45'24"E.
d. 43°58'12"N, 12°45'15"E.

9. **Coastline off Romagna—**Unexploded ordnance has be reported in the following positions:
a. 44°04'06.78"N, 12°49'32.64"E.
b. 44°00'13.80"N, 12°53'00.00"E.
c. 44°18'07.26"N, 12°38'24.96"E.
d. 44°28'34.20"N, 12°25'37.20"E.

10. **Porto Garibaldi** (Mouth of Fiume Reno)—Anchoring and fishing are permanently prohibited due to the presence of explosive ordnance on the sea bottom in the area bounded by lines joining the following positions:
a. 44°39'00"N, 12°15'00"E.
b. 44°43'00"N, 12°22'00"E.
c. 44°31'30"N, 12°22'00"E.
d. 44°33'00"N, 12°17'10"E.

This area is dangerous due to firing practice from 0700 until 2400 on Monday through Thursday and from 0700 to 1200 each Friday.

11. **Porto Fossone—**Anchoring, fishing, and other underwater activities are dangerous due to unexploded ordnance within an area with a radius of 0.5 mile centered on position 45°07'52.0"N, 12°36'52.3"E.

12. **Malamocco—**A wreck, with a depth of 18m, lies in position 45°17'16.2"N, 12°34'34.8"E. The zone centered around this wreck, with a radius of 1 mile, is dangerous for anchoring, trawling, and fishing due to the wreck itself and by explosive material scattered on the bottom.

13. **Punta del Tagliamento to Bibione—**Fishing and anchoring are dangerous due to the presence of explosive ordnance on the bottom in an area bounded by lines joining the following positions:
a. 45°37'50"N, 13°04'18"E.
b. 45°37'00"N, 13°04'18"E.
c. 45°36'20"N, 13°04'30"E.
d. 45°36'20"N, 13°05'12"E.
e. 45°37'00"N, 13°05'20"E.
f. 45°37'50"N, 13°05'20"E.

14. **Grado—**Fishing and anchoring is dangerous to starboard of the access channel to Grado due to the presence of mines on the bottom in an area bounded by lines joining the following positions:
a. 45°39'58"N, 13°22'05"E.
b. 45°39'58"N, 13°22'45"E.
c. 45°39'26"N, 13°22'45"E.
d. 45°39'26"N, 13°22'21"E.
e. 45°39'40"N, 13°22'21"E.

Caution.—There are some additional areas off the Italian coast which constitute danger due to unexploded ordnance. These areas are shown on the charts or described in Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Navigational Information

Enroute Volume

Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Maritime Claims

The maritime territorial claims of Italy are, as follows:

Territorial Sea *	12 miles.
Exclusive Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines. Claims Golfo di Taranto as a historic bay.

Offshore Drilling

Seismic Survey

Seismic surveying and drilling operations are carried out off the coasts of Italy, Sardinia, and Sicilia, normally in depths of less than 200m.

Seismic surveying ships tow a cable about 0.5 mile to 1.6 miles in length, the end of which is marked by a small lighted buoy.

Vessels should give the stern of seismic surveying ships a berth of at least 1.6 miles and avoid interfering with the surveying ship's course.

Vessels should be alert to signals of the International Code displayed by prospecting ships or small escort craft. Details of these surveys are circulated as Italian Notice to Mariners broadcasts by radiotelegraph and radiotelephone, and by NAVAREA III notices.

Fixed oil rigs and mobile platforms may be encountered in Italian waters at some distance offshore; they are fitted with lights and, if possible, fog signals.

Mariners are cautioned that unlighted installations may also exist in these waters. Most of the fixed platforms are found in the central-northern Adriatic Sea.

Vessels in transit should give mobile platforms a wide berth in order to avoid the moorings associated with these installations.

Safety zones, in which unauthorized vessels are prohibited from entering, are established around the fixed and mobile platforms and can extend up to a distance of 0.25 mile from these installations.

Announcements concerning the movements of these installations are promulgated through notices broadcast by radiotelegraph, radiotelephone, and NAVAREA III warnings.

Pilotage

Pilotage is compulsory for all foreign vessels greater than 500 grt, although there are some ports which require pilotage for all foreign vessels greater than 400 grt. Licensed pilots are available at the more important Italian ports and harbors. A vessel requiring a pilot should display one of the signals designated in the International Code of Signals.

Pilot vessels are painted black with a white band with P or PILOT painted on the bow, stern, and funnel.

See Pub. 131, Sailing Directions (Enroute) Western Mediterranean for further information. A pilot vessel bringing out a pilot to a signalling vessel by day, gives notice of such intention by hoisting and lowering the distinguishing flag several times, and at night by showing a flashing light at intervals not exceeding 15 seconds.

Pollution

All vessels navigating in Italian waters should report pollution by noxious substances, threats of pollution caused by any event or incident, and accidents which could lead to such pollution. The first report should be sent as soon as possible via a coast radio station to the following addresses:

1. MINISTRY OF MERCHANT MARINE CENTRALE OPERATIVA ROMA.
2. "Harbormaster of ..." (the nearest port).

The report must contain the paragraph number, together with the information required, in the following format:

1. General information.
   A. Subject of the message.
   B. Time of the incident (in UTC).
   C. Position of the incident.
2. Incident.
   A. Incident concerning: vessel(s), platform, refinery, storage facility, oil pipeline, other.
   B. Cause of incident: collision, explosion, fire, shipwreck, grounding, spillage.
   C. Particulars of vessel(s) or installation(s) involved: name, type, nationality, gross tonnage, owners/charterers, nature and tonnage of cargo, registration number of vessel (if possible).
3. Meteorology.
   A. Meteorological conditions: wind direction (in degrees), wind speed (in knots), sea state.
   B. Surface currents in the area: direction (in degrees), speed (in knots).
   C. Local outlook (improving, worsening, stable).
4. Pollution.
   A. Existing maritime pollution? (Yes/No). If yes, complete all of Paragraph 4, then go on to Paragraph 6. If no, go on to Paragraph 5.
   B. Type of product being spilled: raw (light, medium, heavy), refined (white, black), slops, ballast, condensation, liquefied gas, chemical products.
   C. Have samples been taken? (Yes/No). If yes, by whom: name, address, telephone, telex.
   D. Details of product(s), if available: density, flammability (non-flammable, weak, high), toxicity (low, medium, high).
   E. Quantity spilled: rate of spillage.
   F. If spillage floats, estimate of spread in two dimensions.
   G. Direction (in degrees) and estimated speed of spread.
   H. Is the product on fire? (Yes/No).
   I. Has the spread reached the coast? (Yes/No).
   J. Identify affected areas.
   K. Length of coastline affected (in kilometers).
   L. Type of coast affected: beach, rocky coast, other.
5. Risk of pollution.
   A. Is there a risk of spreading? (Yes/No). If yes, complete paragraph 5. If no, continue on to paragraph 6.
   B. Type of product which can spread (see 4B).
   C. Details of product which can spread (see 4D).
   D. Maximum estimated quantity.
6. Measures already taken.
7. Assistance required.
8. Other observations.

As soon as mariners are in possession of additional information, another message, numbered sequentially, should be sent in the same format.

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Marine Mammals Sanctuary

A marine mammals sanctuary has been established in the Liguarian Sea, the Sea of Corsica and the central and N portions of the Tyrrhenian Sea. The area is located between the following boundaries:

1. North boundary—The coast of Italy and France between Fosso Chiarone, Italy (42°21.4'N., 11°31.0'E.) and Pointe Escampobariou, France (43°01.7'N., 6°05.9'E.).
2. West boundary—A line joining Pointe Escampobariou, France (43°01.7'N., 6°05.9'E.) and Capo Falcone, Sardegna (40°58.3'N., 8°12.1'E.).
3. South boundary—The N coast of Sardegna between Capo Falcone, Sardegna (40°58.3'N., 8°12.1'E.) and Capo Ferro, Sardegna (41°09.3'N., 9°31.3'E.).
4. East boundary—A line joining Capo Ferro, Sardegna

(41°09.3'N., 9°31.3'E.) and Fosso Chiarone, Italy (42°21.4'N., 11°31.0'E.).

Pre-arrival Reporting

It has been reported (2003) that foreign-flagged vessels must provide pre-arrival information, via telex, to COMPAMARE (the harbor authority of the port) 72 hours prior to arrival in order to be allowed to enter the port. If the sailing time to the arrival port is less than 72 hours, the message should be sent prior to leaving the previous port. Vessels failing to comply will have to wait 72 hours before being allowed to enter Italian ports.

Quarantine

Requests for free pratique must be made 12 hours to 4 hours before the vessel's ETA. Messages should be sent to "USMAF SANIMARE (name of port)." Messages sent more than 12 hours in advance may have to be repeated. Messages should contain the following information:

1. Vessel's name and details, including the maritime representative or agent in Italy.
2. ETD.
3. ETA.
4. Destination port.
5. Last port of call.
6. Health situation on board.
7. Number of deceased persons on board, if any (otherwise indicate NIL).
8. If there is a medic on board.
9. Number of crew.
10. Number of passengers.
11. Number of disembarking passengers.
12. Information about the master (name, place of birth, date of birth, where living, and, if possible, the signature of the master).

If a voyage takes less than 12 hours, the request must be made after the vessel's departure and should be forwarded to "USMAF SANIMARE (name of port)" not less than 90 minutes before the vessel's arrival.

Requests must be completed clearly in Italian, English, or French.

Tanker Prohibited Navigation Areas

Tankers that have carried or are currently carrying petroleum, chemical, or gas products in bulk are prohibited from navigating in the following areas:

1. Between Arma de Taggia (43°50'N., 7°51'E.) and Cervo, 13 miles NE—year round prohibition.
2. Between Promontorio de Portofino (44°19'N., 9°11'E.) and Punta Baffe, 12 miles ESE—year round prohibition.
3. Within an offshore area centered on position 44°00'N, 9°38'E—year round prohibition.
4. In the approaches to La Spezia—year round prohibition.
5. Between Pietra Ligure (48°09'N., 8°17'E.) and Varozze, 18 miles NE—navigation prohibited from June 1 until September 30.

Vessels approaching ports enclosed by any of these areas must follow the designated routes or navigate perpendicular to the coast.

Special Tanker Ordinances

Single-hull tankers over 5,000 dwt and over 15 years of age carrying heavy fuels, waste oils, heavy crude oil, bitumen, and tar are prohibited from entering Italian ports.

Italian authorities advise that special ordinances are in effect for regulating the entry and exit of tankers from Italian ports.

These ordinances have the following rules:

Article 1. It is mandatory, starting immediately, that the masters of all tankers transporting petroleum, gas or chemical products, having a gross tonnage equal to or above 1,600 tons, totally or partially full, including empty, but not yet degassified tankers, headed to ports or boundaries included in the area of jurisdiction; do the following:

a. Communicate via radio to the Harbor Master's Office of the Port, on VHF or via coastal public radio station, before entering the territorial waters of jurisdiction:

- The name and international call sign of the vessel
- Nationality of the ship
- Length and draft
- Port or destination of anchorage
- Scheduled time of arrival
- General nature of cargo aboard and its quantity
- If in possession, in the case of transporting chemical products, of the certificate prescribed for new ships of the IMO Code for the construction and equipping of ships that transport chemical products in bulk.
- If, in the case of transporting chemical products in packing cases or liquefied gas in packing cases, the ship is in possession of the appropriate certificate prescribed by the IMO Code.

b. Complete the check list connected with the ordinance and put it within easy reach of the pilot.

Article 2. The Masters of vessels mentioned in the proceeding Article 1, whether entering or leaving a port, navigating in the areas of jurisdiction, must:

- Inform the Harbor Master's Office of any defects or incidents that could jeopardize navigational safety or constitute a danger for the sea environment and adjacent areas.
- Establish and maintain a radiotelephone connection, preferably on VHF, with the Harbor Master's Office or via coastal public radio station.
- Use the pilot even outside the boundaries of the area in which pilotage is mandatory, in case of fog or poor visibility, and whenever the nature of the cargo aboard ship and/or the conditions of navigation make it advisable.

Article 3. If, from the checklist of Article 1, letter b, there ever is a defect that could jeopardize the safety of the navigation of the vessel or that could in any way constitute a danger, the pilots of the port must immediately inform the Harbor Master's Office. The above list, endorsed by the pilot, must be shown immediately after the ship's arrival, to the Harbor Master's technical office.

Article 4. Except for the fact that it does not constitute a serious crime, transgressors of the items of the ordinance will be punished according to the terms of Article 1174 or 1231 of the Navigation Codes and Article 32 of the law of June 5, 1962 number 616, and will also be held responsible for the damages incurred by their illicit behavior should any such damages involve people or things.

Vessels carrying arms or ammunition must declare them and obtain ministerial permission before entering Italian territorial

waters. Complete information must be provided at least 4 days prior to arrival.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU. For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Regulations for Marking Areas Polluted by Toxic Substances in Italian Waters

The Ministry of the Merchant Marine has established a contingency plan in the event of an oil spill or environmental contamination by other toxic substances.

All vessels navigating in Italian territorial waters or adjacent waters are obligated to inform the Italian maritime authority of any pollution or danger of pollution caused by any event, collision, wreck, or explosion.

Notification of such incident must be sent immediately to either the harbormaster's office or to the Ministry of the Merchant Marine DIFMAR Operational Headquarters, Rome, whichever is closer. The message must contain the following:

1. Generalities, including purpose of the message, site of the incident, and day, date and time of the occurrence in UTC.
2. Cause of the accident, as from collision, fire, explosion, wreck, sinking, or spill. Incident with regard to vessel(s), platform, refinery, storage area or pipeline involved.
3. Particulars on the vessel(s) and installation(s) involved including name, type, nationality, gross tonnage, owner, nature and quantity of cargo, and vessel's registration number.
4. Meteorological conditions with respect to wind direction and velocity, state of the sea, and direction and velocity of the surface current. Whether the prevailing circumstances appear to be improving, worsening, or stabilized.
5. Pollution with regard to type of product spilled, characteristics of the product, quantity spilled, and present rate of spill. Statement as to whether samples have been taken and by whom. If the product floats, estimate dimension of the sea area affected.
6. Disposition of the spill with regard to movement, product flammability, and proximity of the product to the coast.
7. Measures which have been taken.
8. Assistance requested.
9. Other information.

Albanian Immigration

Regulations concerning the emigration of Albanian citizens to Italian territory have been issued and apply to vessels of all flags in Albanian territorial waters. All merchant ships entering or leaving Albanian territorial waters will be contacted by Italian warships or Italian coast guard vessels, which will carry out inspection procedures. Vessels must be prepared to submit the following information:

1. Vessel name.
2. Call sign.
3. Flag.
4. Last port of call and departure date.
5. Destination(s) in Albania and ETA.
6. General cargo description.
7. Number of crew.
8. Number of illegal emigrating Albanians on board, if any.
9. For vessels leaving Albanian territorial waters—The destination(s) in Italy and ETA, if possible.

Based on the information provided above, the following action(s) may be taken:

1. Vessels bound for Albanian territorial waters—Masters will be advised to ensure there are no illegal Albanian emigrants on board when departing Albanian ports.
2. Vessels leaving Albanian territorial waters and declaring their destination to be an Italian port—The vessel can be inspected to determine the presence of illegal Albanian emigrants.
3. Vessels leaving Albanian territorial waters and declaring their destination to be other than an Italian port—The vessel will not be stopped but may be followed to confirm that their course has not changed towards an Italian port.

Low-sulphur Fuel

Vessels in Italian ports are prohibited from using fuel oil containing more than 0.1% sulphur.

Search and Rescue

The Maritime Rescue Coordination Center (MRCC) Roma, under the authority of the Italian Port Coast Guard, coordinates search and rescue operations within Italian waters. Further information regarding the Italian Port Coast Guard can be obtained, as follows:

1. Web site: http://www.guardiacostiera.it
2. E-mail: cgcp3rep4@infrastrutturetrasporti.it
   centraleoperativa1@libero.it

The Maritime Rescue Coordination Center and the Maritime Rescue Coordination Subcenters (MRSC), along with contact information, are listed in the accompanying table titled **Italy—MRCC and MRSC Contact Information**.

A network of coast radio stations maintains a continuous listening watch on international distress frequencies.

Ship Reporting System

Adriatic Traffic Reporting System (ADRIREP)

The Adriatic Traffic Reporting System (ADRIREP) is a mandatory reporting system for the following vessels:

1. Oil tankers of 150 grt and over.
2. All vessels of 300 grt and over carrying dangerous or polluting cargo, either in bulk or break bulk. (Dangerous cargo means cargo classified in the IMDG Code, in Chapter 17 of the IBC Code, and Chapter 19 in the IGC Code. Polluting cargo means oils as defines in MARPOL Annex I, noxious

liquid substances as defined in MARPOL Annex II, and harmful substances as defined in MARPOL Annex III.)
For further information on ADRIREP, see Appendix I.

Italian Automated Search and Rescue System (ARES)

Vessels transiting the Mediterranean are encouraged to participate in the Italian Automated Search and Rescue System. The system is aimed at a coordinated efficiency of search and rescue operations. Automated Search and Rescue (ARES) messages will be accepted free of charge by Italian coast radio stations.

For further information on ARES, see Appendix II.

Italy—MRCC and MRSC Contact Information

	Telephone	Facsimile	E-mail
MRCC Rome	39-06-5923569 39-06-5924145 39-06-59084527 39-06-59084697 39-06-59084698 39-06-59084409	39-06-5922737 39-06-59084793	cgcp3rep4@infrastrutturetrasporti.it centraleoperativa1@libero.it cogecap3@flashnet.it
MRSC Ancona	39-071-227581 39-071-502101	39-071-50210209 39-071-55393	ancona@guardiacostiera.it
MRSC Bari	39-080-5216860 39-080-5281544 39-080-5281546	39-080-5211726	bari@guardiacostiera.it
MRSC Genova	39-010-2412222 39-010-2777385 39-010-2777387 39-010-2777388 39-010-27771	39-010-261064 39-010-2777386 39-010-2777427	mrsc@cpgenova.it genova@guardiacostiera.it
MRSC Livorno	39-0586-894493 39-0586-826069 39-0586-826070	39-0586-826090	livorno@guardiacostiera.it
MRSC Napoli	39-081-2445111 39-081-5536017 39-081-2445308	39-081-2445347 39-081-2445435	napoli@guardiacostiera.it
MRSC Pescara	39-085-694040	39-085-9189802	pescara@guardiacostiera.it
MRSC Ravenna	39-0544-443011 39-0544-443013	39-0544-447498	ravenna@guardiacostiera.it
MRSC Reggio Calabria	39-0965-6561 39-0965-656268 39-0965-650090	39-0965-656333	reggiocalabria@guardiacostiera.it
MRSC Roma	39-06-6522222 39-06-65617574 39-06-65617575 39-06-65617326 39-06-65617349 39-06-65617376	39-06-65617303 39-06-65617312	roma@guardiacostiera.it
MRSC Trieste	39-040-676611 39-040-676612 39-040-676616 39-040-676677	39-040-676665 39-040-676613	trieste@guardiacostiera.it
MRSC Venezia	39-041-2405711 39-041-2405745	39-041-2405730	venezia@guardiacostiera.it
MRSC Cagliari	39-070-605171 39-070-659210 39-070-659225	39-070-60517218 39-070-682284	cagliari@guardiacostiera.it

Italy—MRCC and MRSC Contact Information			
	Telephone	Facsimile	E-mail
MRSC Catania	39-095-7474111 39-095-538888	39-095-533962	catania@guardiacostiera.it
MRSC Palermo	39-091-331538 39-091-6043111 39-091-6043110 39-091-6043165 39-091-6043188	39-091-325519 39-091-328213	cppalermo@mit.gov.it gcpalermo@mit.gov.it palermo@guardiacostiera.it

Bonifacio Strait Reporting System (BONIFREP)

The Strait of Bonifacio borders the S side of Corsica and separates it from Sardinia, a province of Italy. The Bonifacio Strait Reporting System (BONIFREP) has been established within the Strait of Bonifacio and its E and W approaches. The system is mandatory for all vessels of 300 grt and over. Further information can be found in Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Strait of Messina Voluntary Reporting System

The Strait of Messina separates the NE extremity of Sicily from the SW extremity of the Italian mainland. The Strait of Messina Voluntary Reporting System has been established in this area. The system is mandatory for all vessels of 300 grt and over. Further information can be found in Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Signals

Italian Storm Signals

In addition to the International Storm Signals, the following storm signals may be displayed at Italian ports:

Storm Signals		
Day	Night	Meaning
Black cone, point up	Two red lights, vertically disposed	Gale expected from the NW quadrant
Black cone, point down	Two white lights, vertically disposed	Gale expected from the SW quadrant
Two black cones, points up, vertically disposed	One red light over one white light	Gale expected from the NE quadrant
Two black cones, points down, vertically disposed	One white light over one red light	Gale expected from the SE quadrant
Two black cones, bases together	One red light	Gale expected from any direction

Traffic Control Signals may be shown from Italian naval vessels. When such vessels are engaged in traffic control they show the following lights at night in addition to navigation lights. These lights are displayed vertically, 2m apart:

1. Three red lights prohibit free entry into the harbor.
2. Three white lights allow for free entry into the harbor.

Italian lighthouses, lightships, and signal stations may exhibit, when necessary, the following signals of distress:

Traffic Control Signals		
Day	Night	Meaning
A black flag with a white ball in the center	A white flare	Doctor needed
A black and white checkered flag or pennant	A red flare followed by a white flare	Damage to apparatus
A black ball	A red flare	Provisions and water needed
A black flag with a white ball in the center above a black ball	A white flare followed by a red flare	Shipwrecked
A black ball above a black flag with a white ball in the center	A white flare followed by a red and then a white flare	Accident to aircraft

Submarine Operating Areas

Submarine operating areas are described below. Ships approaching these areas should abide by notice to mariners, or if lacking special navigational warnings, they should avoid as much as possible crossing these areas.

When, out of necessity, a ship must enter an area, it must proceed with great caution maintaining a good lookout and radar watch.

It is absolutely necessary to comply with the signals of the vessel escorting the submerged submarine, and with Italian signal stations in sight, in order to avoid emergency situations.

Vessels escorting submarines will hoist the signal “NE 2” for the duration of the exercise.

Italian submarines unable to surface may release the following buoys:

1. EM104—A lighted orange buoy broadcasting distress signals on 406.025 MHz and a radiobeacon broadcasting on 243.0 MHz. The signals can be broadcast for up to 60 hours.
2. T-1630/SRT—An unlit black and silver buoy broadcasting distress signals on 406.025 MHz and a radiobeacon

broadcasting on 121.5 MHz. The signals can be broadcast for up to 48 hours.

Italian submarines in distress may also release red smoke flares, oil, or air bubbles.

S701—Bounded by a line joining the following positions:

a. 43°44'59"N, 9°31'30"E.
b. 43°58'00"N, 9°18'30"E.
c. 44°06'00"N, 9°33'00"E.
d. 43°53'00"N, 9°46'00"E.

The area is further subdivided into the following zones bounded by lines joining the following positions:

A. 44°02'00"N, 9°25'40"E.
44°06'00"N, 9°33'30"E.
43°53'00"N, 9°46'00"E.
43°48'40"N, 9°39'00"E.

B. 44°02'00"N, 9°25'40"E.
43°48'40"N, 9°39'00"E.
43°44'59"N, 9°31'30"E.
43°58'00"N, 9°18'30"E.

S701C—Bounded by a line joining the following positions:

a. 44°06'10"N, 9°33'50"E.
b. 44°04'10"N, 9°30'10"E.
c. 44°01'30"N, 9°32'50"E.
d. 44°03'30"N, 9°36'24"E.

This zone is a firing range for checking torpedoes and plans call for the placement of a buoy in position 44°05'20"N, 9°36'00"E.

S702—Bounded by a line joining the following positions:

a. 44°03'13"N, 9°56'18"E.
b. 44°02'06"N, 9°53'24"E.
c. 44°00'36"N, 9°54'24"E.
d. 44°02'00"N, 9°58'36"E.

S721—Bounded by the parallels 37°25'N and 37°20'N, and the meridians 15°08'E and 15°19'E.

S722—Bounded by the parallels 37°15'N and 37°25'N, and the meridians 15°25'E and 15°55'E.

S723—Bounded by the parallels 36°45'N and 37°08'N, and the meridians 15°25'E and 16°l0'E.

S731—Bounded by the parallels 40°00'N and 40°18'N, and the meridians 16°51'E and 17°09'E.

The area is further subdivided, as follows:

A. Bounded by the parallels 40°00'00"N and 40°18'00"N and the meridians 16°51'00"E and 17°00'00"E.

B. Bounded by the parallels 40°00'00"N and 40°18'00"N and the meridians 17°00'00"E and 17°09'00"E.

S732—Bounded by a line joining the following positions:

a. 40°29'18"N, 17°00'18"E.
b. 40°28'00"N, 17°02'18"E.
c. 40°26'30"N, 17°01'00"E.
d. 40°28'18"N, 16°59'00"E.

S733—Bounded by a line joining the following positions:

a. 40°00'00"N, 16°51'00"E.
b. 40°00'00"N, 17°54'00"E.
c. 39°39'00"N, 17°54'00"E.
d. 39°34'00"N, 17°38'00"E.
e. 39°34'00"N, 17°00'00"E.
f. 39°40'00"N, 16°51'00"E.

The area is further subdivided into the following zones bounded by lines joining the following positions:

A. 40°00'00"N, 16°51'00"E.
40°00'00"N, 17°13'00"E.
39°40'00"N, 17°13'00"E.
39°40'00"N, 16°51'00"E.

B. Bounded by the parallels 40°00'00"N and 39°34'00"N and the meridians 17°13'00"E and 17°38'00"E.

C. 40°00'00"N, 17°38'00"E.
40°00'00"N, 17°54'00"E.
39°39'00"N, 17°54'00"E.
39°34'00"N, 17°38'00"E.

D. 39°40'00"N, 16°51'00"E.
39°40'00"N, 17°13'00"E.
39°34'00"N, 17°13'00"E.
39°34'00"N, 17°00'00"E.

Italian submarines operating on the surface display an all round rotating amber light showing about 90 flashes per minute.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is maintained from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Italy are, as follows:

1. **West Coast**
   a. Golfo di Olbia. (Government of Italy)
   b. Approaches to Pontile SARAS No. 1 and Pontile SARAS No. 2 (Sarroch Oil Terminal). (Government of Italy)
   c. Approaches to Pomtile ENICHEM Sud. (Government of Italy)
   d. Approaches to Cagliari. (Government of Italy)
   e. Approaches to Genoa. (Government of Italy)
   f. Approaches to Livorno. (Government of Italy)
   g. Approaches to Piombino. (Government of Italy)
   h. Approaches to Civitavecchia. (Government of Italy)
   i. Approaches to Napoli. (Government of Italy)
   j. Approaches to Torre Annunziata. (Government of Italy)
   k. Approaches to Castellammare di Stabia. (Government of Italy)
   l. In Stretto di Messina. (Government of Italy)
   m. Approaches to Palermo. (Government of Italy)
   n. Approaches to Catania. (Government of Italy)
2. **East Coast**
   a. Approaches to Taranto. (Government of Italy)
   b. Approaches to Bari. (Government of Italy)
   c. Approaches to Brindisi. (Government of Italy)
   d. Approaches to Ancona and Falconara Marittima. (Government of Italy)
   e. In the North Adriatic Sea. (IMO adopted)
   f. Approaches to the Gulf of Trieste. (IMO adopted)
   g. Approaches to the Gulf of Venice. (IMO adopted)
   h. In the Gulf of Trieste. (IMO adopted)
   i. Approaches to Monfalcone. (IMO adopted)
   j. Approaches to Chioggia, Malamocco, and Venezia. (Government of Italy)
   k. Approaches to Trieste. (Government of Italy)
   l. Otranto. (Government of Italy)

U.S. Embassy

The U.S. Embassy is situated at Via Vittorio Veneto 121, Rome.

The mailing addresses are, as follows:

1. Italy address—
   Via Vittorio Veneto 121
   00187 Roma

2. U. S. address—
   PSC 59
   Box 100
   APO AE (09624)

U. S. Embassy Italy Home Page
http://rome.usembassy.gov

Vessel Traffic Service

Vessel Traffic Services operate, as follows:

1. Cagliari, Sardinia (39°12'N., 9°06'E.).
2. Palermo, Sicily (38°08'N., 13°22'E.).
3. Trapani (38°01'N., 12°30'E.).
4. Strait of Messina (38°12'N., 15°34'E.).
5. Taranto (40°27'N., 17°12'E.).
6. Mazara del Vallo, Sicily (37°39'N., 12°35'E.).
7. La Spezia (44°05'N., 9°51'E.).
8. Savona (44°19'N., 8°30'E.).
9. Genova (44°24'N., 8°54'E.).
10. Piombino (42°56'N., 10°33'E.).
11. Bari (41°09'N., 16°51'E.).

For further information, see Pub. 131, Sailing Direction (Enroute) Western Mediterranean.

Appendix I—Adriatic Traffic Reporting System (ADRIREP)

The Adriatic Traffic Reporting System (ADRIREP) is a mandatory reporting system under SOLAS Regulation V/11 for the following vessels:

1. Oil tankers of 150 grt and over.
2. All vessels of 300 grt and over carrying dangerous or polluting cargo, either in bulk or break bulk. (Dangerous cargo means cargo classified in the IMDG Code, in Chapter 17 of the IBC Code, and Chapter 19 in the IGC Code. Polluting cargo means oils as defined in MARPOL Annex I, noxious liquid substances as defined in MARPOL Annex II, and harmful substances as defined in MARPOL Annex III.)

The operational area covered by ADRIREP is the entire Adriatic Sea N of latitude 40°25'N. The area is divided into five sectors, each of which has been assigned to a competent authority.

The system is based on VHF voice communications. Vessels contact the appropriate shore-based authority on the VHF channel assigned to the sector in which the vessel is located. Vessels unable to report using the assigned VHF channel should report by any other available communication method. English shall be used for all communications. ADRIREP Sector Reporting Information is listed in the table titled **ADRIREP Sector Reporting Information**.

The following procedures shall be used by all vessels required to participate in ADRIREP:

1. **Northbound vessels.—**
   a. Vessels shall transmit a First Report to the competent shore-based authority of the interested sector, as follows:
      i. When entering the Adriatic Sea by crossing latitude 40°25'N.
      ii. When entering the Adriatic Sea by leaving a port inside the area covered by ADRIREP.
   b. Vessels shall transmit a Position Report to the competent shore-based authority, as follows:
      i. When entering a new sector by crossing its S border.
      ii. When entering the port of destination in the area covered by ADRIREP.
2. **Southbound vessels.—**
   a. Vessels shall transmit a First Report to the competent shore-based authority of the interested sector when leaving a port area covered by the system.
   b. The shore-based authority to whom the First Report shall be transmitted is that of the country of the port the vessel is leaving.
   c. The recipient of the First Report shall pass the information on to the following authorities:
      i. The maritime authority of the vessel's destination, if in the area covered by ADRIREP.
      ii. Brindisi Cost Guard.
      iii. The other shore-based authorities in between, if any.
   d. Vessels shall transmit a Position Report to the competent shore-based authority, as follows:
      i. When entering a new sector by crossing its N border.
      ii. When entering the port of destination in the area covered by ADRIREP.
3. **Vessels crossing the Adriatic Sea.—**Vessel shall send a Position Report to the closest shore-based authority of the country the vessel is leaving, who shall then inform the maritime authority of the port of destination.
4. **Special cases.—**Northbound or southbound vessels entering Sector 5 shall transmit the report to one of the competent authorities according to where the vessel is going to or coming from.

Southbound vessels crossing latitude 40°25'N and either departing Sector 1 or the area covered by ADRIREP shall transmit an additional Final Report to Brindisi Coast Guard.

Note.—The format of each report, as well as the required information for the report, are given in the accompanying tables.

ADRIREP Sector Reporting Information

Sector	Southern border	Northern border	Competent authority	VHF channel	Remarks
1	40°25'N	41°30'N	Brindisi Coast Guard (Italy)	10	
2	41°30'N	42°00'N	Bar MRCC (Montenegro)	12	
3	42°00'N	43°20'N	Rijeka MRCC (Croatia)	10	
4	43°20'N	44°30'N	Ancona MRSC (Italy)	10	
5	44°30'N	Coastline	Venezia MRSC (Italy)	10	See note.
		Coastline	Trieste MRSC (Italy)	10	See note.
		Coastline	Koper MRCC (Slovenia)	12	See note.

Note.—Northbound and southbound vessels entering Sector 5 shall transmit the First Report or Position Report, as applicable, to the competent authority to where to vessel is going to or coming from.

The responsibilities of the shore-based authorities are, as follows:

1. The shore-based authority receiving the First Report (01/FR) shall inform the maritime authority of the vessel's destination, if in the area covered by ADRIREP, and the other shore-based authorities in between, if any.
2. The shore-based authority in Sector 5 receiving the Position Report from the vessel entering the sector will inform the other two shore-based authorities in Sector 5.
3. Upon the receipt of any report, the shore-based authority will provide the vessel with the following information:
   a. Information on navigational conditions.
   b. Information on weather conditions.
   c. Any other relevant information.

ADRIREP—First Report Format	
Line	**Description**
Message Identifier: ADRIREP	
Type of report: 01/FR (First Report)	
A	Vessel name, call sign, IMO number, and flag
B	Time in UTC (date and time of report (6 digits)—day of month (2 digits) and hours and minutes (in 4 digits))
C	Current position—latitude (4 digits followed by N) and longitude (5 digits followed by E)
E	Course (3 digits)
F	Speed in knots (3 digits)
G	Port of departure
I	Anticipated time of arrival (as expressed in B), followed by the port of destination
N	ETA at next checkpoint (as expressed in B), followed by parallel of the checkpoint
O	Draft (4 digits) in meters and centimeters
P	Cargo information (general category of hazardous cargo as defined by the IMDG, IBC, and ICG Codes and MARPOL Annex I)
T	Vessel's representative and/or owner available on a 24-hour basis
U	Vessel type, dwt, gross tons, and loa in meters
W	Number of people on board, including crew
X	Any other relevant information

Note.—In accordance with provisions of SOLAS and MARPOL Conventions, vessels shall also report on any defect, damage, deficiency, or limitations, as well as information related to any pollution incident or loss of cargo.

ADRIREP—Position/Final Report Format	
Line	**Description**
Message Identifier: ADRIREP	
Type of report: 01/PR, 02/PR, 03/PR (Position Report) or Type of report: ER (Final Report)	
A	Vessel name, call sign, IMO number, and flag
B	Time in UTC (date and time of report (6 digits)—day of month (2 digits) and hours and minutes (in 4 digits))
C	Current position—latitude (4 digits followed by N) and longitude (5 digits followed by E)
E	Course (3 digits)
F	Speed in knots (3 digits)
G	Port of departure
I	Anticipated time of arrival (as expressed in B), followed by the port of destination
N	ETA at next checkpoint (as expressed in B), followed by parallel of the checkpoint
X	Any other relevant information

Note.—The information contained in the Position Report/Final Report shall be supplemented by any other information which differs from the previous report.

Appendix II—Italian Automated Search and Rescue System (ARES)

Vessels transiting the Mediterranean Sea are encouraged to participate in the Italian Automated Search and Rescue System. The system is aimed at a coordinated efficiency of search and rescue operations.

Automated Search and Rescue (ARES) messages will be accepted free of charge by Italian coast radio stations. They should be sent by telex to either of the following:

a. 43-611172
b. 43-614156

There are four types of messages:

1. The Initial Report (INI) is the sailing plan and should be sent as soon after departure as possible.
2. The Intermediate Report (INT) confirms the sailing plan and should be sent at 1200 local time, if navigating in the Mediterranean Sea, and every 48 hours if outside. This report confirms the sailing plan.
3. The Modification Report (MOD) should be sent when the vessel deviates from its sailing plan or it anticipates a deviation of course from that previously sent, if the vessel's position is expected to differ by 15 miles in the Mediterranean Sea, or 25 miles outside.
4. The Final Report (FIN) should be sent just prior to the vessel's reaching the port of arrival.

The first five lines of every message should consist of the following:

1. Priority qualification "O" (immediate) followed by the date and time UTC, e.g. O 290855
2. Prefix "FM" followed by the name of the vessel, e.g. FM RANGER
3. Addressee of message, e.g. TO Comando Generale delle Capitanarie di Porto-Central Operativa—N.I.S.A.T. (Navigation Information System in Advanced Technology)
4. Fixed line "BT" indicating the beginning of the report
5. Prefix "ARES" followed by a progressive two digit report number, type of report, month, and year, e.g. ARES/01/INI/08/1991//

Note.—The report number should be increased sequentially for each subsequent report, regardless of the type of report, and terminated with the final report at the end of the voyage.

Subsequent lines of the report commence with the line identifier (A, B, etc.); the message data is separated from the line identifier by a slash (/). Lines are terminated with a double slash (//).

6. Fixed line "BT" indicating the end of the report

ARES Message Format

Line	Description
A	Call sign, vessel name, and flag code
B	Time in UTC (date and time of report (6 digits)—day of month (2 digits) and hours and minutes (in 4 digits))
C	Position at the time stated in B. State name of port, identifiable position, or position expressed as latitude (4 digits with N or S) and longitude (4 digits with E or W). Nation code* must be included in INI and FIN Reports.
F	Average speed in knots and tenths of knots
I	Destination (including Nation code* if not an Italian port) and ETA
L	Turn points (Latitude and longitude, expressed as in C, representing the route of the vessel from port of departure to port of arrival. If the course is direct between ports only the term "DIRETTA" should be indicated. If one line is not sufficient to contain all the turn points, L may be repeated as many times as needed.)
P	Cargo, danger class, MARPOL 73/78 category, quantity, method of transport, and placement on board **
W	Number of people on board, including crew

* Nation code—Contained in ARES Rules and Regulations.

** Specific cargo codes are contained in ARES Rules and Regulations.

Information Required in ARES Reports

Line	INI	INT	MOD	FIN
A	R	R	R	R
B	R	R	R	R
C	R	R	R	R
F	R		M	
I	R		M	
L	R		M	
P	*			
W	R			

Key

R Required.

M May include these lines.

* Required if vessel carries dangerous cargo.

JAMAICA

General	329
Buoyage System	329
Currency	329
Government	329
Holidays	329
Industries	330
Languages	330
Meteorology	330
Navigational Information	330
Pilotage	330
Regulations	330
Search and Rescue	330
Ship Reporting System	330
Time Zone	330
U.S. Embassy	331

Flag of Jamaica

General

Jamaica is an island located in the Caribbean Sea, S of Cuba.

The climate is tropical, hot, and humid with a temperate interior.

The terrain is mostly mountains with narrow, discontinuous coastal plains.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Jamaican dollar, consisting of 100 cents.

Government

Jamaica is a constitutional parliamentary democracy. The country is divided into 14 parishes.

Elizabeth II, recognized as the Chief of State, appoints a Governor-General. The Prime Minister and Cabinet are appointed by the Governor-General. The bicameral Parliament is composed of a 21-member Senate (appointed by the Governor-General) and a 60-member House of Representatives (directly elected to 5-year terms).

The legal system is based on English common law.

The capital is Kingston.

Holidays

The following holidays are observed:

January 1	New Year's Day
Ash Wednesday	Variable
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 23	National Labor Day
Sunday before August 6	Emancipation Day
August 6	Independence Day
Third Monday in October	National Heroes' Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are bauxite mining, tourism, textiles, food processing, rum, cement, metal, paper, chemical products, and telecommunications.

The main exports are alumina, bauxite, sugar, bananas, rum, coffee, yams, beverages, clothing, and mineral fuels. The main export-trading partners are the United States, Canada, the United Kingdom, the Netherlands, China, Norway, and Germany.

The main imports are fodd and other consumer goods, industrial supplies, fuel, parts and accessories for capital goods, machinery and transport equipment, and construction materials. The main import-trading partners are the United States, Trinidad and Tobago, and Venezuela.

Languages

The languages of the country are English and Creole.

Meteorology

Marine weather forecasts are available in English from the Meteorological Service Jamaica (http://www.metservice.gov.jm).

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Jamaica are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Claims archipelagic status

Pilotage

Pilotage is compulsory for all vessels 50 gross tons and over except, as follows:

1. Government vessels.
2. Vessels engaged in cable operations, salvage operations, surveying, or dredging.
3. Vessels engaged in coastal trade.
4. Tugs operating within the port limits.
5. Port Authority vessels.
6. Vessels under 500 gross tons when the master has obtained a Pilotage Exemption Certificate.
7. Other vessels approved by the Port Authority.

Regulations

In Jamaican waters, the port authorities use VHF channels 11 and 12 for pilotage and shiphandling work. Yachts and pleasure craft primarily use VHF channel 68.

Search and Rescue

The Jamaica Defense Force Coast Guard is responsible for the coordination of search and rescue operations. Contact information is given in the table titled **Jamaica—MRCC and MRSC Contact Information**.

The Jamaica Defense Force Coast Guard Headquarters maintains a continuous listening watch for distress traffic on 2182 kHz and VHF channel 16.

Jamaica—MRCC and MRSC Contact Information

Station	Telephone	Facsimile
MRCC Kingston	876-967-8031 876-967-8032 876-967-8033 876-967-8193 876-322-6602	876-967-8278
MRSC St. Ann (Discovery Bay)	876-973-3256 876-322-6599	—
MRSC St. Elizabeth (Black River)	876-322-6604 876-909-9802	—
MRSC St. James (Montego Bay)	876-977-1033 876-322-6596	—
MRSC Pedro Cays	876-455-1629	—
MRSC Portland (Port Antonio)	876-322-6598 876-715-5514	—
MRSC St. Thomas (Port Morant)	876-823-6588	—

Ship Reporting System

CARICOM (Caribbean Community) Advance Passenger Information System (APIS)

CARICOM APIS is a mandatory reporting system providing Advance Passenger Information (API) about passengers and crew to the Joint Regional Communications Center (JRCC) Barbados for vessels bound for or departing from a port in the CARICOM area. Further information can be found in **Caribbean Sea—Ship Reporting System**.

Signals

Visual storms signals are shown in the table titled **Jamaica—Storm Warning Signals**.

Time Zone

The Time Zone description is ROMEO (+5). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at 142 Old Hope Road, Kingston 6.

The mailing address is P.O. Box 541, Kingston, 5.

U. S. Embassy Jamaica Home Page
http://kingston.usembassy.gov

Jamaica—Storm Warning Signals		
Day signal	**Night signal**	**Meaning**
One triangular red flag	One red light over one white light, vertically disposed.	Small craft advisory. Winds over 18 knots expected.
Two triangular red flags, vertically disposed	One white light over one red light, vertically disposed.	Gale warning. Winds of 34 to 47 knots expected.
One square red flag, with a centered black square	Two red lights, vertically disposed.	Storm warning. Winds of 48 to 63 knots expected.
Two square red flags, with a centered black square, vertically disposed	One white light between two red lights, vertically disposed.	Hurricane warning. Winds over 63 knots expected.

LATVIA

General	**333**
Buoyage System	**333**
Currency	**333**
Firing Areas	**333**
Government	**333**
Holidays	**334**
Ice	**334**
Industries	**334**
Languages	**334**
Mined Areas	**334**
Navigational Information	**335**
Pilotage	**336**
Pollution	**336**
Regulations	**336**
Search and Rescue	**337**
Time Zone	**337**
U.S. Embassy	**337**
Vessel Traffic Service	**337**

General

Latvia is located in Eastern Europe between Estonia and Lithuania and borders the Baltic Sea.

The climate is maritime and wet, with moderate winters.

The country's terrain consists mainly of a low plain.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Many buoys and lighted buoys are withdrawn or replaced for the winter. Information on intended changes and dates is promulgated in Latvian Notices to Mariners as necessary.

Currency

The official unit of currency is the lats, which consists of 100 santims.

Firing Areas

Gulf of Riga (Area M1).—A military practice area bounded by lines joining the following positions:

a. 57°32'N, 23°38'E.
b. 57°32'N, 23°53'E.
c. 57°20'N, 23°53'E.
d. 57°20'N, 23°38'E.

West coast N of Liepaja (Area M2).—A military practice area bounded by the coast and lines joining the following positions:

a. 56°39.1'N, 21°02.6'E. (coast)
b. 56°39.1'N, 20°42.0'E.
c. 56°46.2'N, 20°42.0'E.
d. 56°46.2'N, 21°03.5'E. (coast)

Government

Latvia is an independent parliamentary republic. The country is divided into 109 municipalities and nine cities.

Latvia is goverened by a President who is elected by the Parliament to serve a 4-year term. The Prime Minister is appointed by the President. The unicameral Parliament consists of 100 members, serving 4-year terms, who are directly elected under a system of proportional representation.

Flag of Latvia

The legal system is based on a civil law system.
The capital is Riga.

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
May 4	Declaration on the Renewal of Independence
Second Sunday in May	Mothers' Day
June 23	Ligo Day (Midsummer Solstice Eve)
June 24	St. John's Day (Jani) (Midsummer Solstice)
November 18	Independence Day
December 25	Christmas Day
December 26	St. Stephen's Day
December 31	New Year's Eve

Ice

In Latvian waters during the winter navigation season the responsibility for the control and operation of ice services and icebreakers is divided between the harbormasters at Liepaja, Ventspils, and Riga. In addition, the harbormaster at Riga also has responsibility for winter navigation in Irbe Strait, which is the principal entrance to the Gulf of Riga, as well as for the Gulf of Riga itself.

For information on required reports for vessels transiting the Gulf of Riga in the winter navigation season, see Regulations—Ice Regulations.

For information on obtaining general ice information for the Baltic Sea, see **Baltic Sea—Ice**.

Industries

The main industries are transportation vehicles (buses, vans, streetcars, and railroad cars), synthetic fibers, agricultural machinery, fertilizers, washing machines, electronics, pharmaceuticals, processed foods, and textiles.

The main exports are wood and wood products, machinery and equipment, metals, textiles, and foodstuffs. The main export-trading partners are Lithuania, Estonia, Germany, the United Kingdom, Russia, and Sweden.

The main imports are machinery and equipment, chemicals, fuels, and vehicles. The main import-trading partners are Germany, Lithuania, Russia, Estonia, Poland, Finland, and Sweden.

Languages

Lettish is the official language is. Lithuanian, Russian, and other languages are spoken.

Mined Areas

Formerly mined areas, now open to surface navigation, are located, as follows:

1. **Approach to Riga.—**An area bounded by the coastline and lines joining the following positions:
   a. 56°58.89'N, 23°49.88'E.
   b. 57°12.49'N, 23°49.88'E.
   c. 57°12.49'N, 24°06.78'E.
   d. 57°18.99'N, 24°06.78'E.
   e. 57°18.99'N, 24°16.88'E.
   f. 57°12.99'N, 24°17.78'E.
   g. 57°10.79'N, 24°08.38'E.
   h. 57°05.59'N, 24°08.38'E.
2. **Southwest of Kolka Rags.—**An area bounded by the coastline and lines joining the following positions:
   a. 57°36.49'N, 22°46.38'E.
   b. 57°40.49'N, 22°48.28'E.
   c. 57°39.19'N, 22°57.38'E.
   d. 57°34.99'N, 22°55.58'E.
3. **Irbe Strait.—**An area bounded by the coastline and lines joining the following positions:
   a. 57°19.99'N, 21°27.88'E.
   b. 57°24.99'N, 21°14.88'E.
   c. 57°39.99'N, 21°32.38'E.
   d. 57°39.99'N, 21°25.88'E.
   e. 57°47.99'N, 21°25.87'E.
   f. 57°47.99'N, 21°34.87'E.
   g. 57°48.45'N, 21°58.87'E and continuing along the coastline of Saarema Island to:
   h. 58°46.34'N, 22°55.03'E.
   i. 57°45.59'N, 22°36.38'E.

   This area encompasses the territorial waters of Latvia and Estonia.
4. **South of Uzava Light.—**An area delimited by the coastline, the parallels of latitude 57°03.99'N and 57°09.99'N, and the meridian of longitude 21°14.88'E.
5. **Approach to Liepaja**.—An area delimited by the coastline, the parallels of latitude 56°48.99'N and 56°06.49'N, and the meridian of longitude 20°27.88'E.

The following anchorages have been established in formerly mined areas:

1. **Approach to Riga—Area No. 44**
   a. 57°07'N, 23°51'E.
   b. 57°08'N, 23°49'E.

c. 57°09'N, 23°51'E.
d. 57°08'N, 23°52'E.

2. **Approach to Riga—Area No. 45—**An area bounded by lines joining the following positions:
a. 57°05'N, 23°53'E.
b. 57°07'N, 23°51'E.
c. 57°08'N, 23°55'E.
d. 57°06'N, 23°56'E.

3. **North of Ventspils Harbor—Area No. 50—**An area bounded by lines joining the following positions:
a. 57°30'N, 21°28'E.
b. 57°32'N, 21°30'E.
c. 57°31'N, 21°32'E.
d. 57°29'N, 21°30'E.

This area is designated for the anchorage of gas and liquid cargo tankers.

4. **Northwest of Ventspils Harbor—Area No. 50A—**An area bounded by lines joining the following positions:
a. 57°30'N, 21°21'E.
b. 57°32'N, 21°22'E.
c. 57°31'N, 21°23'E.
d. 57°30'N, 21°23'E.

This area is intended for vessels of large tonnage.

5. **Ventspils Harbor—Area No. 51—**An area bounded by lines joining the following positions:
a. 57°27'N, 21°29'E.
b. 57°28'N, 21°27'E.
c. 57°29'N, 21°29'E.
d. 57°28'N, 21°31'E.

This is a quarantine anchorage as well as a designated anchorage for crude oil tankers or vessels carrying other explosive and inflammable cargo.

6. **Ventspils Harbor—Area No. 51A—**An area bounded by lines joining the following positions:
a. 57°26'N, 21°31'E.
b. 57°28'N, 21°31'E.
c. 57°28'N, 21°34'E.
d. 57°26'N, 21°34'E.

This area is designated for the use of fishing vessels.

7. **Ventspils Harbor—Area No. 52—**An area bounded by lines joining the following positions:
a. 57°26'N, 21°27'E.
b. 57°27'N, 21°25'E.
c. 57°28'N, 21°26'E.
d. 57°26'N, 21°29'E.

This area is designated as a dry cargo vessel anchorage.

8. **Liepaja Harbor—Area No. 54—**An area bounded by lines joining the following positions:
a. 56°30'N, 20°53'E.
b. 56°30'N, 20°56'E.
c. 56°31'N, 20°56'E.
d. 56°30'N, 20°53'E.

This area has been designated for the use of small transport and fishing vessels.

9. **West of Liepaja Harbor—Area No. 55—**An area bounded by lines joining the following positions:
a. 56°31'N, 20°50'E.
b. 56°32'N, 20°52'E.
c. 56°33'N, 20°50'E.
d. 56°33'N, 20°52'E.

10. **West of Liepaja Harbor—Area No. 56—**An area bounded by lines joining the following positions:
a. 56°30'N, 20°43'E.
b. 56°33'N, 20°48'E.
c. 56°33'N, 20°45'E.
d. 56°31'N, 20°48'E.

This area is a deepwater anchorage.

Disused mine exercise areas, within which shipping is not recommended and fishing and anchoring are prohibited, are located, as follows:

1. **West of Akmenrags.—**An area bounded by lines joining the following positions:
a. 56°48.99'N, 20°24.88'E.
b. 56°51.99'N, 20°24.88'E.
c. 56°51.99'N, 20°28.88'E.
d. 56°48.99'N, 20°28.88'E.

2. **Southwest of Akmenrags.—**An area bounded by lines joining the following positions:
a. 56°41.69'N, 20°41.88'E.
b. 56°44.09'N, 20°41.88'E.
c. 56°44.09'N, 20°44.58'E.
d. 56°41.69'N, 20°44.58'E.

Explosives dumping grounds, where anchoring, bottom fishing, underwater activities, and blasting are prohibited due to sunken explosives, are located, as follows:

1. **West of Liepaja.—**A circle with a radius of 0.5 mile drawn from position 56°21.79'N, 19°44.88'E.

2. **Southwest of Liepaja.—**An area bounded by lines joining the following positions:
a. 55°55.98'N, 18°38.88'E.
b. 56°15.98'N, 18°38.88'E.
c. 56°15.98'N, 18°50.88'E.
d. 56°19.98'N, 18°54.88'E.
e. 56°19.99'N, 19°30.88'E.
f. 56°06.99'N, 19°14.88'E.
g. 55°55.98'N, 19°14.88'E.

This area is located in the economic zones of Latvia and Sweden.

An area where shipping is temporarily prohibited is bounded by the coastline and lines joining the following positions:
a. 56°12.0'N, 20°59.5'E.
b. 56°12.0'N, 20°53.0'E.
c. 56°17.0'N, 20°53.0'E.
d. 56°17.0'N, 20°59.2'E.

Navigational Information

Enroute Volume

Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

Maritime Claims

The maritime territorial claims of Latvia are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	200 miles. **
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Foreign warships which are nucelar powered or carrying nuclear material may not enter Latvian ports or territorial waters without receiving permission at least 30 days prior to arrival.

** To defined limits.

Maritime Boundary Disputes

The 1998 maritime boundary treaty with Lithuania has not been ratified by the Latvian Parliament, primarily due to concerns over oil exploration rights.

Pilotage

Pilotage is compulsory for entering and leaving all Latvian ports and for mooring and casting off. Pilots should be ordered through the local agent 4 hours in advance and confirmed 1 hour in advance.

Vessels requiring a deep-sea pilot in the Baltic Sea should send a request to Ventspils or Riga.

Pollution

The Coast Guard or the nearest harbormaster should be notified of any incidents referring to leakage or the possible leakage of oil or other hazardous substances in Latvian waters from a vessel, offshore equipment, port terminal, or other source. The notification must be given to MRCC Riga (Riga Rescue Radio) and should include the following information:

1. Source and cause of pollution.
2. Location and quantity of pollution.
3. Type of substance being spilled.
4. Information on weather leakage has been stopped.

MRCC Riga (Riga Rescue Radio) can be contacted, as follows:

1.	Telephone:	371-67323103 (emergency)
		371-67082064
		371-29476101 (mobile)
2.	Facsimile:	371-67320100
3.	E-mail:	sar@mrcc.lv
4.	INMARSAT-C (AOR-E)	427518510=RIGA X

Monitoring Single Hull Tankers

The transport of heavy grade oils is not allowed on single hull tankers of certain sizes and ages. Denmark, Estonia, Finland, Latvia, Norway, and Sweden have adopted measures to monitor the observance of theses regulations. For further information, see **Denmark—Pollution**.

MARPOL Special Area

The Baltic Sea, including the Gulf of Bothnia and the Gulf of Finland, has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

This Special Area is under intensive surveillance for pollution and violations of traffic rules. Further information on pollution reporting can be found in **Baltic Sea—Pollution—Pollution Reporting**.

Regulations

Notifications

Vessels should send their ETA to the respective harbormaster through their local agent 24 hours and 4 hours in advance.

All foreign vessel must immediatley notify the Latvian Coast Guard and the harbormaster of the nearest Latvian port if the following occur within Latvian territorial waters:

1. The vessel is adrift.
2. The vessel must anchor in case of an emergency.

Vessels shall submit ISPS information electronically to MRCC Riga. The ISPS Reporting Form is available at the MRCC Riga web site (http://www.mrcc.lv/mrcc/en/index.sql).

Ice Regulations

During the ice navigation season, all vessels bound for the port of Riga or ports on the coastline of Latvia in the Gulf of Riga are prohibited from entering Irbe Strait and the Gulf of Riga, or to leave these ports independently, without a special permit issued each time by the Captain of the icebreaker Varma. The special permit takes into account the real ice conditions in this area after being approved by the port of Riga Harbormaster.

Vessels approaching Irbe Strait and the Gulf of Riga from the Baltic Sea should contact the following:

1. Icebreaker Varna
   a. Call sign: YLKV
   b. VHF: VHF channel 13 or 16
   c. Telephone: 371-29341982
      371-29272477
   d. Facsimile: 371-29344270
2. Riga Vessel Traffic Service
   a. Call sign: Riga Traffic
   b. VHF: VHF channel 9 or 16
   c. Telephone: 371-670-82032
   d. Facsimile: 371-673-23117
   e. E-mail: riga_vts@freeportofriga.lv

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU. For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Recommendation on Baltic Sea Navigation

The IMO has issued recommendations regarding vessel transits of the entrances to the Baltic Sea. For further information, see **Baltic Sea—Regulations**.

Particularly Sensitive Sea Areas (PSSA)

The Baltic Sea area of Sweden, Denmark, Finland, Estonia, Lithuania, Latvia, Poland, and Germany (except for waters under Russian jurisdiction) has been declared by the IMO to be a PSSA.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

Search and Rescue

The Latvian Coast Guard is resposible for coordinating search and rescue operations. Further information can be obtained from the following web site:

MRCC Riga Home Page
http://www.mrcc.lv/kad/en

The Maritime Rescue Coordination Center (MRCC) Riga Rescue Radio maintains a continuous listening watch for distress traffic on 2182 kHz and VHF channel 16 and can be contacted, as follows:

1.	Call sign:	Riga Rescue Radio
2.	Telephone:	371-67323103 (emergency)
		371-67082070
		371-67082064 (Maritime Assistance Service)
3.	Facsimile:	371-67320100
		371-29270690
		371-67320100 (Maritime Assistance Service)
4.	E-mail:	sar@mrcc.lv
		isps1@mrcc.lv (Maritime Assistance Service)
5.	INMARSAT-C (AOR-E)	427518510=RIGA X

Rescue craft and/or inshore recue boats are stationed at the following locations:

1. Ventspils (57°24'N., 21°33'E.).
2. Roja (57°30'N., 22°49'E.).
3. Riga (56°58'N., 24°06'E.).
4. Salacgriva (57°45'N., 24°22'E.).
5. Kolka (57°45'N., 22°36'E.).

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time (CHARLIE (-3)) is maintained from the last Sunday in March until the last Sunday in October.

U.S. Embassy

The U.S. Embassy is situated at Raina Boulevard 7, Riga. The mailing addresses are, as follows:

1. Latvia address—
   Raina Boulevard 7
   Riga LV-1510
2. U. S. address—
   PSC 78, Box Riga
   APO AE (09723)

U. S. Embassy Latvia Home Page
http://riga.usembassy.gov

Vessel Traffic Service

Vessel Traffic Services are in operations, as follows:

1. Liepaja (56°32'N., 20°58'E.).
2. Riga (57°04'N., 24°01'E.).
3. Ventspils (57°24'N., 21°32'E.).

For further information, see Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia

LEBANON

General	**339**
Buoyage System	**339**
Cautions	**339**
Currency	**340**
Firing Areas	**340**
Government	**340**
Holidays	**340**
Industries	**340**
Languages	**340**
Navigational Information	**340**
Pollution	**340**
Prohibited Areas	**341**
Regulations	**341**
Search and Rescue	**341**
Time Zone	**341**
U.S. Embassy	**341**

General

Lebanon is located in the Middle East bordered on the N and E by Syria and on the S by Israel.

The climate is Mediterranean with mild to cool, wet winters and hot, dry summers. The mountains of Lebanon experience heavy winter snows.

The coast of Lebanon is varied, alternating between sandy bays and rocky headlands.

A narrow coastal plain is backed by Jabal Lubnan (Lebanon Mountains). The fertile valley of Al Biqa (Bekaa) lies between Jabal Lubnan and the ranges of the Anti-Lebanon and Jabal Ash Shaykh (Mount Hermon).

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Special Warning 121 (Issued 20 March 2003)

Information on Special Warning 121 can be found in **North Atlantic Ocean—Cautions.**

Special Warning 118 (Issued 9 March 2001)

1. The U.S. Department of State warns U.S. citizens, including U.S. mariners, of the risks of travel to Lebanon and recommends that Americans exercise caution while traveling there. During Lebanon's civil conflict from 1975 to 1990, Americans were targets of numerous terrorist attacks in Lebanon. While there have been very few incidents in recent years, the perpetrators of these attacks are still present in Lebanon and retain the ability to act.

2. The local security environment can limit the movement of U.S. officials in certain areas of the country. This factor, plus limited staffing, may prevent the U.S. Embassy from performing full consular functions and providing timely assistance to U.S. citizens in Lebanon. Dual nationals and spouses of Lebanese citizens can encounter particular difficulties, and should see the Department of State Consular Information Sheet on Lebanon. U.S. citizens who travel to Lebanon despite this warning should exercise extreme caution. U.S. citizens who travel to Lebanon are encouraged to register at the U.S. Embassy in Beirut.

3. The security situation may change rapidly, and visitors to Lebanon should monitor the news for reports of incidents that might affect their personal safety.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

Currency

The official unit of currency is the Lebanese pound, consisting of 100 piastres.

Firing Areas

A hill, from which firing practice takes place, is located 1.5 miles SSE of Ras Beirut Light. The axis of the firing range, oriented 288°, is dangerous up to 2.5 miles from shore.

During firing practice a yellow flag is hoisted in the vicinity of the hill.

Government

Flag of Lebenon

Lebanon is a parliamentary republic. The country is divided into eight governorates.

Lebanon is governed by a President who is elected by the National Assembly to a 6-year term. By custom, the President is a Maronite Christian, the Prime Minister is a Sunni Muslim, and the Speaker of the National Assembly is a Shia Muslim. The unicameral National Assembly is composed of 128 members, who are directly-elected to 4-year terms based on proportional sectarian representation.

The legal system is a mixture of Ottoman law, canon law, the Napoleanic code, and civil law.

The capital is Bayrut (Beirut).

Holidays

The following holidays are observed:

January 1	New Year's Day
January 6	Armenian Christmas
January 7	Orthodox Christmas
February 9	St. Maroon's Day
Good Friday (Christian and Orthodox)	Variable
Easter Sunday (Christian and Orthodox)	Variable
Easter Monday (Christian and Orthodox)	Variable
May 1	Labor Day
May 6	Martyrs' Day
August 15	Assumption Day
November 1	All Saints' Day
November 22	Independence Day
December 25	Christmas Day

Islamic holidays, which are subject to the appearance of the moon, include Lailat al Miraj, Eid Al-Fitr (End of Ramadan), Eid Al-Adha (End of Pilgrimage), Hijrah (Islamic New Year), Ashoura, and the Prophet's Birthday.

Industries

The major industries are banking, tourism, food processing, jewlery, cement, textiles, mineral and chemical products, wood and furniture products, metal fabricating, and oil refining.

The main exports are jewelry, inorganic chemicals, miscellaneous consumer goods, fruit, tobacco, construction minerals, electrical power machinery and switching gear, textile fibers, and paper. The main export-trading partners are Syria, the United Arab Emirates, Switzerland, and Saudi Arabia.

The main imports are petroleum products, cars, medicinal products, clothing, meat, livestock, consumer goods, paper, textile fabrics, and tobacco. The main import-trading partners are Italy, Syria, France, Germany, and the United States.

Languages

Arabic is the official language. Armenian, French, and English are also spoken.

Navigational Information

Enroute Volume

Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

Maritime Claims

The only maritime territorial claim of Lebanon is a territorial sea of 12 miles.

Pollution

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Prohibited Areas

The S coastal area of Lebanon, between 33°06'N and 33°15'N, is restricted to navigation within 3 miles offshore.

Vessels should remain 6.5 miles to seaward of the line joining Sidon and Khaldi, just S of Bayrut.

Regulations

General

The Lebanese authorities require that all Lebanese and foreign merchant vessels entering Lebanese territorial waters should obtain permission from the Martime Chamber, via the agent, 24 to 36 hours prior to arrival.

All vessels should contact Bayrut Port Control on VHF channel 16 when 12 miles from the port.

The legal and commercial ports are Bayrut (Beirut), Tarabulus (Tripoli), Jounieh (Juniye), Sidon (Sayde) and Sidon Oil Terminal, and Sur (Sour), with the addition of certain private and specialized ports such as Chekka and Selaata.

Ports are open to traffic during the following periods:

1. Bayrut (Beirut)—24 hours.
2. Tarabulus (Tripoli), Sidon (Sayde), and Sur—between 0500 and 2000.

Passage between the above ports is limited to between 0500 and 2000.

Normal international courtesies, such as flying the Lebanese flag at the foremast, should be carefully adhered to by vessels while in the waters and ports of Lebanon.

UNIFIL Maritime Task Force Regulations

The United Nations Interim Force In Lebanon (UNIFIL) Maritime Task Force (MTF) is monitoring merchant traffic sailing towards Lebanese waters or transiting inside Lebanese territorial waters. The UNIFIL-MTF is acting in accordance United Nations Security Council Resolution (UNSCR) 1701.

Ships approaching Lebanese territorial waters are to be ready to answer United Nations warships' hailing and to be controlled in accordance with UNSCR 1701.

Ships planning to enter Lebanese territorial waters are to make sure that their agents in Lebanon inform the appropriate Lebanese authorities about their intended arrival.

Four entry corridors have been established into and through Lebanese territorial waters, as follows:

1. Tarabulus (Tripoli) corridor—beginning at the entry point (34°30'N., 35°31'E.) on a course of 090° towards Tarabulus (Tripoli) port breakwaters.
2. Bayrut (Beirut) corridor—beginning at the entry point (33°54'N., 35°13'E.) on a course of 090° towards Bayrut (Beirut) port breakwaters.
3. Sidon (Sayde)—beginning at the entry point (33°34'N., 35°08'E.) on a course of 090° towards Sidon (Sayde) port breakwaters.
4. Coastal corridor—along the coastline 3 miles from shore to be used by merchant traffic between Lebanese ports.

Merchant vessels using these corridors must, at all times, adhere to the following rules and regulations:

1. Any merchant vessel destined for Tarabulus (Tripoli), Bayrut (Beirut), or Sidon (Sayde) will sail to their destination using the indicated corridor until 3 miles from the coast, at which point they will head to the port entrance of their port of destination.
2. Any merchant vessel departing a Lebanese port and destined for any other Lebanese port will sail along the Lebanese coast using the coastal corridor until their port of destination entrance.
3. When departing from their port and leaving Lebanese territorial waters, all vessels will leave their port and the territorial waters of Lebanon by sailing on a course of 270° as safe navigation permits.

Search and Rescue

The Lebanese navy, with a Rescue Coordination Center in Bayrut, is responsible for search and rescue operations in Lebanese waters. RCC Bayrut can be contacted, as follows:

1. Telephone: 961-1-629026
2. Facsimile: 961-1-629023
3. E-mail: ais@beirutairport.gov.lb

Lebanese naval bases maintain a continuous listening watch for distress traffic on 2182 kHz and VHF channel 16.

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time (CHARLIE (-3)) is maintained from the last Sunday in March until the last Saturday in October.

U.S. Embassy

The U.S. Embassy is situated at Awkar, facing the municipality.

The mailing addresses are, as follows:

1. Lebanon address—
   P.O. Box 70-840 Antelias
   Bayrut, Lebanon
2. U. S. address—
   6070 Beirut Place
   Department of State
   Washington, DC (20521-6070)

U. S. Embassy Lebanon Home Page
http://lebanon.usembassy.gov

LIBERIA

General	**343**
Buoyage System	**343**
Cautions	**343**
Currency	**343**
Government	**343**
Holidays	**344**
Industries	**344**
Languages	**344**
Navigational Information	**344**
Regulations	**344**
Search and Rescue	**344**
Time Zone	**344**
U.S. Embassy	**344**

General

Liberia lies on the W coast of Africa. It borders Guinea, Ivory Coast, and Sierra Leone and has about 350 miles of coastline on the Atlantic Ocean.

Three distinct land forms lie parallel to the coast:

1. The low coastal belt.
2. The high forest area, with elevations of 244m.
3. The inland plateau, with elevations of 57 to 610m.

The climate is tropical, with annual rainfall of over 5,000mm on the coast, decreasing to about 1,800mm inland. The average mean temperature is about 29°C. The rainy season is between April and November.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation in Liberia are unreliable. Lights may be extinguished; buoys and beacons may be missing, unlit, or out of position.

Cautions

Fishing vessels, many of which may be unlit, may be encountered off the entire coast of Liberia.

Special Warning 92 (Issued 3 December 1992; revised 29 October 1997)

1. Mariners are advised to use caution when sailing near the coast of Liberia.

2. The United Nations Security Council has passed Resolution 788 (November 19, 1992), which says that "all states shall, for the purposes of establishing peace and stability in Liberia, immediately implement a general and complete embargo on all deliveries of weapons and military equipment to Liberia until the Security Council decides otherwise." Resolution 788 also "requests all states to respect the measures established by the Economic Community of West African States (ECOWAS) to bring about a peaceful solution to the conflict in Liberia."

Currency

The official unit of currency is the Liberian dollar, consisting of 100 cents, although U.S. currency is legal tender.

Government

Liberia is a republic. The country is divided into 15 counties.

Liberia is governed by a directly-elected President who serves a renewable 6-year term. The bicameral National Assembly consists of a directly-elected 30-member Senate, serv-

Flag of Liberia

ing 9-year terms, and a directly-elected 64-member House of Representatives, serving 6-year terms.

The legal system is based on a combination of Anglo-American common law and local customary law.

The capital is Monrovia.

Holidays

The following holidays are observed:

January 1	New Year's Day
February 11	Armed Forces Day
March 8	Decoration Day
March 15	J. J. Robert's Birthday
Easter Sunday	Variable
April 12	National Redemption Day
April 14	Fast and Prayer Day
May 6	Samuel K. Doe's Birthday
May 14	National Unification Day
May 25	Africa Day
July 26	Independence Day
August 24	Nation Flag Day
October 29	National Youth Day
November 7	Thanksgiving Day
November 29	W. V. S. Tubman's Birthday
December 25	Christmas Day

Industries

The main industries are agriculture, rubber processing, palm oil processing, timber, and diamonds.

The main exports are rubber, timber, iron, diamonds, cocoa, and coffee. The main export-trading partners are Germany, South Africa, Poland, the United States, and Spain.

The main imports are fuels, chemicals, machinery, transportation equipment, manufactured goods, and foodstuffs. The main import-trading partners are South Korea, Japan, Singapore, and China.

Languages

English is the official language. There are also about 20 ethnic group languages, of which a few can be written and are used in correspondence.

Navigational Information

Enroute Volume

Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Maritime Claims

The maritime territorial claims of Liberia are, as follows:

Territorial Sea	12 miles.
Fisheries or Economic Zone	200 miles.

Regulations

The Economic Community of West African States (ECOWAS) has declared an embargo on arms and military equipment destined for Liberia. Its monitoring group (ECOMOG) has imposed a maritime exclusion zone of 15 miles along the coast of Liberia.

The port of Monrovia is accessible. Vessels should state their ETA to ECOMOG at least 24 hours in advance, as follows:

ECOMOG
P.O. Box 10.9033
Monrovia, Liberia

Vessels should contact the warships maintaining the embargo upon entering the territorial waters of Liberia.

Search and Rescue

A Maritime Rescue Coordination Center is located at Roberts International Airport and can be contacted, as follows:

1. Telephone: 231-68223776
2. E-mail: robertsfir@yahoo.com

Time Zone

The Time Zone description is ZULU. Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at 111 United Nations Drive, Mamba Point, Monrovia.

The mailing address is P.O. Box 98, Mamba Point, Monrovia.

U.S. Embassy Liberia Home Page
http://monrovia.usembassy.gov

LIBYA

General	**345**
Buoyage System	**345**
Cautions	**345**
Currency	**346**
Firing Areas	**346**
Fishing Areas	**346**
Government	**347**
Holidays	**347**
Industries	**347**
Languages	**347**
Mined Areas	**347**
Navigational Information	**347**
Pollution	**347**
Regulations	**348**
Submarine Operating Areas	**348**
Time Zone	**348**
U.S. Embassy	**348**

General

Libya is located in Northern Africa, bordering the Mediterranean Sea, between Egypt and Tunisia.

The climate is Mediterranean along the coast and extremely dry in the desert interior.

The terrain is mostly barren, flat to undulating plains, plateaus, and depressions.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Special Warning 121 (Issued 20 March 2003)

Information on Special Warning 121 can be found in **North Atlantic Ocean—Cautions**.

Special Warning 81 (Issued 31 August 1990)

1. Due to unsettled relations between the U.S. government and the government of Libya, U.S. mariners are advised to exercise caution in transiting the waters of the Gulf of Sidra S of 32°30'N. The United States does not maintain an embassy in Libya and cannot ensure the safety of its citizens.

2. The publication of this notice is solely for the purpose of advising U.S. mariners of information relevant to navigational safety and in no way constitutes a legal recognition of the validity of any foreign rule, regulation, or proclamation so published.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

Miscellaneous

Oil rigs and production platforms may be located anywhere off the coast of Libya.

Vessels anchoring in the roadsteads off Libya in the winter are recommended, with permission of the harbor authority, to leave their daytime anchorage and to anchor further offshore at night due to the strong winds and occasional gales from the NW.

Operation Unified Protector (NATO Arms Embargo Operation in the Vicinity of Libyan Territorial Waters)

Command and Control of NATO Maritime Embargo Operations.—NATO has assumed the role of coordinator for the maritime embargo operations in the vicinity of Libyan Arab Jamahiriya (Libya) in accordance with United Nations Security Council Resolutions 1970 and 1973. There continues to be a large number of naval vessels operating in the area.

Maritime Surveillance Area (MSA).—Maritime Interdiction Operations (MIO) are conducted in the Mediterranean Sea and systematically enforced in the following MSA:

1. Northern limit—latitude 34°00'N.
2. Western limit—longitude 12°00'E.
3. Eastern border—a line joining position 34°00'N, 22°00'E and position 33°00'N, 25°00'E.
4. Southern border—Libyan Territorial Waters (not included).

Reporting System.—In order to reduce to a minimum the disruptions to merchant traffic, this embargo is run using a system based on the distance of a vessel from the MSA and the vessel's Next Port of Call (NPOC). The reporting system is updated, as follows:

1. All vessels planning to transit through the MSA will Sent a Format A Message (reference: ATP 2(B) is available at http://www.shipping.nato.int) to the NATO Shipping Center (UK) 12 hours prior to entering the MSA.
2. Upon entering the MSA, vessels with an NPOC in Libya must send an additional Format A Message to NATO Headquarters Maritime Command (NATO HQ MC) Naples (Italy).
3. All vessels departing a port in Libya must send an Format A Message to NATO HQ MC Naples (Italy) 6 hours prior to departing the port.

General Guidance for the Mariners.—NATO is enforcing this arms embargo and will be proactive in measures to determine a vessel's cargo and NPOC. NATO naval units are fully complying with international laws and conventions. Merchant ships in compliance with the arms embargo have no reason to fear NATO naval units.

Willingness to cooperate and quickly respond to NATO unit hailing is highly encouraged in order to minimize delays to traffic flow.

A Naval Cooperation and Guidance for Shipping (NCAGS) Cell can be contacted 24 hours at NATO HQ MC Naples (Italy) Maritime Operations Center (MOC). The NCAGS Cell's main task is to enhance coordination between NATO units enforcing the embargo and mariners transiting through the MSA.

NATO HQ MC Naples (Italy) strongly recommends to merchant companies planning ship calls in Libyan harbors to coordinate first with the NCAGS Cell.

Points of Contact.—This operation is conducted by the (NATO HQ MC) Naples (Italy). Its MOC is the main point of contact for any issue or information regarding the arms embargo and can be contacted, as follows:

1. Telephone: 800-1101-2010 (toll free)
2. E-mail: mocn3dogcell@manp.nato.int

For other issues, the NATO Shipping Centre (UK) remains the main point of contact and can be contacted, as follows:

1. Telephone: 44-192-395-6574
2. Facsimile: 44-192-395-6575
3. E-mail: info@shipping.nato.int
4. Internet: http://www.shipping.nato.int/operations

Currency

The official unit of currency is the Libyan dinar, consisting of 1,000 millemes.

Firing Areas

Firing exercises take place in two areas off the Libyan coast from Ras Ajdir to Tarabulus. These areas are described below, as follows:

1. **Area 1.—**An area bounded by lines drawn joining the following positions:
   a. 33°20'N, 12°36'E.
   b. 33°20'N, 13°00'E.
   c. 33°04'N, 13°00'E.
   d. 33°08'N, 12°42'E.
2. **Area 2.—**An area delimited by the parallel 33°00'N, the meridians 12°25'E and 13°10'E, and the coast.

The following areas are prohibited to navigation:

1. **Khalij Surt** (Gulf of Sidra).—An area bounded by lines joining the following positions:
   a. 31°09'N, 19°42'E.
   b. 31°09'N, 19°19'E.
   c. 31°56'N, 19°19'E.
   d. 31°56'N, 19°42'E.
2. An area bounded by lines joining the following positions:
   a. 32°52'N, 12°44'E.
   b. 32°58'N, 12°48'E.
   c. 32°58'N, 13°06'E.
   d. 32°53'N, 13°06'E.

Fishing Areas

Tunny Net Areas

During certain seasons of the year, expansive tunny nets are laid out in places off the Libyan coast. The nets are sometimes upward of 5 miles offshore and should be avoided.

The prescribed marking for all tunny fisheries is, as follows:

1. By day.—Two balls displayed vertically, the upper one red, the lower white, and not less than 2m apart. They are shown at a height of not less than 5m above the sea from boats or floats moored seaward of the central outer portion of the main nets or the return, whichever extends farthest.
2. By night.—Two lights, the upper one red, the lower white, visible not less than 2 miles, are shown in place of the above balls.

Tunny nets which do not extend more than 0.15 mile from the coast, and are not laid out in areas frequented by shipping, are exempt from showing the above night signals.

Practical difficulties may temporarily prevent the proper marking of tunny fisheries areas and may affect their dimensions and positions. Generally, such fisheries are allotted a water area of about 3 miles along their front, 5.5 miles on their W side, and 0.5 mile along their E side.

Where nets have been laid out, vessels should keep not less than 6 miles from the coast to avoid the possibility of fouling them. Great caution should be observed when entering or leaving a port.

Tunny nets are usually laid as far as:

a. 5 miles offshore of Zuwarah.
b. 2.5 miles NNW of Marsa Zuwaghah.
c. 5 miles N of Marsa Dilah.
d. 5 miles offshore of Zanzur.
e. 2.5 miles NNW of Ras el-Ahmar.
f. 3 miles W of Ras al Hallab, the end of which may project as far as 5 miles from shore, in proximity of normal shipping routes.
g. 4.5 miles offshore of Ras al Misann.
h. The sea area fronting Sidi Muftah.
i. 1.5 miles NNW of Zlitan.
j. 2.5 and 5 miles NW of Sidi Bu Fatimah and Marsa Zurayq..
k. 2.2 miles offshore of Minqares Sighir (4 miles NE of Banghazi).

Government

Flag of Libya

Libya has established a form of direct democracy, the Jamahiriya (state of the masses), governed by the populace through local councils. The country is divided into 22 states.

The country functions as a military dictatorship. The General People's Congress is composed of 760 members selected by local councils.

The legal system is based on Italian civil law, French civil law, and Islamic law.

The capital is Tripoli.

Holidays

The following holidays are observed:

March 2	Proclamation of the People's Authority
March 28	Evacuation of the British Forces
June 11	Evacuation of the American Forces
July 23	Revolution Day
September 1	National Day
October 7	Evacuation of the Italians

Islamic holidays, which are subject to the appearance of the moon, include Eid Al-Fitr (End of Ramadan), Eid Al-Adha (End of Pilgrimage), Hijrah (Islamic New Year), and the Prophet's Birthday.

Industries

The main industries are petroleum, iron and steel, food processing, textiles, handicrafts, and cement.

The main exports are crude oil, refined petroleum products, chemicals, and natural gas. The main export-trading partners are Italy, Germany, Spain, Turkey, France, and the United States.

The main imports are machinery, transport equipment, semi-finished goods, food, and consumer products. The main import-trading partners are Italy, Germany, Tunisia, China, France, and Turkey.

Languages

Arabic is the official langage. Italian and English are also in general use in the major cities.

Mined Areas

Mines have been reported in areas bounded by lines joining the following positions:

1. **Area 1**
   a. 32°52.8'N, 13°24.5'E.
   b. 32°57.7'N, 13°24.5'E.
   c. 32°57.6'N, 13°18.0'E.
   d. 32°53.8'N, 13°22.3'E.
2. **Area 2**
   a. 32°53.7'N, 13°20.6'E.
   b. 32°55.9'N, 13°18.0'E.
   c. 32°55.9'N, 13°15.0'E.
   d. 32°54.5'N, 13°15.0'E.

Navigational Information

Enroute Volume

Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

Maritime Claims

The maritime territorial claims of Libya are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	74 miles.
Continental Shelf	No specified limits.

* Claims straight baselines. Requires advance permission or notification for innocent passage of warships in the territorial sea. Claims the Gulf of Sidra as a historic bay. All merchant ships required to give prior notice of innocent passage.

Pollution

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where

special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

The normal international courtesies, such as flying the Libyan flag at the foremast, should be carefully adhered to while in the territorial waters and ports of Libya.

The Libyan flag and the ship's national flag must be shown by day and night. Failure to fly the Libyan flag may result in a heavy fine.

Before arrival at the outer limits of a Libyan port, vessels are requested to display the following signals:

1. Flags of the vessel's call sign.
2. Quarantine flag.
3. Ship's national flag.
4. Libyan flag at the foremast.
5. A red flag during daylight, and red light at night, if carrying explosives or any inflammable cargo.
6. Pilot flag.

Libyan law does not permit ships transiting Libyan waters to retain on board Israeli flags, stores, goods, or containers of Israeli origin, or literature pertaining to Israel, even though the above items may be normally a part of the vessel's navigation equipment. Any vessel having such items on board upon arrival in the harbor will be liable to a heavy fine and confiscation of the goods or containers. In addition, the Libyan authorities may refuse to clear the vessel.

Ships bound to any Libyan port must inform their agent in Libya from the vessel's port of departure of the following:

1. Name of vessel.
2. Call sign.
3. Nationality of vessel.
4. Name and address of owner.
5. Name and nationality of master.
6. Number of crew and passengers.
7. Gross tonnage.
8. Type and quantity of cargo.
9. Destination port and intended duration of stay.
10. ETA.

Vessels must contact the nearest coast radio station 24 hours prior to arriving at the Approach Reporting Point to confirm the above information and to supply the following additional information:

1. Position.
2. Speed.
3. Course being steered.
4. Approach Reporting Point to be used.
5. Sea state.
6. Ship's condition (trim, list, draft).

All vessels bound for Libyan ports must pass through one of the designated Approach Reporting Points. On arrival at an Approach Reporting Point, vessels must report their position, course, and speed to the appropriate port authority.

All vessels arriving, departing, or on passage between Libyan ports within Libyan territorial waters must make regular contact every 4 hours with a Libyan coast radio station on VHF channel 16 or a port radio station on VHF channel 11 or 16. Vessels must maintain a continuous listening watch on VHF channel 16.

Destination	Approach Reporting Points
Mina Tubruq (Mersa Tobruch)	32°10'N, 24°02'E.
Darnah (Derna)	32°58'N, 22°42'E.
Banghazi (Bengasi)	32°20'N, 20°06'E. 32°17'N, 19°53'E.
Banghazi (Bengasi)	32°09'N, 19°49'E. 32°03'N, 19°50'E.
Az Zuwaytinah Oil Terminal	32°43'N, 19°06'E.
Marsa al Burayqah Oil Terminal	32°43'N, 19°06'E.
Ras Lanuf Oil Terminal	32°43'N, 19°06'E.
Qasr Ahmad (Qasr Ahmed)	32°34'N, 15°16'E.
Tarabulus (Tripoli)	33°05'N, 13°19'E. 33°07'N, 13°10'E. 33°05'N, 13°04'E. 33°00'N, 12°58'E.
Zuwarah (Zuara)	33°03'N, 12°15'E.

All ships must abide by the designated anchorages and prohibited areas and adjust their course to pass an Approach Reporting Point. Vessels mat not shift berths except when directed by the port authority.

All ships must ensure that they have on board all certificates and documents required including the safe minimum manning certificate when entering any Libyan port or passing through Libyan waters.

Ships violating these regulations may be subject to punitive penalties. See Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean and the chart for further information.

Submarine Operating Areas

A submarine exercise area exists seaward of the coast between Zuara and Tarabulus, 55 miles E.

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is located in the Ben Ashour area on Jraba Street behind the British/Libyan Climic, Tripoli.

The mailing addresses are, as follows:

1. Libya address—
   Ben Ashour Area
   Jraba Street
   Tripoli
2. U.S. address—
   8850 Tripoli Place

Washington, DC (20521-8850)

U. S. Embassy Libya Home Page
http://libya.usembassy.gov

LITHUANIA

General	**351**
Buoyage System	**351**
Currency	**351**
Firing Areas	**351**
Fishing Areas	**351**
Government	**351**
Holidays	**352**
Ice	**352**
Industries	**352**
Languages	**352**
Navigational Information	**352**
Pilotage	**352**
Pollution	**352**
Regulations	**352**
Search and Rescue	**353**
Time Zone	**353**
U.S. Embassy	**353**
Vessel Traffic Service	**353**

General

Lithuania is located in Eastern Europe, bordering the Baltic Sea between Latvia and Russia.

The climate is maritime, with wet, moderate winters and summers.

The terrain is composed of fertile lowlands, with many scattered small lakes.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the litas, consisting of 100 cents.

Firing Areas

An area frequently used for firing exercises and declared temporarily dangerous to shipping, is bound by lines joining the following positions:

a. 55°37'N, 20°46'E.
b. 55°34'N, 21°00'E.
c. 55°25'N, 21°00'E.
d. 55°22'N, 20°46'E.
e. 55°25'N, 20°42'E.
f. 55°34'N, 20°42'E.

Fishing Areas

Coastal fishing grounds have been created in Lithuanian territorial waters from the shoreline out to the 20m depth contour. Vessels passing through this area should be aware of the existance of fishing equipment that may affect safe navigation.

Government

Lithuania is a parliamentary democracy. The country is divided into ten counties.

Lithuania is governed by a directly-elected President serving a 5-year term. The Prime Minister is appointed by the Presi-

Flag of Lithuania

dent. The unicameral 141-member Parliament has 71 directly-elected members and 70 members elected through a system of proportional representation, all serving 4-year terms.

The legal system is based on civil law.

The capital is Vilnius.

Holidays

The following holidays are observed:

January 1	New Year's Day
February 16	Lithuanian Statehood Day
March 11	Independence Statehood Day
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
July 6	Crowning of Mindaugas
August 15	Assumption Day
November 1	All Saints' Day
December 25	Christmas Day
December 26	Boxing Day

Ice

For information on obtaining general ice information for the Baltic Sea, see **Baltic Sea—Ice**.

Industries

The main industries are metal-cutting machine tools, electric motors, television sets, refrigerators and freezers, petroleum refining, shipbuilding, furniture making, textiles, food processing, fertilizers, agricultural machinery, optical equipment, electronic components, computers, and amber jewelry.

The main exports are mineral products, textiles and clothing, machinery and equipment, chemicals, wood and wood products, and foodstuffs. The main export-trading partners are Russia, Latvia, Germany, Estonia, and Poland.

The main imports are mineral products, machinery and equipment, transport equipment, chemicals, textiles and clothing, and metals. The main import-trading partners are Russia, Germany, and Poland.

Languages

Lithuanian is the official language. Polish and Russian are also spoken.

Navigational Information

Enroute Volume

Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

Maritime Claims

The maritime territorial claims of Lithuania are, as follows:

Territorial Sea	12 miles.
Fisheries or Economic Zone	200 miles. *

* To median lines or boundaries.

Maritime Boundary Disputes

The 1998 maritime boundary treaty with Latvia has not been ratified by the Latvian Parliament, primarily due to concerns over oil exploration rights.

Pilotage

Pilotage is compulsory for entering and leaving all Lithuanian ports and for mooring and casting off. Generally, pilots should be ordered through the local agent 12 hours in advance and confirmed 4 hours prior to arrival.

Pollution

MARPOL Special Area

The Baltic Sea, including the Gulf of Bothnia and the Gulf of Finland, has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

This Special Area is under intensive surveillance for pollution and violations of traffic rules. Further information on pollution reporting can be found in **Baltic Sea—Pollution—Pollution Reporting**.

Regulations

Vessels should send their ETA to the local agent 12 days, 96 hours, and 12 hours in advance. Oil, gas, and chemical tankers should send their ETA 14 days, 72 hours, and 12 hours in advance.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system

for vessels arriving at or departing from a port or anchorage in the EU.

The reports should be sent, as follows:

Klaipeda Seaport	
Telephone	370-46-499646
E-mail	operator@port.lt
Butinge Oil Terminal	
Telephone	370-46-396486
E-mail	terminalcontrolroom@orlenlietuva.lt

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Recommendation on Baltic Sea Navigation

The IMO has issued recommendations regarding vessel transits of the entrances to the Baltic Sea. For further information, see **Baltic Sea—Regulations**.

Particularly Sensitive Sea Areas (PSSA)

The Baltic Sea area of Sweden, Denmark, Finland, Estonia, Lithuania, Latvia, Poland, and Germany (except for waters under Russian jurisdiction) has been declared by the IMO to be a PSSA.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

Search and Rescue

The Maritime Rescue Coordination Center (MRCC) Klaipida is responsible for coordinating search and rescue operations and maintains a continuous listening watch for distress traffic on 2182 kHz, 2187.5 kHz, VHF channel 16, and VHF channel 70.

MRCC Klaipeda can be contacted, as follows:

1. Telephone: 370-616-499677
   370-46-391257 (Maritime Assistance Service)
   370-46-391258 (Maritime Assistance Service)
2. Facsimile: 370-46-391309
   370-46-391259 (Matitime Assistance Service)
3. E-mail: mrcc@mil.lt

Rescue craft are stationed at Klaipeda (55°43'N., 21°08'E.) and Liepaja (56°31'N., 21°01'E.).

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time (CHARLIE (-3)) is maintained from the last Sunday in March until the last Sunday in October.

U.S. Embassy

The U.S. Embassy is situated at Akmenu gatve 6, Vilnius.

The mailing addresses is Akmenu gatve 6, Vilnius, LT-03106.

U. S. Embassy Lithuania Home Page
http://vilnius.usembassy.gov

Vessel Traffic Service

A Vessel Traffic Service is in operation in Klaipeda (55°44'N., 21°40'E.). For further information, see Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

MALTA

General	**355**
Buoyage System	**355**
Cautions	**355**
Currency	**355**
Firing Areas	**355**
Fishing Areas	**356**
Government	**356**
Holidays	**356**
Industries	**357**
Languages	**357**
Meteorology	**357**
Navigational Information	**357**
Pollution	**357**
Regulations	**357**
Search and Rescue	**357**
Signals	**358**
Submarine Operating Areas	**358**
Time Zone	**358**
U.S. Embassy	**358**
Vessel Traffic Service	**358**

General

The Maltese Islands lie in the central Mediterranean Sea and, lying 60 miles S of Sicily, are considered part of southern Europe. The group consists of three islands and seven islets.

Malta, the main island, is the largest. Gozo and Comino are two of the next larger islands. Filfla and Kemmunett are uninhabited rocks.

The climate is Mediterranean with mild rainy winters and hot dry summers.

The terrain is mostly low, rocky, and flat. There are no permanent lakes or streams on Malta because of the porous nature of the limestone topography.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Oil exploration is taking place over most of the width of Malta Channel between Malta and the S coast of Sicily.

Currency

The official unit of currency is the Maltese lira, consisting of 100 cents.

Firing Areas

Forts of the Maltese Islands may conduct firing exercises towards the sea on towed objects. These regulations govern artillery practice from any fort in the Maltese Islands.

A blue pennant over a red flag will be shown at the station from which practice is to take place on the afternoon prior to the practice and at 0700 on the day of the practice. The same signal will be shown on the vessel towing the targets.

A red flag will be hoisted at the firing location 15 minutes before the commencement and will be kept flying during firing practice. Bombardments by vessels or planes may take place on Filfla Islet. While such practice is taking place, a red flag is

displayed by day and a red light is shown at night on Torri tal Wied Zurrieq.

Exercise Zones

Five Naval Air Exercise Zones, which may be dangerous, exist in the vicinity of the Maltese Islands. They are defined, as follows:

1. **Zone D1.—**An area bounded by lines joining the following positions:
   a. 35°05'N, 14°06'E.
   b. 35°05'N, 15°21'E.
   c. 34°20'N, 16°24'E.
   d. 34°20'N, 13°49'E.
2. **Zone D2.—**An area bounded by lines joining the following positions:
   a. 36°31'N, 17°00'E.
   b. 35°30'N, 17°35'E.
   c. 35°41'N, 15°25'E.
   d. 36°12'N, 15°25'E.
   e. 36°31'N, 15°50'E.
3. **Zone D3.—**An area bounded by lines joining the following positions:
   a. 36°01'N, 14°12'E.
   b. 35°58'N, 14°20'E.
   c. 35°55'N, 14°20'E.
   d. 35°51'N, 14°14'E.
   e. 35°56'N, 14°10'E.
4. **Zone D4.—**A circular area with an 8.5 mile radius centered on position 35°40'N, 14°59'E. A lighted buoy, fitted with a radar reflector, lies at the center of the circle.
5. **Zone D6.—**An area between the parallels 36°11'N and 36°31'N and the meridians 16°00'E and 17°00'E.

Small Arms Training Area

Small arms is conducted at the Pembroke Rifle Range, about 3 miles NW of the entrance to Valletta Harbor, between Il-Torri Tal-Madliena (36°56.2'N., 14°28.4'E.) and Ras I-Irqieqa, about 0.4 mile E. Exercises take place between 0700 and 1600; advance notice is given before any exercises occur.

When exercises are in progress, a red flag is flown from shore. When the flags are displayed, vessels must avoid the area extending seaward which is bounded by the coast and lines joining the following positions:

a. 35°56'10.8"N, 14°28'21.6"E. (Madliena Tower)
b. 35°58'07.8"N, 14°27'30.6"E.
c. 35°58'13.8"N, 14°29'06.6"E.
d. 35°57'37.8"N, 14°30'33.6"E. (Ras I-Irqieqa)
e. 35°56'09.6"N, 14°28'51.6"E.

Fishing Areas

Tunny Net Areas

Tunny nets are usually laid in the vicinity of Mellieha Bay and between Ponta tal Marfa and Ras il Pellegrin. The seaward extremities of the nets are marked, as follows:

1. By day.—A small conical buoy surmounted by a staff and ball.
2. By night.—A boat exhibiting two white fixed lights shown vertically.

Government

Flag of Malta

Malta is a parliamentary democracy.

Malta is governed by a President elected by the House of Representatives to serve a 5-year term. The Prime Minister is appointed by the President. The unicameral House of Representatives is composed of 65 members who are directly elected under a system of proportional representation to serve 5-year terms, although additional seats may be given to the party with the largest popular vote to ensure a legislative majority.

The legal system is based on English common law and Roman civil law.

The capital is Valletta.

Holidays

The following holidays are observed:

January 1	New Year's Day
February 10	St. Paul's Shipwreck
Carnival	Varies
March 19	St. Joseph Day
March 31	Freedom Day
Good Friday	Variable
Easter Sunday	Variable
May 1	Worker's Day
June 7	Commemoration of the Uprising of 7 June 1919
June 29	St. Peter and St. Paul Feast Day
August 15	Assumption of the Blessed Virgin Mary
September 8	Our Lady of Victories Feast Day
September 21	Independence Day
December 8	Immaculate Conception
December 13	Republic Day
December 25	Christmas Day

Industries

The main industries are tourism, electronics, shipbuilding and repair, construction, food and beverages, textiles, footwear, clothing, and tobacco.

The main exports are machinery, transport equipment, and mranufactured goods. The main export-trading partners are Fance, the United States, Singapore, the United Kingdom, and Germany.

The main imports are machinery and transport equipment, manufactured and semi-manufactured goods, food, beverages, and tobacco. The main import-trading partners are Italy, the United Kingdom, France, Germany, Singapore, and the United States.

Languages

Maltese and English are the official languages.

Meteorology

Marine weather forecasts in Engliish for an area 20 to 30 miles from Nadur are available from Gozo Weather (http://www.gozoweather.com/marine.shtml).

Navigational Information

Enroute Volume

Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Maritime Claims

The maritime territorial claims of Malta are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	25 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines. Requires advance permission or notification for innocent passage of warships in the territorial sea.

Pollution

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

General

No commercial vessels or vessels with an loa of over 50m may transit through the following areas:

1. Through the channels between Malta and Ghawdex (Gozo).
2. Between the SW coast of Malta and the island of Filfa (35°47'N., 14°25'E.).

In cases of emergency, permission to enter can be obtained through Valleta Port Control on VHF channel 16 or 12.

All vessels bound for Malta must make an initial VHF contact with Valleta Port Control as soon as possible.

Speed Limit

Vessels are limited to a maximum speed of 10 knots when sailing within 1 mile of the coast.

Quarantine

Quarantine messages should be sent to Valetta and must be received 18 hours prior to the vessel's expected arrival.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The reports should be sent, as follows:

Mail	Register General of Shipping and Seamen
	Malta Transport Center
	Marsa
	MRS 1917
	Malta
Telephone	356-21-250360
Facsimile	356-21-241460
E-mail	mershipmalta.tm@transport.gov.mt

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Search and Rescue

The Operations Center of the Armed Forces Malta also serves as the Malta Rescue Coordination Center. It is responsible for coordinating search and rescue operations within the Malta Search and Rescue Region and can be contacted, as follows:

1. Telephone: 356-21-257267
   356-22-494202
2. Facsimile: 356-21-809860
   356-21-241001 (daytime only)

3. E-mail: rccmalta@gov.mt

Signals

The following signals are shown from the Palace Tower and from Fort St. Angelo at Grand Harbor:

1. Gales or strong winds are expected from between W and E, through N and is shown:
   a. By day.—A black cone, point upwards.
   b. By night.—Three green lights, in the form of a triangle, point upwards.
2. Gales or strong winds are expected from between E and S, through W and is shown:
   a. By day.—A black cone, point downwards.
   b. By night.—Three green lights, in the form of a triangle, point downwards.
3. The following signals are shown when a wind of force 5 or greater, from between 010° and 120°, is expected in any part of Valetta Harbor, and is also shown as a scend warning after a gale warning has been cancelled until such time as the sea has fallen below 1.5m:
   a. By day.—One black ball.
   b. By night.—One red light.
4. A Gregale is the name given to strong NE winds occurring in the central Mediterranean Sea, especially in the Ionian Sea and on the coasts of Sicily and Malta. Gregale signals are, as follows:
   a. Moderate Gregale, indicating a wind between N and E of force 5 to 7, on the Beaufort scale:
      - By day.—Two black cones, points upwards, vertically disposed.
      - By night.—Two green lights, vertically disposed.
   b. Strong Gregale, indicating a wind between N and E of force 8 or greater, on the Beaufort scale:
      - By day.—Three black cones, points upwards, vertically disposed.
      - By night.—Three green lights, vertically disposed.

Vessels are not permitted, during the night, to make use of private signals off any bay or creek of the island. The only authorized signals are:

1. A vessels requiring a pilot may show a blue light.
2. A vessel in distress may show the internationally-prescribed distress signals.

See Pub. 131, Sailing Directions (Enroute) Western Mediterranean, for traffic signals shown from these stations.

Submarine Operating Areas

Submarines frequently operate within 20 miles of Malta and Gozo.

Time Zone

The Time Zone description is ALPHA (-1). Daylight Savings Time (BRAVO (-2) is maintained from the last Sunday in March until the last Sunday in October.

U.S. Embassy

The U.S. Embassy is situated at Development House, Third Floor, Saint Anne Street, Floriana, Malta.

The mailing address is P.O. Box 535, Valletta CMR01.

U. S. Embassy Malta Home Page
http://malta.usembassy.gov

Vessel Traffic Service

Malta Vessel Traffic Service operates in the approaches to Malta, as well as the ports of Marsaxlokk and Valletta. For further information, see Pub. 131, Sailing Direction (Enroute) Western Mediterranean.

MARTINIQUE

General	**359**
Buoyage System	**359**
Cautions	**359**
Currency	**359**
Government	**360**
Holidays	**360**
Industries	**360**
Languages	**360**
Navigational Information	**360**
Regulations	**360**
Search and Rescue	**360**
Ship Reporting System	**361**
Time Zone	**361**
U.S. Embassy	**361**
Appendix—SURNAV	**363**

General

Matinique is an island in the Caribbean Sea. It lies near the N end of the Windward Islands between Dominica and Saint Lucia.

The climate is tropical and humid. The rainy season occurs from June through October. The island is subject to hurricanes. December through May are generally the coolest, driest, and most comfortable months.

The predominant current around Martinique fluctuates between WNW in winter and NNW in summer. It is most pronounced from March to September and moderate for the rest of the year. The average rate is 1 knot.

The terrain is mountainous, with an indented coast line. The island is dominated by Mount Pelee, almost 1,400m high, a dormant volcano visible up to 45 miles.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Seaplane operating areas are located off the W and S coasts of Martinique.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Government

Flag of Martinique

Martinique is an overseas department of France. The island elects two senators to the French Senate and four deputies to the French National Assembly.

Martinique is administered by the directly-elected General Council, consisting of 45 members serving 6-year terms, and the directly-elected Regional Council, consisting of 42 members serving 6-year terms.

The legal system is based on French law.

The capital is Fort-de-France.

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
May 8	World War II Victory Day
May 22	Slavery Abolishment Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
July 14	Bastille Day
August 15	Assumption Day
November 1	All Saints' Day
November 11	Armistice Day
December 25	Christmas Day

Industries

The main industries are sugarcane and banana production, tourism, and light industry (cement, rum, construction, and oil refining).

The main exports are refined petroleum products, bananas, rum, and pineapples. The main export trading partners are France and Guadeloupe.

The main imports are petroleum products, crude oil, foodstuffs, construction materials, vehicles, clothing, and other consumer goods. The main import-trading partners are France and Venezuela.

Languages

French is the official language. A Creole patois is also widely spoken.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Martinique are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines.

Regulations

Vessels in transit or stationary within the territorial waters, except when alongside in port, should maintain a continuous listening watch on VHF channel 16 and respond to calls by official vessels and French coast radio stations.

Vessels over 1,600 grt must remain at least 10 miles off the coast of Martinique except when in waiting areas or when using approach or access channels.

Search and Rescue

The Maritime Rescue Coordination Center (MRCC) Fort de France is located on Martinique and is the Centre Regional de Surveillance et de Sauvetage aux Antilles-Guyana (CROSSAG). CROSSAG is responsible for coordinating search and rescue operations in its area of responsibility. MRCC Fort de France can be contacted, as follows:

MRCC Fort de France can be contacted, as follows:

1. Telephone: 596-596-709292
   596-596-731616
2. Facsimile: 596-596-632450
   596-596-735730
3. Telex: 298-912008 COSMA A
4. E-mail: antilles@mrccfr.au

CROSSAG maintains a continuous listening watch for distress traffic on 2182 kHz and VHF channel 16.

Ship Reporting System

The SURNAV system is intended to prevent accidental pollution in the territorial waters of Guadeloupe and Martinique as well as in the waters within 50 miles of the coast of Guadeloupe and Martinique.

For further information, see the Appendix.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

Martinique is an overseas department of France. There is no diplomatic representation.

Appendix—SURNAV

Covered Vessels.—The regulations are mandatory for the following vessels:

1. Vessels carrying hydrocarbons or the gaseous residues of hydrocarbons as specified in Annex 1 of MARPOL 73.
2. Non-inert tankers and vessels carrying the following:
   a. Noxious liquid substances as specified in Annex 2 of MARPOL 73 and classed in Category A and Category B in Chapter 17 of the IBC Code.
   b. Liquefied gas in bulk.
   c. Plutonium-239, uranium-233, uranium-235, uranium-238, thorium, or all materials containing them, with the exception of ores.
   d. Acetaldehyde (UN 1089), ether ethyl (UN 1155), ethyl vinylic ether (UN 1302), monoethylamine (UN 1036), ammonium nitrate (UN 0222), or propylene oxide (UN 1280).
   e. Composite organochlorides, such as organochloride pesticides (UN 2761, UN 2762, UN 2995, and UN 2996).
3. Vessels carrying the following:
   a. Noxious liquid substances as specified in Annex 2 of MARPOL 73 and not listed above.
   b. Harmful liquid substances as specified in Annex 3 of MARPOL 73.
   c. Dangerous cargo as specified in the International Maritime Code of Dangerous Goods (IMDG), including radioactive materials specified in the INF Code.
   d. Dangerous cargo as specified in Chapter 17 of the IBC Code and Chapter 19 of the IGC Code.

Contact Information.—CROSS Antilles-Guyane can be contacted, as follows:

1. Call sign: CROSSAG
2. VHF: VHF channel 16
3. Radiotelephone: 2182 kHz
4. Telephone: 596-596-709292
5. Facsimile: 596-596-632450
6. Telex: 584-422799024 (INMARSAT-C)
7. E-mail: fortdefrance.mrcc@developpement-durable.gouv.fr

SURNAV-FRANCE Messages.—All vessels listed in paragraph 1 and paragraph 2 of **Covered Vessels** preparing to pass through of stay in the territorial waters of Guadeloupe or Martinique must send a SURNAV-FRANCE message to CROSS Antilles-Guyane 6 hours prior to entering the territorial waters of Guadeloupe or Martinique or 6 hours prior to departing from a port or anchorage in Guadeloupe or Martinique.

The message covers the entire planned voyage in the territorial waters until departure or until arrival at the destination, even if the vessel's route takes it out of these waters and back in again. If there is a change in the vessel's planned route, or the vessel is unable to maneuver or navigate, the vessel must send a correcting message as soon as possible.

SURNAV-FRANCE messages should be send to CROSS Antilles-Guyane and prefixed SURNAV-FRANCE using any method available to the vessel. Messages should be sent in the format given in the table below and should also include the following additional information:

1. Intended movements within territorial waters.
2. Current ability to maneuver and navigate.

SURNAV-FRANCE Message	
Designator	**Information required**
ALFA	Vessel's name, call sign, and flag.
BRAVO	Date and time UT (GMT), suffixed ZULU (6 figures DD/HH/MM).
CHARLIE	Position (latitude/longitude).
ECHO	Course.
FOXTROT	Speed.
GOLF	Origin.
HOTEL	1. Date, time UT (GMT), and position of entering territorial waters. * 2. Date, time UT(GMT), and place of departure. * *Whichever is appropriate.
INDIA	Destination.
KILO	1. Date, time UT (GMT), and position of leaving territorial waters. * 2. Date and time UT (GMT), of arrival at destination (port, anchorage, waiting position, deballasting position) within territorial waters. * *Whichever is appropriate.
MIKE	Radio watch maintained.
OSCAR	Draft.
PAPA **	Cargo—type (as defined by MARPOL 73) and quantity.
QUEBEC	Any defects, damage, faults, or restrictions.
UNIFORM	Type of vessel.
XRAY	Other remarks.
ZULU	End of message.
** Vessels should refer to IMO Resolution A.851(20) in order to correctly give the information requested.	

Vessels arriving from outside the European Union.—All vessels listed in paragraph 1, paragraph 2, and paragraph 3 of **Covered Vessels** arriving from a port outside the European Union and intending to anchor in territorial waters of Martinique must send a message when departing from the loading port, or as soon as possible if changing destinations, using any method available to the vessel to CROSS Antilles-Guyane stating either the following information or indicating the authority holding this information in the European Union:

1. Vessel name and call sign.
2. Flag.
3. Draft and loa.
4. Destination port.

5. ETA at destination port, pilot station, or designated anchorage, as requested by the local authority
6. ETD.
7. Planned itinerary.
8. Precise technical names of dangerous or polluting cargo; UN numbers, if necessary; risk classes, as defined by the IMO in accordance with the IMDG Code and the IBC/IGC compendium; and the INF category of the vessel, if necessary.
9. Confirmation that a list, manifesto, or loading diagram held on board that details the dangerous or polluting cargo on board the vessel and the location of it.
10. Number of crew.

Incident/Accident Report.—Vessels of 300 gross tons and over on a commercial voyage and navigating with the limits of the Economic Zone, or when outside the limits of the zone but less than 50 miles from the coast must immediately report the following:

1. Every incident or accident affecting the safety of the vessel (collision, stranding, damage, breakdown or failure, invasion or movement of cargo, or all defects within the hull or damage to the structure).
2. Every incident or accident affecting the safety of navigation (damage likely to affect the vessel's maneuverability or navigation, or every defect affecting the propulsion systems, steering gear, the production of power, or the navigation or communication equipment.
3. Every situation likely to lead to pollution (discharge or risk of discharge of pollutants into the sea).
4. Every slick of pollution and every drifting container seen in the sea.

Messages should be sent to CROSS Antilles-Guyane using any method available to the vessel, in the format given below.

Incident/Accident Report	
Designator	**Information required**
ALFA	Vessel's name, call sign, and flag.
BRAVO	Date and time UT (GMT), suffixed ZULU (6 figures DD/HH/MM).
CHARLIE	Position (latitude/longitude).
ECHO	Course.
FOXTROT	Speed.
GOLF	Origin.
INDIA	Destination and ETA.
MIKE	Radio watch maintained.
OSCAR	Draft.
PAPA *	Cargo and details of dangerous or pollutant cargo on board.
QUEBEC *	Nature of incident or situation, with damage or problem suffered.
ROMEO *	Description of the pollution caused or observed and of all containers, parcels, or cargo lost overboard or observed drifting and presenting a danger to navigation and/or the environment.
TANGO	Owner's details, charter company, and possible consignees in France.
UNIFORM	Vessel type, characteristic, and tonnage.
WHISKEY	Number of people on board.
XRAY *	Date and time (UT/GMT) of possible call for assistance or towing, possible presence and name of assisting vessel, time (UT/GMT) of contacting a possible assisting vessel, or other information.
YANKEE	Request transmission of report to another system (AMVER, AUSREP, JASREP, MAREP, etc.).
ZULU	End of message.
* Vessels should refer to IMO Resolution A.851(20) in order to correctly give the information requested.	

Listening watch—Throughout the duration of a transit or stay in territorial waters, vessels listed in paragraph 1, paragraph 2, and paragraph 3 of **Covered Vessels** must maintain a continuous listening watch on 2182 kHz, VHF channel 16, and any other frequency they are advised to listen on.

MAURITANIA

General	**365**
Buoyage System	**365**
Cautions	**365**
Currency	**365**
Government	**365**
Holidays	**366**
Industries	**366**
Languages	**366**
Navigational Information	**366**
Search and Rescue	**366**
Time Zone	**366**
U.S. Embassy	**366**

General

Mauritania is located in Northwest Africa and is bordered on the N and NW by Western Sahara, on the NE by Algeria, on the E by Mali, on the S by Mali and Senegal, and on the W by the Atlantic Ocean.

The coastline is generally smooth and unindented. Most of the country is desert and is relatively flat, with ridges between regions of lower and higher altitudes.

Except for certain spots in the S, Mauritania's climate is hot and dry; the temperature averages more than 38°C for half the year. The climate along the coast has one rainy season and an annual rainfall of less about 675mm each year. Trade winds moderate the temperature for about 8 months of the year.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Offshore oil and gas exploration is carried out in the coastal and deep-water areas off the coast of Mauritania.

Fishing vessels may be encountered off the entire coast of Mauritania.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

Currency

The official unit of currency is the ouguiya, consisting of five khoums.

Government

Mauritania is a republic. The country is divided into 12 regions and one capital district.

Mauritania is governed by a directly-elected President who serves a 5-year term. The bicameral legislature consists of an indirectly-elected 56-member Senate, who serve 6-year terms, and a directly-elected 95-member National Assembly, who serve 5-year terms.

The legal system is based on French civil law and Islamic law.

The capital is Nouakchott.

Flag of Mauritinia

Holidays

The following holidays are observed:

January 1	New Year's Day
March 8	Women's Day
May 1	Labor Day
May 25	African Unity Day
July 10	Armed Forces Day
November 28	Independence Day

Islamic holidays, which are subject to the appearance of the moon, include Eid Al-Fitr (End of Ramadan), Eid Al-Adha (End of Pilgrimage), Hijrah (Islamic New Year), and the Prophet's Birthday.

Industries

The main industries are agriculture, livestock, fish processing, and mining (iron ore and gypsum).

The main exports are iron ore, fish and fish products, and gold. The main export-trading partners are China, Italy France, Belgium, Spain, and Japan.

The main imports are machinery and equipment, petroleum products, capital goods, foodstuffs, and consumer goods. The main import-trading partners are France, the United States, China, Belgium, Italy, and Spain.

Languages

Hasaniya Arabic and Wolof are the official languages. Pular, Soninke, and French are also spoken.

Navigational Information

Enroute Volume

Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Maritime Claims

The maritime territorial claims of Mauritania are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Claims an 89-mile straight baseline between Cap Blanc and Cap Timiris.

Search and Rescue

Rescue Coordination Center (RCC) Nouakchott maintains a continuous listening watch on 2182 kHz, VHF channel 16, and VHF DSC.

RCC Nouakchott can be contacted, as follows:

1. Telephone: 222-524-1521
   222-525-3968
2. Facsimile: 222-524-2593
   222-525-0163
3. E-mail: ccsm@mauritel.mr

Time Zone

The Time Zone description is ZULU. Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at 288, Rue 42-100 (Rue Abdalleye), Nouakchott.

The mailing address is B. P. 222, Nouakchott.

U. S. Embassy Mauritania Home Page
http://mauritania.usembassy.gov

MEDITERRANEAN SEA

General	**367**
Cautions	**367**
Climatology	**367**
Currents	**372**
Fishing Areas	**374**
Navigational Information	**375**
Pollution	**375**
Regulations	**375**
Routes	**376**
Ship Reporting System	**376**
Tides	**376**
Appendix—Routes Across the Mediterranean Sea	**377**

General

The Mediterranean Sea is almost completely enclosed by land. It is bounded on the N by Europe, and the E by Asia, and on the S by Africa.

The Mediterranean Sea is connected to the Atlantic Ocean on the W by the Strait of Gibraltar and to the Black Sea on the E by Istanbul Bogazi (The Bosporus), Marmara Denizi (The Sea of Marmara), and Canakkale Bogazi (The Dardanelles). The Suez Canal in the SE connects the Mediterranean Sea to the Red Sea.

The Mediterranean Sea has an average depth of 1,500m; the deepest point is the Calypso Deep, with a depth of 5,267m, in the Ionian Sea. A shallow submarine ridge in the Strait of Sicily, between the island of Sicily and the coast of Tunisia divides the Mediterranean Sea into two main basins; the E basin is about double the size of the W basin.

Cautions

Special Warning 121 (Issued 20 March 2003)

Information on Special Warning 121 can be found in **North Atlantic Ocean—Cautions**.

Special Warning 120 (Issued 16 November 2001)

Information on Special Warning 120 can be found in **North Atlantic Ocean—Cautions**.

Locust Reports

Many countries in Africa and Southwest Asia are, from time to time, invaded by swarms of Desert Locust. These locusts are capable of traveling for hundreds of miles and have repeatedly been seen in flight at sea off the NW coast of Africa and within the Mediterranean Sea. The adult Desert Locust is about 60mm long, with a wingspan of about 120mm. They vary in color from red to yellow according to their state of maturity. For further information, see **North Atlantic Ocean—Cautions—Locust Reports**.

Whales

From April through August, sperm whales may be found in the Strait of Gibraltar. A sperm whale conservation area is bounded by lines joining the following positions:

a. 36°00.6'N, 5°28.8'W.
b. 35°55.2'N, 5°27.0'W.
c. 35°51.6'N, 5°38.4'W.
d. 35°57.0'N, 5°40.2'W.

The maximum allowed vessel speed in this area is 13 knots. Vessels should be extremely vigilant when transiting this area.

Climatology

General

The influence of the sea results in mild winters and warm summers in the Mediterranean Sea. In the N gulfs, where winds are mainly of land origin, continental extremes of temperature are more likely during both seasons.

Winter is the stormiest season. The Golfe du Lion, the Golfo di Genova, and the Adriatic Sea are the principal areas of cyclogenesis during this season. Storms generally follow an E track along the N side of the Mediterranean Sea. In general, gales are more likely in the north, particularly in the Golfe du Lion, the Adriatic Sea, and the Aegean Sea. Spring and autumn show a decrease in the number of storms although cyclogenesis occurs in the Golfo di Genova and the northern Adriatic Sea. The storm tracks are similar to those of winter, although the frequency of gale force winds is about one-half that of winter.

Summer is characterized by fair weather. Storms and strong

winds are uncommon throughout most of the area.

Poor visibility in the form of fog or precipitation is much more likely to occur during the winter months than any other season, particularly in the N. Dust or dry haze blowing from North Africa can also greatly reduce visibility. Summer is characterized by exceptional visibility over the entire area, except near large cities, where there is often an early morning fog.

The Naval Research Laboratory Monterey, a corporate research laboratory for the United States Navy and Marine Corps, publishes port studies and forecaster handbooks that may be of use to the mariner. These publications can be accessed at the Naval Reserach Laboratory web site.

Naval Research Laboratory Monterey Home Page

http://www.nrlmry.navy.mil/pubs.htm

The African Severe Weather Port Guide contains information on the following ports:

1. Egypt—Alexandria and Port Said.
2. Tunisia—Bizerte, Sfax, Sousse, and Tunis.

The European Severe Weather Port Guide contains information on the following ports:

1. Albania—Durres.
2. Croatia—Dubrovnik, Split, and Zadar.
3. Cyprus—Lanarca and Limassol.
4. Egypt—Alexandria and Port Said.
5. France—Cannes, Marseilles, Nice, Toulon, and Villefranche.
6. Gibraltar.
7. Greece—Astakos, Kaliamata, Kerkira, Kithra, Piraeus, Souda Bay, St. Theodore, and Thessaloniki.
8. Israel—Ashdod and Haifa.
9. Italy—Augusta Bay, Cagliari, Catania, Gaeta, Genoa, La Maddalena, la Spexia, Livorna, Messina, Naples, Palermo, Porto Torres, San Remo, Taormina, Taranto, Trieste, and Venice.
10. Malta—Valleta.
11. Monaco.
12. Slovenia—Koper.
13. Spain—Barcelona, Benidorm, Cartagena, Ibeza, Malaga, Palma, Pollensa, and Valencia.
14. Tunisia—Bizerte, Sfax, Sousse, and Tunis.
15. Turkey—Aksaz, Antalya, Izmir, Izkenderun, and Mersin.

Winds

In the Mediterranean there is no general wind current dominating the whole region at any time of the year, although the overall wind pattern remains fairly constant in all seasons.

During the winter season winds are often W to NW, with average speeds of 12 to 17 knots. Between the Strait of Gibraltar and Sardegna (Sardinia), both E and W winds predominate while in the Adriatic Sea SW winds are common. The W coast of Italy shows no prevailing wind direction. Cyprus and the northeastern Mediterranean Sea have a high percentage of N and NE winds. The Aegean Sea shows the greatest departure from the general pattern, with N winds in all seasons, although in winter both N and S winds are frequent.

Spring brings little change to the above pattern except in the northeastern Mediterranean Sea, where SW winds now predominate. The average wind speeds drop to 9 to 13 knots in spring.

In the summer months the average wind speeds are 5 to 9 knots over the area. The general pattern remains the same except in the Aegean Sea, where S winds are rare.

Fall brings little change in the general pattern except for the southeastern Mediterranean Sea, where winds are variable. The average wind speeds increase to 7 to 10 knots in this season.

The diurnal alternation of land and sea breezes caused by the differential heating of land and sea is pronounced in the warm season and sometimes noticeable in the cool season. During daylight hours, the land warms up much more rapidly than the sea, causing air near the surface to rise. Air flowing in from seaward to replace this rising air forms the sea breeze. At night the reverse action takes place.

Regular sea breezes prevail from April to October, beginning at 0700 or 0800, reaching a maximum about 1300 or 1400, and continuing until about 1800 or 1900. In the spring and autumn, the sea breeze begins later in the morning; in the winter, when it occurs, its onset may be delayed until noon. The extent of land-sea breezes is about 10 to 20 miles from the coast. The sea breezes usually reach 11 to 16 knots, while the land breezes are weaker, averaging 5 to 9 knots.

Gales are most likely in the Golfe du Lion, the Adriatic Sea, and the Aegean Sea. There is a general decrease toward the S and E, but gale frequency increases in the main straits, such as the Strait of Gibraltar and the Alboran Sea, due to funneling.

Winter is the primary season for strong winds. The highest frequency of gales is the Golfe du Lion, where they occur greater than 20 per cent of the time near the head, decreasing to 10 per cent in the open seas. Both the Adriatic Sea and the Aegean Sea show a 10 per cent frequency of gales in this season. The extreme winds are most likely from September through March in the Mediterranean Sea.

The maximum recorded wind was 65 knots, at Iskenderun in March. Izmir has recorded 61 knots in that month and has a summer record of 50 knots (June). Split has recorded a 58 knot NNE gale during the month of December. Very few stations have recorded winds greater than 30 knots during June, July, and August.

The complex topography of the Mediterranean Sea area, with mountains to the N, desert to the S, and numerous islands and indented coastlines, results in a variety of regional winds. Most of these winds have names and are briefly described, as follows:

1. **Bora.—**A fall wind whose source is so cold that when the air reaches the lowlands or coast the dynamic warming is insufficient to raise the air temperature to the normal level for the region; hence it appears as a cold wind. The terms borino and boraccia denote a weak bora and strong bora, respectively. The term is applied (along with karstbora) to the cold NE wind on the Dalmatian coast of the Adriatic Sea in winter when cold air from Russia crosses the mountains and descends to the relatively warm shores of the Adriatic Sea. It is very stormy and squally; the squalls sometimes reach 90 knots or more. The cyclonic bora (bora scura), with clouds and rain, covers the whole Adriatic Sea and occurs with a low pressure system to the S. The dry anticyclonic bora is generated by a powerful anticyclone over central Europe. It is very violent over the land but extends only a short distance

out to sea. A local bora also occurs on the E shore of the Adriatic Sea with an anticyclone over the Balkans. Boras may last for several days, although advancing cold fronts may be preceded by a relative lull. Each cold front is accompanied by a violent squall and followed by an increase in winds which are strongest and most frequent in the cool season. Bora gales occur about 10 per cent in the northern Adriatic Sea during the month of January.

2. **Borasca**.—Also called borasco or bourrasque. Literally means "little bora." A thunderstorm or violent squall, especially in the Mediterranean Sea.

3. **Burin.—**A coastal wind in the northern Adriatic Sea occuring in summer due to the temperature differences between the sea and the land. The wind, which usually comes from the ENE to NNE, begins around 2200 and continues through the night until about sunrise. It is strongest around sunrise, although it rarely exceeds force 2.

4. **Cers.—**A name for the mistral in Catalonia, Narbonne, and parts of Provence (southern France and northeastern Spain). It is very violent and turbulent in the Aude Valley below Carcassone, with gusts often reaching 45 to 50 knots. It is cold in the winter, hot in the summer, and always dry and clear. A similar N wind in Spain is the cierzo.

5. **Chergui.—**An E or SE desert wind in Morocco (North Africa), especially in the N. It is persistent, very dry and dusty, hot in the summer, and cold in the winter. It blows with high pressure in the Mediterranean Sea and the isobars running nearly parallel with the coast. It is said to be most frequent in the 40 days following July 11 or 12, a period which is known as the Smaim (see Simoom).

6. **Chili.—**A warm dry descending wind in Tunisia resembling the sirocco. In southern Algeria, it is called chichili.

7. **Cierzo.—**Spanish term for the mistral in the lower valleys of the Rio Ebro. It occurs mainly in the autumn and early winter.

8. **Dusenwind.—**Literally "jet wind" or "blast wind." The mountain-gap wind of Canakkale Bogazi (The Dardanelles); a strong ENE wind which blows out of Canakkale Bogazi (The Dardanelles) into the Aegean Sea, penetrating as far as the island of Lemnos. It is caused by a ridge of high pressure over the Black Sea.

9. **Etesians.—**The prevailing N winds in summer in the eastern Mediterranean Sea and especially the Aegean Sea; basically similar to monsoon and equivalent to the maestro of the Adriatic Sea.

According to the ancient Greeks, the etesians blow for 40 days beginning with the heliacal rising of Sirius. They are associated (along with the seistan and shamal) with the deep low pressure area which forms in summer over northwest India. They bring clear skies and dry relatively cool weather.

In Greece, the etesian wind is locally named the sleeper; in Turkey it is the meltem. The Romans used the word also for the Southwest Monsoon of the Arabian Sea.

During the summer these NW through NE winds are very persistent and in some places have almost the character of trade winds. They are dry and, moving over a relatively cool sea, bring good visibility and clear skies; only after traveling some distance over the sea do they generate cumulus clouds. Their wind speeds may be greatly increased by funneling in many of the narrow channels of the Aegean Sea.

10. **Ghibli.—**Also called chibli, gebli, gibleh, gibli, and kibli. A hot dust-bearing desert wind in Tripolitania similar to the foehn. In Morocco, the analogous gibla is a hot dry wind from between the SE and S. It means "the direction in which one turns," i.e., the traditional direction of Mecca.

11. **Gregale.—**The Maltese and best known variant of a term for a strong NE wind in the central and western Mediterranean Sea. It occurs either with high pressure over central Europe or the Balkans and low pressure over Libya, when it may continue for up to 5 days, or with the passage of a low to S or SE when it lasts only a day or two. It is most frequent in winter. The weather varies with the type of pressure distribution and the onshore or offshore direction of the wind. At Malta, the gregale raises dangerous seas in the harbor.

12. **Khamsin.—**Also spelled camsin, chamsin, kansin, khamasseen, and khemsin. A dry, dusty, and generally hot desert wind in Egypt and over the Red Sea. It is generally S or SE, occurring in front of depressions moving E across North Africa or the southeastern Mediterranean Sea.

13. **Leste.—**Spanish nautical term for E wind. The name is given to a hot dry and dusty E or SE wind which blows from the Atlantic coast of Morocco out to Madeira and the Canary Islands. It is a form of sirocco and occurs ahead of depressions advancing E.

14. **Levante.—**The Spanish and most widely used term for an E or NE wind occurring along the coast and inland from southern France to the Strait of Gibraltar. It is moderate or fresh (not as strong as the gregale), mild, very humid, overcast, and rainy; it occurs with a depression over the western Mediterranean Sea. In summer it is rare and weak; in January it is inhibited by the Iberian anticyclone. It is most frequent from February to May and from October to December.

15. **Levanter.—**An English name for the levante, more specifically applied to winds in the Strait of Gibraltar and on the E coast of Spain. It blows from E or NE with high pressure over central Europe and a depression over the southwest Mediterranean Sea. It is most frequent and strongest from October to December and February to May, and persists for 2 or 3 days

16. **Levantera.—**A persistent E wind in the Adriatic Sea, usually bringing cloudy weather.

17. **Leveche.—**Also spelled laveche. A name for the sirocco in Spain. It is a hot sand and dust-laden wind from between SE and SW that blows in front of a depression on the SE coast of Spain but extends only a few miles inland.

18. **Libeccio.—**Italian name for a SW wind; used especially in northern Corsica for the W or SW wind which blows throughout the year, and especially in winter when it is often stormy. On windward slopes it brings rain, with thunderstorms in summer and autumn; after crossing the mountains it is warm and dry, but may be very turbulent.

19. **Liberator.—**A name sometimes given the W wind through the Strait of Gibraltar.

20. **Lips.—**The ancient Greek name for the SW wind; it is the sea breeze in Athens. On the Tower of the Winds it is represented by a bare-legged young man carrying a piece of a trireme (ancient galley). This may indicate either that the wind favored homecoming ships or that, when stormy, it caused wrecks. Today the name is applied to any hot wind, usually the sirocco.

21. **Maestro.—**A NW wind with fine weather which blows, especially in summer, in the Adriatic Sea; it is most frequent on the W shore and is equivalent to the etesians of the eastern Mediterranean Sea. It is also found on the coast of Corsica and Sardinia.

22. **Mamatele.—**Also called mamaliti or mamatili. A light NW wind of Sicily; it is a form of mistral.

23. **Marin.—**A warm moist SE wind from the sea on the French Mediterranean coast and in the Maritime Alps, especially frequent in spring and autumn. In the Rhone Delta, it blows also from the S.

24. **Meltem.—**Also spelled meltemi. A strong wind from the NE or E which often sets in suddenly and blows during the day in summer on the Bulgarian coast and in Istanbul Bogazi (The Bosporus). It is also the Turkish name for the etesians.

25. **Mistral.—**A N wind which blows down the Rhone Valley S of Valence, France and into the Golfe du Lion. It is strong, squally, cold, and dry and is the combined result of the basic circulation, a fall wind, and jet-effect wind. It blows from the N or NW in the Rhone Delta, where it is strongest; from the NW in Provence; and from the NE in the valley of the Durance, below Sisteron.

A general mistral usually begins with the development of a depression over the Tyrrhenian Sea or Golfo di Genova, with an anticyclone advancing from the Azores to central France. It often exceeds 50 knots and reaches 75 knots in the lower Rhone Valley and 45 knots at Marseilles, decreasing both to the E and W. In the absence of a strong pressure gradient, a weaker katabatic local mistral develops in the Rhone Valley. A general mistral usually lasts for several days, sometimes with short lulls. It is most violent in winter and spring, and may do considerable damage.

The mistral has a variety of local names, such as mangofango (Provence); secaire, maistrau, maistre, or magistral (Cevennes); dramundan (Perpignan); cierzo (Spain); and cers (the Pyrennes). South of Mont Ventoux, a similar wind is named bise. A local W wind of mistral type which descends from Mount Canigou to the plains of Roussillon is called canigonenc.

26. **Orsure.—**A stormy N to NE wind in the Golfe du Lion.

27. **Ostro.—**A S wind occuring most frequently in the open part of the Adriatic Sea. It appears when cyclonic activity approaches the Adriatic Sea from W to NW. The direction of the ostro is usually determined by pressure differences and is not affected by land. It is transient in nature and of short duration, but can increase and warn of an approaching storm.

28. **Ponente.—**A W wind on the Cote d'Azur (French Mediterranean coast), the northern Roussillon region, and Corsica. On the Cote d'Azur, it is a weakened mistral and brings clear skies. In northern Roussillon, it is the land breeze of early morning, changing to SE during the day, and generally precedes the tramontana.

29. **Raffiche.—**Also called refoli. In the Mediterranean Sea region, gusts from the mountains; violent gusts of the bora.

30. **Riefne.—**An intense storm of Malta in the Mediterranean Sea.

31. **Simoom.—**A strong, dry, and dust-laden desert wind which blows in the Sahara, Israel, Syria, and the desert of Arabia. Its temperature may exceed 54°C and the humidity may fall below 10 per cent. The name means "poison wind" and is given because the sudden onset of a simoom may cause heatstroke. This is attributed to the fact that the hot wind brings more heat to the body than can be disposed of by the evaporation of perspiration.

32. **Siffanto.—**A SW wind of the Adriatic Sea; it is often violent.

33. **Sirocco.—**Also spelled scirocco. A warm S or SE wind in advance of a depression moving E across the southern Mediterranean Sea or North Africa. The air comes from the Sahara (as a desert wind) and is dry and dusty, but the term is not used in North Africa, where the natives call it cham (hot) or arifi (thirsty). In crossing the Mediterranean Sea, the sirocco picks up much moisture because of its high temperature and reaches Malta, Sicily, and southern Italy as a very enervating hot and humid wind. As it travels N, it causes fog and rain.

In some parts of the Mediterranean region, the word may be used for any S wind. In the extreme SW of Greece, a warm foehn wind crossing the coastal mountains is named sirocco di levante. There are a number of local variants of the spelling, such as xaroco (Portuguese), jaloque or xaloque (Spanish), and xaloc or xalock (Catalonian). In the Rhone Delta, the warm rainy SE sirocco is called eissero. On Zakynthos Island, it is called lampadista.

34. **Solano.—**A SE or E wind on the SE coast of Spain in summer, usually an extension of the sirocco. It is hot and humid and sometimes brings rain; when dry, it is dusty.

35. **Tarantata.—**A strong breeze from the NW in the Mediterranean Sea region.

36. **Tramontana.—**A cold wind from the NE or N, particularly on the W coast of Italy and northern Corsica, but also in the Balearic Islands and the Ebro Valley in Catalonia. Like the mistral, it is associated with the advance of an anticyclone from the W following a depression over the Mediterranean Sea. The weather is fine, with occasional showers.

37. **Traversier.—**In the Mediterranean Sea, dangerous winds blowing directly into port.

38. **Vardar.—**Also called vardarac. A cold fall wind blowing from the NW down the Vardar Valley in Greece to the Gulf of Salonica. It occurs when atmospheric pressure over Eastern Europe is higher than over the Aegean Sea, as is often the case in winter. It persists for 2 or 3 days, with a mean velocity of 10 to 15 knots, rising to 30 knots in squalls. It is strongest where the Vardar River leaves the mountains, but it extends for some distance out to sea.

39. **Vendaval.—**A stormy SW wind on the southern Mediterranean coast of Spain and in the Strait of Gibraltar. It occurs with a low advancing from the W in late autumn, winter, or early spring, and is often accompanied by thunderstorms and violent squalls.

40. **Zephyrus.—**In the northern Adriatic Sea, a wind from the W which arrises suddenly, particularly in cold weather, but does not last long. It is usually a strong wind and can cause high waves.

Temperature

The regional climate of the Mediterranean Sea is generally one of mild winters and hot summers. In the summer months

the average daily temperatures increase toward the E and S. The average daily highs in summer are usually in the high teens or low 20s (°C). Hot temperatures are not unusual along the North African coast when a hot breeze blowing off the desert (sirocco) encroaches on the marine environment. The highest temperature recorded in the Mediterranean region is 47.8°C, which was measured in Banzart in August and in Tunis in July. High temperatures also occur in a number of other places in the Mediterranean Sea due to adiabatic heating of air as it flows down the lee side of a mountain range (foehn effect), especially near the Corsican Mountains, the N coast of Sicilia (Sicily), and southern Italy when the sirocco blows in summer. Palermo has recorded a high of 45.6°C in August.

In general the average winter temperatures increase toward the S, and they are slightly higher in the eastern Mediterranean Sea than in the western Mediterranean Sea. January and February are usually the coldest months. The lowest temperatures occur in the cold continental air streams on the shores of the Golfe du Lion, the north Adriatic Sea, and in the north Aegean Sea. In these areas the minimum temperature may be as low as -6° to -9°C. The extreme minimum in the area is -14°C, which was recorded in Trieste in February.

Changes in wind direction can bring about marked changes in temperature. In summer months if the onset of the (cool) sea breeze is delayed until afternoon, a drop of 8° to 11°C may occur when the sea breeze does arrive.

Large changes occur when the sirocco winds are suddenly followed by a cold front. The W coast of Greece can experience large summer changes when hot dry winds from the mountains are followed by a cold front.

Precipitation

Rainfall in the Mediterranean Sea area generally occurs in association with low pressure systems. Heaviest rains occur ahead of cold fronts, particularly when the air is warm and humid. In autumn, when the sea is still very warm, showers caused by instability and thunderstorms are often associated with warm fronts. Thunderstorms also occur in siroccos when they are orographically lifted in the N parts of the Mediterranean Sea area.

The average annual precipitation is generally highest in the N sector, decreasing to a minimum along the eastern North African coast. Rijeka has an annual average of 1,575mm, the highest in the area, with 111 days showing measurable precipitation (1mm or greater), while the minimum of 76mm is reported at Bur Said, which has an average of only 19 days with measurable precipitation. Most of the NW area reports an annual average close to 762mm.

Most of the Mediterranean Sea experiences a dry season in the summer, when there is an almost constant flow of surface air onto North Africa and a very stable lapse rate in the atmosphere. A change in either of these conditions, such as exceptionally cold air moving in from Europe or warm air blowing out of Africa, could cause a break in the dry season. The southeastern Mediterranean Sea experiences almost complete aridity during the summer months; no station on the North African coast reports more than a 25mm total for the summer months (June, July, August). The NE is also dry, with Piraievs averaging 15mm and Izmir averaging 25mm for the summer months. To the NE, Genova has an average of 172mm total and 13 days showing measurable precipitation.

The Mediterranean rainy season usually occurs from late fall to early spring. December, a representative month in the rainy season, shows Genova and Napoli with an average of 137mm and 9 and 13 days, respectively, with measurable precipitation. Some cities to the south are still quite dry; Bur Said has an average of only 15mm and 4 rainy days in December.

Snow is relatively rare at sea level in the Mediterranean Sea. The most affected areas are the northeast Adriatic Sea and the N parts of the Aegean Sea, where snow falls on an average of 6 days each year. Snow seldom lies on the ground for more than 1 to 2 days in this area.

Hail may occur in the northern Mediterranean at any time of the year, but in general it is most frequent in spring and winter. In the S areas, hail is practically confined to these seasons. In regions where the rainfall consists mainly of heavy showers, the highest frequencies of hail occur in the seasons of maximum rainfall and not necessarily of maximum thunderstorm activity. Hail in this region occurs mainly along cold fronts, in showers caused by instability in cold air masses, and in thunderstorms.

The frequency of Mediterranean thunderstorms is highest in the N waters, with a maximum in the North Adriatic Sea, decreasing to a minimum along the N coast of Africa, from Libya to Egypt. The annual average of thunderstorm days ranges from 37 at Split to 3 at Bur Said. In the North Adriatic Sea the frequency of thunderstorms is highest in the summer months, with many of these being air mass thunderstorms. Rijeka has an average of 6 thunderstorm days during the month of July. In other parts of the Mediterranean, autumn and winter are the main season for thunderstorms. Autumn thunderstorms are most common in the western and central Mediterranean Sea, the southern Adriatic Sea, and the western Aegean Sea; Tunis and Piraevs average 4 thunderstorm days in October. In the eastern Aegean Sea and eastern Mediterranean Sea, thunderstorms are most common in winter.

Humidity

The relative humidity over most of the Mediterranean Sea is highest in the winter months, decreasing to a minimum during July or August. In general, the relative humidity is highest during the night; this variation is brought about more by diurnal temperature variations than changes in actual water content. The seasonal variation is highest in the N area and very small along the North African coast.

Winds often determine the short period range in humidity. Offshore winds are generally dry in all seasons, especially on the North African coast, where the sirocco is often desiccative, while the sea breeze is generally quite moist. An extreme example of wind effect has been noted at Al Iskandariyah (Alexandria), where relative humidity as low as 8 per cent has risen to 90 per cent within 2 hours after the arrival of NW winds in the rear of a low.

In the winter months, the relative humidity is generally highest in the W part of the region, although the January minimum occurs at Genova, which has a 56 per cent daytime average in this month. In the summer months, the relative humidity is highest in the southern Mediterranean Sea.

The diurnal variation depends, to a great extent, on the local winds and, therefore, has a large range over the Mediterranean Sea area. Average diurnal changes can be nearly 0 per cent (Hefa in October) and as high as 24 per cent (Banzart in July).

The diurnal range is smallest along the E shore of the Mediterranean Sea and at Genova, which does not have a diurnal average greater than 9 per cent in any month during the year.

Cloud Cover

In general, the Mediterranean Sea is not a cloudy area. The seas W of Sicilia (Sicily) and the northern Adriatic Sea experience a slightly greater percentage of cloud cover than the rest of the area. Most of the stations in western Mediterranean Sea report an annual average of near 4 oktas cloud cover, while most cities in the E region report to 2 to 3 oktas average cloud cover.

The cloud cover is heaviest during the winter months. In December, Napoli has an average of 13 cloudy days, while Alger averages 11 and Bayrut has a mean of 7 cloudy days. The area is seldom overcast during the summer months and few stations report more than 2 to 3 cloudy days each month during this season. In many places along the coast the diurnal variation of cloud cover during the winter often gives a maximum each morning due to low stratus. This cover normally dissipates after sunrise and there is a second maximum in the afternoon due to the development of cumulus. Most of the area only experiences the afternoon maximum in summer. The clearest time of the day is in the evening. The diurnal cloud changes usually only affect the offshore waters to a distance of 10 to15 miles from the coast.

Visibility

The more important causes of poor visibility in the Mediterranean Sea are fog, dust, haze, and precipitation. Mist or fog is common near large cities in the early morning, when the smoky air is especially favorable for condensation of moisture.

Dense sea fogs are relatively scarce in the Mediterranean Sea, but when they do occur, they are more frequent in the relatively cool waters of the N gulfs than in the warmer water to the S. On the coast radiation fog sometimes develops in early morning when winds are very light, but this usually decreases soon after sunrise.

The N movement of moist sirocco air over the relatively cool sea is a major cause of fog in the Mediterranean Sea. Thick sirocco fogs occur in the northern Adriatic Sea, along the W coast of Italy, and in the Golfo di Genova and the Golfe du Lion. Fog at Venezia has been known to continue for as long as 5 days.

The haze caused by African dust can affect the visibility just as intensely and abruptly as a dense fog. This dust is carried N from the desert area by storms moving E along the North African coast and is associated with the hot sirocco or other S winds. Dust storms are most intense in the strong winds ahead of a cold front. A dust storm seldom lasts for more than 12 hours at anyone place, although a low may cause dust storms for 3 or more days as it moves along its track. Generally the dust clears after the passage of the cold front. Dust storms are most common in May, but they can occur at any time of the year. Such dust may travel great distances N, but generally the extent of reduced visibility is limited to a belt 20 to 50 miles wide along the African coast.

Poor visibility is generally most common in winter and spring. Venezia has an average of 12 days a month with visibilities less than 2 miles in both February and December, while Napoli averages 10 days in April. The southern and eastern Mediterranean ports seldom show more than 3 days per month with poor visibility (less than 2 miles) during this period.

Currents

General

The following is a general discussion of surface circulation in the Mediterranean Sea. It should be carefully noted that current patterns change seasonally as wind patterns change. Local current patterns are altered as well when winds blow for a period of days from an other-than-usual direction, causing surface currents to change direction for a time or be increased beyond the normal rate until conditions return to normal.

Surface Atlantic Ocean water flows through the Strait of Gibraltar along the coast of Spain and France at mean rate of 0.5 knot, forming two surface features in the Alboran Sea. A jet of water moves from the strait along the coast of Spain, turns SE near 4°W, and passes between Alboran Island and Cape Tres Forcas before continuing NE. This surface current slows from about 2 knots in the Strait of Gibraltar to about 1 knot in the Alboran Sea. Southwest of the jet, a large gyre of water circulates clockwise, with speeds up to 0.5 knot. When low atmospheric pressure over the Mediterranean Sea results in a W wind, the force of the jet can double as the gyre decays and sometimes disappears. High pressure over the Mediterranean Sea weakens the jet and strengthens the gyre, which may develop a diameter of up to 50 miles.

Mediterranean Sea bottom water flows W along the Moroccan coast. In the Strait of Gibraltar, anticyclonic vorticity draws deep water up and over the sill into the Atlantic Ocean a few hours before high tide at Tarifa and maintains the Alboran anticyclonic gyre. Strong winds blowing from the French coast cool and evaporate surface waters which sink, forming Western Mediterranean bottom water that is also drawn up and over the Gibraltar Sill. The onset of the mistral winds in February causes particularly violent mixing in the Golfe du Lion off the coast of France. These winds supply energy to a cyclonic gyre in the Ligurian Sea; the gyre is predominantly maintained by thermal advection and salinity differences, as well as the Coriolis force. Surface water flows along the west coast of Corse; at Cap Corse, the N end of the island, this flow is joined by a current of equal strength flowing along the E coast of Corse. They merge and form the Ligurian Current, which then flows W along the Italian Riviera and the French Cote d'Azur. The mean surface flow is strongest off Nice, especially in a coastal band from 20 to 30 miles wide, where the mean rate is 0.4 to 0.6 knot. In the W approach to the Strait of Bonifacio, current speeds of 2.8 knots may occur when strong winds, tidal, and hydraulic currents all set in the same direction.

The main surface Atlantic Ocean flow in the Alboran Sea moves SE at a mean rate of 0.5 knot, and up to 2 knots during gales, until it approaches the coast of Algeria and increases to a mean rate of 0.75 knot. To the N of the Algerian Current large cyclonic (counterclockwise) circulations develop. To the S, anticyclonic (clockwise) gyres form. Atlantic Ocean water then flows E at a mean rate of 0.75 knot through the Sardegna Channel, where part of the water flows through the Strait of Sicilia into the E basin and another branch flows along the N coast of Sicilia into the Tyrrhenian Sea. The surface waters of the Tyrrhenian Sea generally flow in a cyclonic gyre. This cyclonic flow continues N along the W coast of Italy until it sets W and

then S along the E coast of Sardegna to complete the gyre. Weak countercurrents flow along the W coast of Italy from Genova S and along the E coast of Corse.

The general mean surface circulation is SE from the Strait of Sicilia into the Ionian Sea basin at a mean rate of 0.2 to 1 knot. Along the S coast of Sicilia the current is generally weak but increases with W winds. Strong S winds may cause the currents to flow NW and during gales may reach speeds up to 2 knots.

The Strait of Sicilia widens from W to E, forming a broad continental shelf which breaks off into a deeper abyssal plain near Malta. This allows the North Atlantic Ocean surface water flowing in a well-defined current along the N coast of Africa to spread out, meander, and lose its identity as the Algerian Current. The general weakening of circulation in the surface layer from W to E is a distinctive feature of the Mediterranean Sea. The weakened surface stream generally follows the coast of Libya. An anticyclonic feature in the Gulf of Sidra shunts the flow NE toward the coast of Cyrenaica and into the central Ionian Sea.

Surface circulation is generally cyclonic in the eastern Mediterranean Sea basin. Smaller cyclonic gyres in the Levantine Basin draw portions of the African North Atlantic Ocean stream N into the interior of the Levantine Basin. Cyclonic flow moves the remainder of the surface North Atlantic Ocean water E along the coast of Egypt. Before the Aswan High Dam was built, the spring flooding of the Nile River produced a NNE surface current with speeds up to 3.2 knots near the coast; since the completion of the Aswan High Dam, however, surface currents along the Egyptian coast rarely exceed 0.5 knot.

Surface flow generally continues N toward Turkey along the coasts of Lebanon nd Israel and then NE along the coast If Greece. Circulation in the Aegean Sea is complicated by the large number of islands in the area. There is a S flowing W boundary current which moves surface water through the Petalion Gulf and around the Peloponessus. The surface flow then moves N toward the Adriatic Sea. There is an anticyclonic gyre SW of the Peloponessus and a cyclonic gyre S of Otranto in the northern Ionian Sea. These smaller surface circulation features along with the Levantine Basin gyres may not always be expressed at the surface because of the variable wind field in the area.

The S limit of the Adriatic Sea is defined by the 39 mile-wide Strait of Otranto, where the water flow is further restricted by a sill across the strait at a depth of 745m. The Adriatic Sea is separated into two basins by the Palagruza Sill at a depth of 171m or less. The two basins are the South Adriatic Pit, located S of the Palagruza Sill, and the Jabuka Pit, located N of Palagruza Sill. The sill itself is dotted with rocks and islands. Water circulation in the Adriatic Sea, especially in the surface layer, is strongly influenced by these basins and sills.

The average depth of the N and middle Adriatic Sea is only 82m. The Adriatic Sea as a whole is rather shallow and is under the influence of environmental factors seasonally, including the wind field, an influx of fresh water, and surface air temperatures. During the winter, a strong SE wind (sirocco) prevails; however, the weather is quite changeable due to the frequent passage of cyclones and bursts of strong NE continental winds (boras). During the summer, the etesians (mistral) blow fairly constantly to the NW and increase the outflow of surface water.

The currents of the Adriatic Sea are characteristically slow. Circulation is cyclonic, with stronger currents along the W coast in the summer and along the E coast in the winter. During the fall and spring, the current intensities are nearly equal along both coasts. In the winter, an incoming NW current predominates, while in the summer, an outgoing SE current prevails. Environmental conditions may develop such that the incoming winter branch or the outgoing summer branch may be lacking.

There is a cyclonic cell under the influence of the Po River discharge in the northern Adriatic Sea. A little farther S the flow is anticyclonic. During the summer and winter, the Palagruza Sill separates the N and southern Adriatic current regime into two distinct cells. During the fall and spring, this flow separation is no longer apparent. Current speeds are small throughout the Adriatic Sea; the highest values are found in the Strait of Otranto. Under normal conditions, the average current velocity through the strait in summer is 0.7 knot and in winter is 0.35 knot, with a maximal velocity of 1.7 knots.

Strait of Gibraltar.—In the following discussion of tidal flow through the Strait of Gibraltar, all of the times mentioned are in reference to HW at Tarifa. Mediterranean Sea bottom water and surface Atlantic Ocean water are exchanged through the Strait of Gibraltar, which is on the average 201m deep, 6.2 miles wide, and 6.2 miles long. Water movement through the strait is controlled by global tides, strong winds, and barometric pressure over the Mediterranean Sea. The configuration of the strait itself influences the mean current regime. In the W part of the strait the cross section is triangular and the surface current is weak. The E cross section is deeply U-shaped; the surface current is shallow and sets strongly E. The net inward surface flow averages about 1 knot.

Two primary factors modify the mean current regime:

1. Ocean-generated tides.—Ocean-generated tides are periodic while atmospheric factors, such as local winds and pressure fields, are aperiodic. The ocean basin tides generate strong tidal streams in the strait; weak countercurrents run along the coasts. Local atmospheric conditions cause fluxes of water exchanged through the strait to vary.
2. Complex nonlinear processes.—Complex nonlinear processes cause drastic changes in the instantaneous flow regime to the E of the sill. At about HW at Tarifa, a current front is generated near the sill which propagates toward the east into the Alboran Sea at a velocity of 3 to 4 knots. Slicks or tide rips mark the passage of the front.

The ocean-generated tide is semidiurnal with a small diurnal component. The amplitude is greater than 2m at the western entrance to the strait than in the center, 1.3m at Tarifa, and 1.0m at the eastern end. The total current (mean plus tidal) reverses at the surface during a semidiurnal tidal cycle. The maximum value for outflow occurs at 3 to 4 hours before HW at Tarifa; the maximum value for inflow occurs about 3 hours after HW at Tarifa. Over the sill, the current sets E after a sudden reversal at about 30 minutes after HW at Tarifa, with a change in current speed of about 3 knots. To the E of the sill the surface current is higher (3.5 knots) than to the W of the sill (2 knots) because the surface current is more shallow and the strait is more constricting. At the surface, a line of eddies forms along the position of the sill as the current flows outward from 5 hours to 30 minutes before HW at Tarifa. At about 45 minutes before HW at Tarifa surface temperatures drop and salinity values reach a minimum as intermediate Mediterranean Sea

water is brought near the surface. Just after the surface tidal current reverses to an inflow, the current speed increases by about 3 knots in 30 minutes.

The current pattern is different at the E entrance of the strait near Gibraltar. Strong currents flow in the surface layer down to a depth of 103m and do not reverse with the tide at the surface. The minimum inflow current occurs at about 2 hours 30 minutes after HW at Tarifa; the maximum inflow current occurs at about 6 hours after HW at Tarifa. In the middle of the strait the maximum current speeds at springs are higher than 3 knots. In the E part of the strait the currents have a N component so that the surface water tends to rotate in a clockwise direction.

The winds, which may be violent at times, modify the flow through the Strait of Gibraltar. During the summer, the wind generally blows from the E, at times up to 35 knots for a week, which causes the surface flow to increase up to 5 knots in the downwind direction and decrease, or even reverse, in the upper 10 to 15m in the upwind direction.

Barometric pressure as well has an effect on the flow through the strait. High pressure over the western Mediterranean Sea causes a decrease in the inflow; low pressure causes an increase, especially since W winds generally blow when atmospheric pressure is low over the W basin.

Strait of Sicilia.—Levantine and surface water from the E and W basins flow in opposite directions through the Strait of Sicilia under normal wind conditions.

The bottom topography is complicated and directly influences the flow patterns at the bottom and somewhat at the surface, especially over Adventure Bank.A ridge divides the strait into two channels, one 365m deep oriented towards the NNW, and the other 430m deep oriented directly towards the N.

The Atlantic Ocean surface water flows E along the N coast of Africa as the Algeria Current, through the Strait of Sicilia, and into the E basin. The surface flow is strongest along the coast of Tunisia. As the surface North Atlantic Ocean water moves eastward it slows and spreads to fill the width of the strait. Weak countercurrents form near Malta and flow along the coast of Sicilia.

The surface flow through the strait is stronger in the summer than in the winter; it averages 0.5 to 0.75 knot throughout the year, but the current may increase to 2 knots during WNW gales in the winter and, in rare cases, to 3 to 4 knots during a strong NE wind. During the spring and fall, strong E winds may cause a short-term reversal of the flow. Near Malta, the shallow Sicilian shelf falls away sharply into the Levantine Basin. A strong front, the Maltese Front, forms along this shelf break.

Strait of Messina.—The Strait of Messina is very narrow; it is 2.2 nautical miles wide at the narrowest point, which is the location of a shallow sill, 120m deep, positioned between Punta Pezzo on the Italian coast and Ganzirri on the Sicilian coast. The sea floor falls away on either side of the sill to submarine valleys with a steeper gradient to the N than to the S.

There is an amphidromic point in the strait where tidal heights are zero. To the south in the Ionian Sea, tidal heights are 0.1m,; to the north in the Tyrrhenian Sea, tidal heights are 0.2m. This slope in sea level, along with the shallow sill and narrow constrictions of the Strait of Messina, drives strong tidal currents (averaging about 4.3 knots at springs and 2.5 knots at neaps) through the Strait of Messina. Countercurrents flow along the coasts as the Strait of Messina widens to the S.

Where the Strait of Messina bends, convergence zones develop, causing the generation of strong shear zones. These zones are similar to an estuarine tidal bore and are called "tagli" by local fishermen. The tagli appear as zones of increased surface roughness which can be decreased by opposing winds or increased by spring tides. The tagli are stronger when the tidal current flows N. These convergences also give rise to turbulent eddies; the large ones are cyclonic and develop off Capo Peloro, Scilla, and near the harbor entrance of Messina. Smaller anticyclonic eddies also form in the Strait of Messina.

Corse Channel.—The Corse Channel, located between the coasts of Tuscany and Corse, separates the Tyrrhenian Sea and the Ligurian Sea. The main channel lies between Corse and the islands of the Tuscan Archipelago (Elba, Capraia, Pianosa, etc.).

A surface current flows NNW, with an average speed of 0.5 knots through the main channel between Corse and the islands of Pianosa, Montecristo, and Capraia. With N winds, the current may be as high as 1.8 knots. A countercurrent forms along the coast of Corse. A current flowing W between Elba and Capraia splits into a N component and a S component; a cyclonic eddy is located where the E current meets the N current.

Strait of Otranto.—The Strait of Otranto is the southern limit of the Adriatic Sea; it is 39 nautical miles wide, and there is a sill across the entrance of the strait 745m deep.

Surface currents to a depth of 43m in the Adriatic Sea are generally weak but increase through the Strait of Otranto. Surface current speeds are controlled by meteorological factors and are seasonal. During the summer an outgoing SE current through the strait prevails, especially along the W coast, as part of a general cyclonic circulation pattern. Along the Italian coast, current speeds range from 0.4 knot to 1.5 knots. Along the Albanian coast current speeds range from 0.4 knot in open waters to 0.8 knot along the coast.

Deep eastern Mediterranean Sea water is formed nearly entirely in the vicinity of the Strait of Otranto. The exchange of water between the Adriatic Sea and the Ionian Sea may be faster than in the rest of the basin.

Near Cap Colonne and Punta Alice surface flow strongly constricts because of cyclonic circulation which produces currents of about 0.5 knot. During the winter, surface currents flow NW along the E coast of the Adriatic Sea. In the summer the currents flow SE along the W coast. The current flow rate through the strait reaches its maximum value in August. The yearly average surface current velocity through the strait is 0.8 knot, with a maximum velocity of 1.7 knots under normal conditions. During the summer, the velocity averages 0.7 knot; during the winter, it averages 0.4 knot. When tidal and nontidal currents set in the same direction, surface current speeds may increase to 3 knots along the Italian coast and up to 4 knots along the Albanian coast.

Fishing Areas

In the N and S approaches to the Strait of Gibraltar, nets used to catch bluefin tuna may be moored, as follows:

1. March through September—in the N approaches.
2. June through December—in the S approaches.

The nets are marked by cardinal lighted buoys and are fitted with radar reflectors.

Navigational Information

Electronic Navigational Communications

For information on the International Maritime Satellite Organization (INMARSAT), the Global Maritime Distress and Safety System (GMDSS(), the Global Positioning System (GPS), and SafetyNET, see **North Atlantic Ocean—Navigational Information**.

International Ship and Port Facility (ISPS) Code

The ISPS Code applies to ships on international voyages and port facilities directly interfacing with these ships. All vessels should fully comply with the provisions of Chapter XI-Part 2 of the SOLAS Convention and Part A of the ISPS Code. Vessels shall demonstrate that appropriate maritime security measures are in place according to ISPS Code regulations. For further information, see **North Atlantic Ocean—Navigational Information**.

Enroute Volumes

Pub. 131, Sailing Directions (Enroute) Western Mediterranean

Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

Pollution

Single-hull Tanker Phase-out Schedule

In accordance with Regulation 13G of Annex I of the MARPOL Convention, single-hull tankers should be phased out or converted to a double-hull configuration according to a schedule based on their year of delivery. These requirements are designed to reduce the risk of oil spills from tankers involved in low-energy collisions or groundings. For further information, see **North Atlantic Ocean—Pollution—Single Hull Tanker Phase-out Schedule**.

Ballast Water Management

International guidelines have been adopted by the IMO to prevent the introduction of unwanted aquatic organisms and pathogens from ships' ballast water and sediment discharge into marine ecosystems. The guidelines include the retention of ballast water onboard, ballast exchange at sea, ballast management aimed at preventing or minimizing the uptake of contaminated water or sediment, and the discharge of ballast ashore. Particular attention is drawn to the hazards associated with ballast exchange at sea. For further information, see **North Atlantic Ocean—Pollution—Ballast Water Management**.

MARPOL Special Areas

MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

The sea area of the Mediterranean Sea proper, including all gulfs and seas within it. is a MARPOL Special Area It is bounded on the W by the Strait of Gibraltar at the meridian of 5°36'E. The boundary between the Mediterranean Sea and the Black Sea is the parallel of 41°00'N.

For further information, see **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Mediterranean Sea—Garbage Disposal

Due to the fact that the Mediterranean Sea has been declared a MARPOL Special Area, disposal of the following types of garbage into the Mediterranean Sea is prohibited:

1. All plastic including, but not limited to, synthetic ropes, synthetic fishing nets, plastic garbage bags, and incinerator ashes from plastic products which may contain toxic or heavy metal residues.
2. All other garbage including paper products, rags, glass, metal, bottles, crockery, dunnage, and lining and packing materials.

Food waste may be disposed of at sea provided the disposal is carried out as far as practicable from land. Disposal is prohibited within 12 miles of the nearest land.

All ships are required to dispose of their garbage at shore reception facilities. When reception facilities are unavailable, garbage is to be retained on board until it can either be disposed of onshore or in accordance with the provisions of MARPOL Annex V outside of the Mediterranean Sea.

Regulations

Schengen Agreement

The aim of the Schengen Agreement is to create free movement for persons within the European Union (EU) and to intensify the fight against cross-border crime. In practice, the Schengen Agreement means that personal checks on journeys between the member states will cease, while the external frontier controls will be intensified, i.e. towards countries that are not signatories to the Schengen Agreement. For further information, see **North Atlantic Ocean—Regulations—Schengen Agreement**.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The participating EU countries in the Mediterranean Sea are, as follows:

1. Cyprus.
2. France.
3. Greece.
4. Italy.
5. Malta.
6. Slovenia.
7. Spain.

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR)

The NIR of the PMoU has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the Paris MoU region.

For further information, see **North Atlantic Ocean—Regulations—Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR).**

European Union (EU) Advanced Manifest Rule

All cargo vessels sailing from a non-EU port to an EU port must submit an Entry Summary Declaration (ENS) to the first port of call in the EU 24 hours prior to the cargo being loaded. for further information, see **North Atlantic Ocean—European Union (EU) Advanced Manifest Rule.**

Routes

The route information in this section considers routes to and from selected ports in the Mediterranean Sea.

In general, these routes are as direct as safe navigation permits. However, in some instances, a divergence is made to avoid dangers to navigation, to take advantage of favorable currents, or to minimize the effects of adverse currents. It should not be inferred that recommendations in this chapter necessarily represent adopted or established sea lanes. Routes between ports consist of a series of rhumb lines unless stated otherwise. When a route may be followed in either direction the reverse route is not described.

Detailed information on these routes can be found in the Appendix—Routes Across the Mediterranean Sea.

Ship Reporting System

GIBREP

GIBREP, a mandatory Vessel Traffic Service, is in operation in the Strait of Gibraltar, including the TSS and Inshore Traffic Zones. The reporting system covers the area between longitudes 5°58'W and 5°15'W. Further information can be found in Pub. 131, Sailing Directions (Enroute) Western Mediterranean (paragraph 1.1).

SURNAV

SURNAV is a system designed to monitor the movements and condition of vessels carrying hydrocarbons, dangerous cargo, or noxious substances navigating in the approaches to the French coasts of the North Sea, the English Channel, the Atlantic Ocean, and the Mediterranean Sea. For further information, see **France—Ship Reporting System—SURNAV**.

Bonifacio Strait Reporting System (BONIFREP)

The Strait of Bonifacio borders the S side of Corsica and separates it from Sardinia, a province of Italy. The Bonifacio Strait Reporting System (BONIFREP) has been established within the Strait of Bonifacio and its E and W approaches. The system is mandatory for all vessels of 300 grt and over. Further information can be found in Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Strait of Messina Voluntary Reporting System

The Strait of Messina separates the NE extremity of Sicily from the SW extremity of the Italian mainland. The Strait of Messina Voluntary Reporting System has been established in this area. The system is mandatory for all vessels of 300 grt and over. Further information can be found in Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Italian Automated Search and Rescue System (ARES)

Vessels transiting the Mediterranean are encouraged to participate in the Italian Automated Search and Rescue System. The system is aimed at a coordinated efficiency of search and rescue operations. Automated Search and Rescue (ARES) messages will be accepted free of charge by Italian coast radio stations. For further information. see **Italy—Ship Reporting System—Italian Automated Search and Rescue System (ARES**).

Adriatic Traffic Reporting System (ADRIREP)

The Adriatic Traffic Reporting System (ADRIREP) is a mandatory reporting system under SOLAS Regulation V/11. For further information, see **Italy—Ship Reporting System—Adriatic Ship Reporting System (ADRIREP)**.

Israel

Vessels bound for Israeli ports are required to report certain information through the Israeli navy to the Israeli Ministry of Transport (IMOT) when 100 miles off the Israeli coast (25 miles for small craft). For further information, see **Israel—Ship Reporting System.**

Tides

The tide in the Mediterranean Sea is typically semidiurnal (two high and two low waters each tidal day, with little or no inequality between the heights of successive high or successive low waters) except for parts of the Adriatic Sea where the tide is mixed (two high and two low waters each day, with marked inequality between successive high and successive low waters) or where the tide at times becomes diurnal (one high and one low water each day). There is an amphidromic point (where the tidal range is zero) in the Strait of Messina, the Strait of Sicilia, and the Adriatic Sea.

The mean and spring tide ranges are small and average less than 0.6m. In the Strait of Gibraltar, the range of the tide is about 0.9m. The range decreases farther E until, along the coast of Spain near Cartagena, in the Islas Balereas, and along the coast of Algeria from Tenes to Djidjelli, there is very little tidal range at all. Elsewhere the range is less than 0.3m., except in the Gulf of Gabes, where the range increases to nearly 1.8m at Gabes. The tidal range in the Mediterranean Sea and the Ionian Sea is only a few centimeters.

Meteorological conditions may influence water level heights more than astronomical forces. In the western Mediterranean Sea near Sicilia, sudden strong winds (marrobbio) may increase the water level about 0.9m above mean sea level; rapid changes of 0.3m may occur within a few minutes and cause problems for small boats in the area. In the central Mediterranean Sea, from February through April, the average sea surface height may be 0.5m below mean sea level. In the Adriatic Sea, a strong S or SE wind at Venezia will raise the water level 1.8m. Offshore winds frequently lower water levels along the E shore of the Adriatic Sea and along the leeward side of the islands in that region.

Appendix—Routes Across the Mediterranean Sea

In general the routes in the Mediterranean Sea are as direct as safe navigation permits. However, in certain instances a divergence is made from the direct track to take advantage of favorable currents, to obtain shelter by passing to the leeward of islands, and to minimize the affect of adverse currents. The additional mileage involved in the deviations from the direct route duly compensates the navigator in time and fuel saved. It it not inferred that recommendations in this section are the shortest distances between ports and/or that they necessarily represent adopted or established sea lanes.

Because of the great number of ports in the Mediterranean Sea, only a few selected routes are described. When navigating between ports in geographical proximity of these routes, vessels may refer to the primary route as directly as safe navigation permits; otherwise they can proceed directly by the shortest route.

Routes are described progressively E from the Strait of Gibraltar, as follows:

1. The Strait of Gibraltar to ports on the E coast of Spain, the S coast of France, and the W coast of Italy.
2. The Strait of Gibraltar to ports on the coast of North Africa, Algeria, Malta, Libya, and Egypt.
3. The Strait of Gibraltar to ports in the Adriatic Sea via Stretto di Messina or S of Sicilia (Sicily).
4. The Strait of Gibraltar to ports in the Aegean Sea and the Dardanelles.
5. The Strait of Gibraltar to ports in the S coast of Turkey, Lebanon, and Israel.
6. Spanish and French ports to the Aegean Sea area and Bur Said (Port Said).
7. Ports in the Adriatic Sea to the Aegean Sea via Dhiorix Karinthou or Dhiekplous Elajonisonn-Stretto di Messina to ports in the Aegean Sea via Dhiorix Korinthou.
8. Bur Said to ports in the Aegean Sea and the Dardanelles.

1. The Strait of Gibraltar to ports on the E coast of Spain, the S coast of France, and the W coast of Italy

Strait of Gibraltar to Barcelona, Spain; Marseilles, France; and Genova and Livorno, Italy.—After proceeding through the Strait of Gibraltar to a position 6.5 miles S of Europa Point, steer a direct course to a position 10 miles S of Cabo de Gata, taking advantage of the E current that sets from the strait; the; steer to a position 10 miles SE of Cabo de Palos, and then to a position about 15.5 miles SE of Cabo de la Nao. From the latter position steer a course to the harbor of Barcelona.

Vessels bound for Marseille steer a direct course from the position off Cabo de Palos to a position 1 mile W of lIe du Planier, and proceed to the harbor.

Vessels bound for Genova depart from the Barcelona track off Cabo de Palos and steer to a position about 3 miles NW of Isla Conejera and then steer direct to destination.

Vessels bound for Livorno depart from the Genova track off Isla Conejera; then steer to a position 10 miles NW of Isla Dragonera, and then direct to destination; passing close S of Isola di Gorgona.

When strong NW winds are blowing, especially the mistral which is most frequent during the winter months, vessels bound for Marseille and Genova sometimes prefer to continue along the spanish coast to Cabo San Sebastian, and then steer to destination.

During the summer months some navigators bound for Genova or Livorno prefer to continue E from Cabo de Gata to a position 3 miles S of Isla del Aire, passing S of the Balearic Islands, and then direct to destination; in the case of Livorno they join the above-mentioned route N of Cap Corse, Corse (Corsica). Strong E currents have been reported along this route.

Barcelona to the Strait of Gibraltar.—It has been reported that a SW current sets closely along the E coast of Spain and continues W along the S coast of Spain as far as Europa Point. Westbound vessels taking the following route will not only benefit from this current but will also avoid the adverse current that sets strongly through the Strait of Gibraltar.

After clearing the harbor of Barcelona, steer S to a position about 2 miles ESE of Cabo de la Nao, then direct to a position about 5 miles SE of Cabo de Palos, and then steer SW to a position about 5 miles S of Cabo de Gata. Follow the S coast of Spain at a distance of 3 to 5 miles offshore to a position about 9 miles SE of Malaga and then steer SW to a position about 2 miles S of Europa Point. From Europa Point, steer to a position about l.5 miles S of Isla de Tarifa, taking care to avoid La Perla, and then proceed to the junction point of the Strait of Gibraltar. Vessels bound for English Channel ports depart from this track off Isla de Tarifa.

Marseille to the Strait of Gibraltar.—Proceed to the W of Ile du Planier; then steer a direct course to a position 5 miles SE of Cabo de Palos; and then proceed to destination as directed in the route from Barcelona.

Genova to the Strait of Gibraltar.—Follow the reverse of the northbound route N of the Balearic Islands to a position 3 miles NW of Isla Conejera; then steer to a position 5 miles SE of Cabo de Palos and then proceed to destination as directed in the **Barcelona to the Strait of Gibraltar** route.

Livorno to the Strait of Gibraltar.—Follow the reverse of the northbound route N of the Balearic Islands to a position 3 miles NW of Isla Conejera and then proceed as directed in the **Genova to the Strait of Gibraltar** route.

The Strait of Gibraltar to Napoli.—Vessels bound for Napoli proceed as directed previously to a position 6.5 miles S of Europa Point and then continue E to a position 15 miles S of Cabo de Gata. From the latter position steer a direct course to a position 7 miles SSE of Capo Spartivento, Sardegna (Sardinia) and then steer to Golfo di Napoli and destination.

Napoli to the Strait of Gibraltar.—Follow the reverse of the **Strait of Gibraltar to Napoli** route as far as the position S of Capo Spartivento, then steer a direct course to a position 5 miles S of Cabo de Gata, and continue to destination as directed in the Barcelona to the Strait of Gibraltar route.

The Strait of Gibraltar to Messina, Sicilia.—Proceed as directed in the **Strait of Gibraltar to Napoli** route to the position S of Cabo de Gata and then steer to a position about 31 miles N of lIe de la Galite. From the latter position, steer a course to a position 5 miles N of Capo San Vito, Sicilia (Sicily), and then steer to a position 3 miles NE of Capo Rasocolmo, passing about 3 miles S of Isola Vulcano. Pass through the Stretto di Messina as directly as safe navigation permits and proceed to destination.

This route leads about 15.5 miles N of the reported obstruction located NNE of lIe de la Galite and passes about 21 miles N of Keith Reef. The current in the vicinity of Skerki Channel and Skerki Bank is variable in direction and strength. The current generally sets ESE; during NW winds it has been observed to attain a rate of 3 to 4 knots. However, on occasions, the current has been found to be setting between NW and NNW. Navigators must take great care when passing this area.

Navigating through the Stretto di Messina, although not difficult, requires utmost diligence as the tidal currents are very strong.

Messina to the Strait of Gibraltar.—Westbound vessels steer the reverse of the **Strait of Gibraltar to Messina** route to the position N of lIe de la Galite; then steer to a position 5 miles S of Cabo de Gata; and then follow the Spanish coast to destination as directed in the **Barcelona to the Strait of Gibraltar** route.

2. The Strait of Gibraltar to ports on the coast of North Africa, Algeria, Malta, Libya, and Egypt.

The Strait of Gibraltar to Oran, Algeria.—Vessels traversing in the middle of the Strait of Gibraltar generally experience an E current, the rate of which is largely influenced by the direction of the wind. Inshore of this E current, the currents are tidal.

Vessels bound for Oran steer a course through strait to a position about 5 miles N of Punta Almina, Morocco; then steer a direct course to a position 3 miles N of Cap Falcon, passing about 2 miles S of Isla del Alboran; and then proceed to destination.

Oran to the Strait of Gibraltar.—After clearing the harbor and reaching a position about l.5 miles N of Cap Falcon, proceed direct to a position about 2.5 miles N of Punta Almina, passing about 4 miles S of Isla del Alboran, and then along the coast to a position 1.5 miles N of Punta Cires, being guided by the condition of the tidal currents. From the last position, proceed to the junction point in the Strait of Gibraltar.

The Strait of Gibraltar to North African ports (continued).—After passing through the strait to a position 6.5 miles S of Europa Point, steer a course to a position about 2.5 miles N of Cap Bengut, about 8 miles N of Cap Tenes, and 3 miles N of Cap Caxine. From Cap Bengut steer to a position 4.5 miles N of Cap Serrat, passing about 3 miles N of Cap Bougaroun; then round Ras Enghela at a distance of 2 miles, pass between Iles Cani and Cap Zebib, and continue to a position at least 3 miles N of Cap Bon. Vessels bound for Valletta steer from the latter position to pass 2 miles N of Punta Spadillo, on Isola di Pantelleria, then pass about 2 miles N of the island of Gozo, and then proceed to destination, taking care to avoid Secca il Baida (Bells Bank).

Vessels bound for Tarabulus round the Cap Bon at a distance of at least 3 miles and proceed direct to destination.

Vessels bound for Al Iskandariyah (Alexandria) steer a great circle course from 2 miles N of Punta Spadillo to destination.

Vessels bound for Bur Said steer a great circle course from Cap Bon to a position about 15 miles NNE of Damietta Light and then proceed to destination as directly as safe navigation permits.

Bur Said, Al Iskandariyah, Tarabulus, and Valletta to the Strait of Gibraltar.—Westbound vessels from Bur Said proceed to a position about 13 miles NNE of Damietta Light and then steer a great circle course to a position 3 miles N of Iles Cani, taking care when passing S of Graham Shoal and Pantelleria Bank. From this position, steer a rhumb line course to a position 5 miles N of Ile de la Galite, then a direct course to a position 5 miles S of Cabo de Gata, and then onward along the Spanish coast to destination as directed in the **Barcelona to the Strait of Gibraltar** route.

From Al Iskandariyah, steer a great circle course to the position N of Iles Cani, and then proceed as directed in the above-mentioned route.

From Tarabulus, steer the reverse of the eastbound route to a position off Cape Bon, then to a position 3 miles N of Iles Cani, and then to destination as directed in the route from Bur Said.

From Valletta steer the reverse of the eastbound route as far as Punta Spadillo, then steer to a position 3 miles N of Iles Cani, and continue W as directed in the route from Bur Said.

3. The Strait of Gibraltar to ports in the Adriatic Sea via Stretto di Messina or S of Sicilia (Sicily).

Vessels bound for ports in the Adriatic Sea have the choice of two routes. The principal route through the Stretto di Messina is about 25 miles shorter than the route S of Sicilia; however, the current is favorably stronger along the North African coast and in the Strait of Sicily than along the route N of Sicilia and through the Stretto di Messina.

Via the Stretto di Messina.—Follow the eastbound route to Messina as far as the Stretto di Messina. Pass through the Stretto di Messina as directly as prudent navigation permits, having due regard for the existing tidal currents, then round Cape dell' Armi at a distance of about 2 miles, and steer to a position 2.5 miles S of Capo Spartivento. From the latter position steer to a position about 4 miles SE of Capo Santa Maria di Leuca and then to a position about 2 miles E of Capo d'Otranto. Then proceed N about 12 miles and then steer a direct course to Venezia, giving the coast a berth of at least 5 miles as far as Brindisi.

Vessels bound to Trieste depart from the track leading to Venezia at a position about 4 miles WSW of Otocic Jabuka, then steer to a position about 6 miles WSW of Rovinj, proceeding N, and after rounding Punta Salvore at a distance of 1.5 miles, enter the Gulf of Trieste and proceed to destination.

Via S of Sicilia.—Follow the **Strait of Gibraltar to Bur Said** eastbound route as far as Cap Bon and then steer to a position about 3 miles S of Capo delle Correnti. Then steer to a position about 3 miles SSE of Capo Passero and then steer to a position about 4, miles SE of Capo Santa Maria di Leuca. From the latter position proceed to destination as directed in the above-mentioned route.

Caution.—Navigation in the Gulf of Trieste within coastal waters of Slovenia is limited to vessels with maximum draft of 14m and maximum speed of 10 knots.

Large tankers (over 20,000 grt), with drafts greater than 15m and speeds greater than 12 knots should remain at a distance of at least 2 miles outside the route from Rt Savudrija to Luker Koper Anchorage.

Venezia, Trieste, and Adriatic Sea ports to the Strait of Gibraltar.—Proceed in reverse of the **Via the Stretto di Messina** route and then proceed to destination as directed in the route from Messina.

4. The Strait of Gibraltar to ports in the Aegean Sea and the Dardanelles.

Follow the Strait of Gibraltar to the Adriatic Sea (via S of Sicilia) route as far as the position S of Capo delle Correnti. Then steer to a position 1 mile S of Akra Tainaron and pass through Dhiekpious Elafonisou to a position off Akra Males. From the latter position, if bound for Piraievs, pass to the W of Nisos Parapola, then steer 1.5 miles E of Akra Zourva and then shape a course to the destination.

The currents in the vicinity of Nisos Parapola are often strong and the set is uncertain; caution is necessary during thick weather.

Vessels bound for Thessalonki, Izmir, and the Dardanelles proceed from off Akra Malea through Porthomos Keas and Porthmos Kafireos to a position about 2 miles NW of Akra Fassa. If bound for Thessaloniki, round Akra Kafirevs, then pass close W of Nisos Prasoudha, taking care to avoid Nisos Glaros (at night, it is recommended to pass E of Nisos Prasoudha), and then steer for the entrance of Porthmos Skopelou between Nisos Skopelos and Nisos Skiathos. After passing through Porthmos Skopelou, proceed NW into Thermaikos Kolpos to a position about 4 miles WSW of Akra Epanomi. Then proceed N to the entrance of Kolpos Thesssalonikis and steer to destination as directly as safe navigation permits, giving due regard to the charted dangers.

Some navigators prefer to make passage through Nisoi Voriai Sporadhes by using Prthmos Ilioddhromias, between Nisos Iliodhromia and Nisos Skopelos, as the distance is several miles shorter, but the channel is narrow and the two islets located in it constitute a danger at night.

If bound for Izmir, vessels depart from the route to Thessaloniki at the position off Akra Fassa and then steer to pass about midway between Nisos Psara and Nisos Khios to a position about 2 miles NW of Akra Milaina. Then steer northward of Nisos Khios and the peninsula of Karaburun and enter Izmir Korfezi. Pass to the E of Uzun Ada and proceed to destination.

Vessels bound for Izmir sometimes proceed via Khios Strait. A course is steered from Akra Malea to a position 2 miles SE of Nisos Serifors, giving due regard to the strong and uncertain currents in the vicinity of Nisos Falkonera. Then steer to a position in Porthmos Mikonou between Nisos Mikonos and Nisos Tinos; then steer to a position about 2 miles SE of Nisos Venetiko, off the S extremity of Nisos Khios. Enter Khios Strait by passing close W of Ferner Ada, then pass through Egri-Liman Channel, on the E side of Nisoi Oinousai, and round the peninsula of Karaburun to the entrance of Izmir Korfezi. Proceed to destination as directed in the above-mentioned route.

There is no difference in distance between the latter two routes. The route via Khios Strait has the advantage of avoiding the strong adverse current encountered in Porthmos Keas and Porthmos Kafireos as well as having, during S winds, a favorable current in the strait. However, caution must be used when navigating in the vicinity of Nisoi Oinousai as the charted soundings in this area are not in sufficient detail.

Vessels bound for the Dardanelles continue NE from the position NW of Akra Fassa to a position about 4 miles WNW of Presa Adalari. Then a course is laid to the entrance of the Dardanelles. The outflow of water from the Dardanelles forms strong currents setting to the W and SW in the approaches of the Dardanelles. Great care must be taken when navigating in this vicinity.

Piraievs, Thessalonki, Izmir, and the Dardanelles to the Strait of Gibraltar.—Proceed in reverse of the eastbound route (in the case of Izmir, N of Nisos Khios) to a position S of Akra Tainaron. Then steer to a position about 65 miles SSW of Capo delle Correnti, where the westbound track from Bur Said is joined, and continue W as directed in the route from Bur Said.

5. The Strait of Gibraltar to ports in the S coast of Turkey, Lebanon, and Israel.

Vessels bound to any of these ports have a common track as far as 3 miles S of Capo delle Correnti as directed in the Strait of Gibraltar to the Adriatic Sea (via S of Sicilia) route.

The Strait of Gibraltar to Iskenderun.—Proceed from the position off Capo delle Correnti to 3 miles S of Nisos Avgo in Dhiekplous Kithiron. Continue E to a position 2.5 miles N of Nisos Saria, passing between Nisos Karavonisia and Nisos Avgo in the E part of Kritikon Pelagos. Steer through Stenon Karpathou to a position 5 miles SSW of Prasonisi, Nisos Rodhos, then proceed E to pass a position 5 miles S of Anamur Bumu, and then continue E to Iskenderun Korfezi and destination.

Iskenderun to the Strait of Gibraltar.—Proceed in reverse of the eastbound route to a position S of Nisos Avgo, then steer to a position about 6.5 miles SSW of Capo delle Correnti, where the westbound track from Bur Said to the Strait of Gibraltar is joined. Then continue to destination as directed in the route from Bur Said.

The Strait of Gibraltar to Bayrut (Beirut).—Steer from the position 3 miles S of Capo delle Correnti to a position 2 miles N of Akra Spatha (Crete) and then steer E to a position 2.5 miles N of Nisos Paximadha. From the latter position, steer a direct course to the approaches of Bayrut, passing through Kaso Strait and about 2.5 miles S of Nisos Kasos.

Bayrut (Beirut) to the Strait of Gibraltar.—Proceed in reverse of the Strait of Gibraltar to Bayrut (Beirut) route to a position N of Akra Spatha, then steer to a position about 6.5 miles SSW of Capo delle Correnti, and then proceed to destination as directed in the Strait of Gibraltar to Iskenderun route.

The Strait of Gibraltar to Tel Aviv-Yavo.—Steer a direct rhumb line course from the position S of Capo delle Correnti to destination, passing S of Nisos Gavdhos.

Tel Aviv-Yafo to the Strait of Gibraltar.—Steer a rhumb line course to a position about 6.5 miles SSW of Capo delle Correnti, then proceed to destination as directed in the **Iskenderun to the Strait of Gibraltar** route.

6. Spanish and French ports to the Aegean Sea area and Bur Said (Port Said).

The route from Barcelona passes S of Sicilia; the route from Marseille passes through the Stretto di Messina.

Barcelona to Bur Said and the Aegean Sea.—After clearing the harbor, steer a direct course to pass 4 miles S of Isla Toro, off the S coast of Sardegna, and then proceed to a position about 7 miles SSE of Capo Spartivento. From the latter position, steer to pass N of Keith Reef and Sylvia Knoll to a position 9 miles SSW of Capo Granitola, having due regard for the currents in the Strait of Sicily. Follow the S coast of Sicilia to a position 9 miles SSW of Capo delle Correnti, then steer a great circle course to a position 13 miles NNE of Damietta Light, and then proceed to destination. If bound for ports in the Aegean Sea, follow the S coast of Sicilia to a position 3 miles S of Capo delle Correnti and continue E as directed in the **Strait of Gibraltar to the Aegean Se**a route.

Bur Said and the Aegean Sea to Barcelona.—Proceed as directed on the westbound tracks from the respective ports to a position S of Capo delle Correnti, then proceed direct to a position 9 miles SSW of Capo Granitola, and continue to destination in reverse of the directions in the **Barcelona to Bur Said and the Aegean Sea** route.

Marseille to ports in the Aegean Sea and Bur Said.—This route passes through the Strait of Bonifacio. After leaving the approaches of the harbor, proceed between Ile du Planier and Ile Maire to a position about 2 miles W of He Riou, then steer to a position about 3 miles S of Les Moines, off the S coast of Corse (Corsica). Steer as directly as safe navigation permits through the Strait of Bonifacio via Bocca Grande Channel to a position 1.5 miles NE of Isla La Presa. Then proceed directly to the Stretto di Messina, passing between Isola Panaria and Isola Salina. Utmost caution must be taken to avoid Secca del Capo (an 8.2m shoal) in approaching Isola Panaria. Pass through the Stretto di Messina, having due regard for the strong tidal currents, to a position 3 miles S of Capo dell' Armi. From the latter position, if bound for ports in the Aegean Sea, steer directly to a position 1 mile S of Akra Tainaron, and proceed to respective destinations as directed in the **Barcelona to Bur Said and the Aegean Sea** route.

If bound for Bur Said, depart from the above-mentioned track off Capo dell' Armi and steer a rhumb line course to a position 13 miles NNE of Damietta Light, passing S of Nisos Gavdhos, and then to destination.

7. Ports in the Adriatic Sea to the Aegean Sea via Dhiorix Karinthou or Dhiekplous Elajonisonn-Stretto di Messina to ports in the Aegean Sea via Dhiorix Korinthou.

Vessels that are able to transit Dhiorix Korinthou (Corinth Canal), will save a substantial distance by navigating the canal route from ports in the Adriatic Sea, or Stretto di Messina and ports N and W to ports in the Aegean Sea and Black Sea.

The Adriatic Sea through Dhiorix Korinthou (Corinth Canal).—After passing the Strait of Otranto to a position off Capo d'Otranto, continue S to a position about 1.5 miles SW of Akra Doukaton, Nisos Levkas. Pass between Nisos Levkas and Nisos Kefallinia, then N and E of Nisos Ithaki to a position 1.5 miles SW of Nisos Oxia, and then proceed through Patraikos Kolpos and Korinthiakos Kolpos and enter Ormos Korinthou. After making the canal transit, vessels bound for Piraievs pass close S to Nisos Salamis, taking care to avoid the reported shoal water off Akra Kokhi, and then to destination.

Vessels bound for Thessaloniki, Izmir, and the Dardanelles pass between Nisos Salamis and Nisidhes Eleousai and enter Saronikos Kolpos. Then steer SE to the S approaches of Porthmos Keas, passing S of Nisos Fleves and Nisis Patroklou, and join the eastbound track from the Strait of Gibraltar to respective destination.

The Adriatic Sea to Aegean Sea ports via Dhiekplous Elafonisou (Corinth Canal).—Proceed SSE from the posiition off Capo d'Otranto to a position 6.5 miles WSW of Akra Yerogombos, Nisis Kvelling. Then continue SSE to a position 5 miles SW of Nisos Sapientza, passing E of Nisidhes Strofadhes, and then steer to a position about 1 mile S of Akra Tainaron. From the latter position, proceed to respective destination as directed in the eastbound route from the Strait of Gibraltar.

When approaching Akra Tainaron care must be taken not to come too close to Nisos Karavi.

The Stretto di Messina to the Aegean Sea via Dhiorix Korinthou (Corinth Canal).—Upon arriving at a position 2.5 miles S of Capo Spartivento, steer to a position about 2 miles N of Akra Skinari, Nisos Zakinthos. Then proceed NE to a position about 1. miles N of Akra Papas, where the canal route from the Adriatic Sea ports is joined. Continue to respective destination as directed in the route from the Adriatic Sea through Dhiorix Korinthou (Corinth Canal) route. Kakava Shoal, off the SE extremity of Nisos Kefallinia, should be given to a wide berth when rounding Akra Mounda.

The Adriatic Sea to the Aegean Sea via Dhiekplous Elafonisou.—From a position 3 miles S of Capo dell' Armi, steer a course to a position 1 mile S of Akra Tainaron, and proceed to destination as directed in the eastbound route from the Strait of Gibraltar.

8. Bur Said to ports in the Aegean Sea and the Dardanelles.

Bur Said (Port Said) to Piraievs.—After arriving at a position 13 miles NNE of Damietta Light, steer to a position about 7 miles NE of Akra Sidheros (Crete), via Kaso Strait, then continue NW between Niso Kristina and Nisos Folegandros. From the latter position, pass about 2 miles E of Nisos Poliaigos and steer to a position 2 miles W of Nisos Fleves, passing SW of Nisos Serifos and Nisos Kithnos and N of Nisos Ayios Yeoryios, and then steer to destination.

Navigators are advised to give due consideration to the strong S and SW set in the vicinity of Porthmos Serifou, Porthmos Kithnou, and Porthmos Keas.

Bur Said (Port Said) to Thessaloniki and the Dardanelles.—This route passes through Stenson Karpathou. From a position 13 miles NNE of Damietta Light, steer a rhumb line course to a position 3 miles ENE of Niso Liadhoi, passing about 11.5 miles SW of Prasonisi and about 8 miles SW of Nisis Antileousa. Vessels bound for the Dardanelles steer to pass 3 miles WSW of Akra Papas, Nisos Ikaria, 3 miles E of Nisos Psara, 4 miles W of Nisos Sigri, and then to a position 3 miles W of Bozca Ada. Then proceed N, and, taking care to avoid the foul ground in the vicinity of Bozea Ada and Presa Adalari, enter the Dardanelles as directly as safe navigation permits.

Vessels bound for Thessaloniki depart from the **Bur Said-Dardanelles** route 3 miles ENE of Nisos Prasoudha and then proceed to destination as directed in the eastbound route from the Strait of Gibraltar. The latter route passes within a few miles of the islets of Melantioi and Nisos Khtapodhia, which have no lights on them. When navigating in this vicinity at night utmost caution must be taken.

MEXICO

General	**383**
Buoyage System	**383**
Currency	**383**
Firing Areas	**383**
Fishing Areas	**384**
Government	**384**
Holidays	**384**
Industries	**384**
Languages	**384**
Navigational Information	**384**
Offshore Drilling	**385**
Pilotage	**385**
Regulations	**385**
Search and Rescue	**385**
Signals	**386**
Time Zone	**386**
Traffic Separation Schemes	**386**
U.S. Embassy	**386**

General

Mexico is located in Central America and borders the U.S. to the N and Belize and Guatemala to the S. The Caribbean Sea and Gulf of Mexico are the bodies of water to its E and the North Pacific Ocean lies to its W.

The climate in the N is arid to semi-arid; this section of the country tends to experience extremes in temperature. The S portion of Mexico and the Yucatan Peninsula have tropical climates and are generally humid.

The terrain is high, rugged mountains, low coastal plains, with high plateaus, and desert.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Mexican peso, consisting of 100 centavos.

Firing Areas

North of Punta Jerez.—Area bounded by lines joining the following positions:

a. 23°30.0'N, 97°42.5'W.
b. 23°30.0'N, 97°32.5'W.
c. 23°00.0'N, 97°32.5'W.
d. 23°00.0'N, 97°42.5'W.

Vicinity of Roca Portida and Punta Zapotitlan.—Area bounded by lines joining the following positions:

a. 18°52.3'N, 95°05.8'W.
b. 18°40.2'N, 95°42.5'W.
c. 18°32.2'N, 95°47.5'W.
d. 18°42.2'N, 95°10.0'W.

North of Cayo Arenas.—Area bounded by lines joining the following positions:

a. 22°20.0'N, 91°34.5'W.
b. 22°20.0'N, 91°16.0'W.
c. 22°10.0'N, 91°16.0'W.
d. 22°10.0'N, 91°34.0'W.

Fishing Areas

The coastal areas on the Caribbean Sea coast are extensively fished by local vessels working out of small harbors and rivers.

The Gulf of Mexico is a rich fishing ground; fishing vessels may be encountered at any time. Large numbers of shrimp boats may be found between Campeche (19°50'N., 90°30'W.) and Ciudan del Carmen (18°39'N., 91°51'W.).

Government

Flag of Mexico

Mexico is a constitutional republic. The country is divided into 31 states and a federal district.

Mexico is governed by a directly-elected President serving a non-renewable 6-year term. The bicameral General Congress consists of a 128-member Senate, 96 of which are directly elected and 32 elected under a system of proportional representation, serving 6-year terms, and a 500-member Chamber of Deputies, 300 of which are directly elected from single-member districts and 200 elected under a system of proportional representation, serving 3-year terms.

The legal system is based on a mixture of U. S. constitutional theory and civil law.

The capital is Mexico City.

Holidays

The following holidays are observed:

January 1	New Year's Day
February 5 *	Constitution Day
March 21 *	Benito Juarez's Birthday
Holy Thursday	Variable
Good Friday	Variable
Easter Sunday	Variable
May 1	Labor Day
May 5	Battle of Pueblo (Cinco de Mayo)
May 10	Mother's Day
September 1	State of the Nation Address
September 16	Independence Day
October 12	Columbus Day (Dia de la Raza)
November 2	All Souls' Day
November 20 *	Revolution Day
December 12	Virgin of Guadalupe Day
December 25	Christmas Day

* In accordance with Mexican law, these holidays always observed on Monday.

Industries

The main industries are tourism, tobacco, food and beverage production, iron and steel, petroleum, textiles, clothing, chemicals, mining, consumer durables, and motor vehicles.

The main exports are manufactured goods, oil and oil products, silver, fruits and vegetables, coffee, and cotton. The main export-trading partner is the United States.

The main imports are metalworking machinery, steel mill products, agricultural machinery, electrical equipment, car parts for assembly, repair parts for motor vehicles, and aircraft and aircraft parts. The main import-trading partners are the United States, China, and South Korea.

Languages

Spanish is the official language, but many dialects of Mayan are spoken.

Navigational Information

Enroute Volumes

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2.

Pub. 153, Sailing Directions (Enroute) West Coasts of Mexico and Central America.

Maritime Claims

The maritime territorial claims of Mexico are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Claims straight baselines. No more than three foreign warships will be authorized in Mexican ports on each coast at the same time; no more than one will be in any given port. Port calls by more than one training vessel can be authorized only if permission is requested 3 months in advance. Nuclear-powered and nuclear-armed ships are not allowed to enter Mexican territorial waters or dock in Mexican ports.

Offshore Drilling

Numerous structures, usually lit, along with pipelines, submerged obstructions, and wrecks, are located throughout the Gulf of Mexico, usually within the 200m curve. These features may best be seen on the chart.

Pilotage

Pilotage is compulsory for all vessels of 500 tons or more entering or departing a port in Mexico.

Regulations

The vessel's ETA should be given with as much notice as possible. The ETD should be given at least 6 hours before sailing.

All vessels will be boarded on arrival by a Health Officer, the Port Captain, and a Customs Officer.

The maritime authorities require the following information upon arrival:

1. Last port clearance.
2. Passenger list (stamped with a visa by a Mexican Consulate or Embassy).
3. Crew list (stamped with a visa by a Mexican Consulate or Embassy).
4. Cargo manifest (stamped with a visa by a Mexican Consulate or Embassy).
5. Deck log book.
6. Customs manifest.

On departure, vessels must submit:

1. Request for clearance.
2. List of passengers embarked.
3. Crew list and Articles of Agreement.
4. Stores list.

Protected Areas

Areas, protected by Presidential Decree, are established along the coast of the State of Jalisco (20°00'N., 105°00'W.), within the jurisdiction of Naval Zone XII, at Los Arcos, Playa Mismaloya, Playa Teopa, Playa Cuitzamala, and Playa El Tecuan, and in the waters of the coasts and estuaries in their vicinity. In these areas, the following is prohibited:

1. Collection, or disturbance, of flora and fauna, on both land and sea.
2. Anchoring.
3. Dumping of hydrocarbons, oil derivatives, and refuse.
4. Fishing.

Search and Rescue

The Mexican Navy is responsible for coordinating search and rescue operations within the Exclusive Economic Zone of Mexico in the Gulf of Mexico and the Caribbean Sea. The Maritime Rescue Coordination Center (MRCC) Tampico, which is the Regional Control Center covering this area, can be contacted, as follows:

1. Telephone: 52-833-2107205
   52-833-2107206
   52-833-2107207
   52-833-2107209
   52-833-2107210
2. Facsimile: 52-833-2107208
3. E-mail: radiotam@telecomm.net.mx

Three Maritime Rescue Coordination Centers (MRCC) located in the Regional Control Center coverage area can be contacted, as follows:

1. MRCC Tuxpan
   a. Telephone: 52-783-8370720
      52-783-8370709
      52-783-8370810
      52-783-8370713
   b. E-mail: m1@csi.sedemar.mil.mx
2. MRCC Carmen
   a. Telephone: 52-938-3821931
      52-938-3820424
      52-938-3821945
      52-938-3821931
   b. E-mail: m3@csi.sedemar.mil.mx
3. MRCC Mujares
   a. Telephone: 52-998-8771306
      52-998-8770196
      52-998-8770186
   b. Facsimile: 52-998-8770194
   c. E-mail: m5@csi.sedemar.mil.mx

The following coast radio stations maintain a continuous listening watch on international distress frequencies:

1. Cancun (XFO).
2. Isla Cozumel (XFC).
3. Chetumal (XFP).
4. Tampico (XFS).
5. Veracruz (XFU).
6. Coatzacoalcos (XFF).
7. Ciudad del Carmen (XFB).
8. Radiomex (XDA).

Mexico—Time Zones

Location	Standard Time	Daylight Savings Time
All states except those listed below	SIERRA (+6)	ROMEO (+5) Maintained from the first Sunday in April until the last Sunday in October.
Baja California Sur, Nayarit, Sinaloa, and Chichuahua	TANGO (+7)	SIERRA (+6) Maintained from the first Sunday in April until the last Sunday in October.

Mexico—Time Zones		
Location	**Standard Time**	**Daylight Savings Time**
Baja California Norte	UNIFORM (+8)	TANGO (+7) Maintained from the first Sunday in April until the last Sunday in October.
Sonora	TANGO (+7)	Not observed.

Signals

When bad weather is imminent and may affect port operations, the following signals are displayed from a flagstaff, painted in red and white bands, in the port:

1. Red square—Port closed due to bad weather.
2. Blue square flag—Port will be open only for the following 24 hours.
3. Yellow square flag—Port will be open only for the following 48 hours.

Time Zone

Mexico is covered by several time zones. Information is given in the accompanying table titled **Mexico—Time Zones**.

Traffic Separation Schemes

An IMO-adopted Traffic Separation Scheme is located on the E coast of Mexico in the approaches to the port of Veracruz.

U.S. Embassy

The U.S. Embassy is situated at Paseo de la Reforma 305, Colonia Cuauhtemoc, Mexico City.

The mailing addresses are, as follows:

1. Mexico address—
   Paseo de la Reforma 305
   Colonia Cuauhtemoc
   06500 Mexico, D. F.
2. U.S. address—
   P.O. Box 9000
   Brownsville, TX (78520-9000)

U. S. Embassy Mexico Home Page
http://mexico.usembassy.gov

MONACO

General	**387**
Buoyage System	**387**
Currency	**387**
Government	**387**
Holidays	**388**
Industries	**388**
Languages	**388**
Navigational Information	**388**
Search and Rescue	**388**
Time Zone	**388**
U.S. Embassy	**388**

General

The principality of Monaco is located in Western Europe on the Mediterranean Sea and borders France.

The climate is Mediterranean with mild, wet, winters and hot, dry summers.

Monaco consists of four quarters, as follows:

1. Monaco-Ville, the capital, situated on a rocky headland.
2. La Condamine, the business district.
3. Monte Carlo, the N section.
4. Fontvieille, the industrial area in La Condamine.

Monaco is the site of the International Hydrographic Bureau.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Government

Flag of Monaco

Monaco is a constitutional monarchy.

Prince Albert II is the Head of State. The Prince appoints a Minister of State. The unicameral National Council consists of 24 members serving 5-year terms; 16 members are elected by a list-majority system, while 8 members are elected on the basis of proportional representation.

The legal system is based on French law.

The capital is Monaco.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 26-27	Sainte-Devote Days
Shrove Tuesday	Variable
Mi-Careme	Variable
Holy Thursday	Variable
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
Corpus Christi	Variable
August 15	Assumption Day
November 1	All Saints' Day
November 18-19	National Days
December 8	Immaculate Conception
December 24	Christmas Eve
December 25	Christmas Day
December 31	New Year's Eve

Industries

The main industries are tourism, construction, and small-scale industrial and consumer products.

Languages

French is the official language. English, Italian, and Monegasque are also spoken.

Navigational Information

Enroute Volume

Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Maritime Claims

The maritime territorial claims of Monoco are, as follows:

Territorial Sea *	12 miles.
Fisheries Zone *	12 miles.

* Claims waters within defined geographical coordinates not related to distance from the coastline.

Search and Rescue

The Monaco Maritime Police Headquarters, equipped with terrestrial radio facilities, is the location of a listening post for MRCC La Garde and can be contacted, as follows:

1. Telephone: 377-93-153016
2. Facsimile: 377-93-302245
3. E-mail: dpma@gouv.mc

An agreement on cooperation in search and rescue operations has been established with France.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is maintained from the last Sunday in March until the last Sunday in October.

U.S. Embassy

There is no embassy in Monaco; however, the U.S. Ambassador to France is accredited to Monaco.

The U.S. Embassy in France is situated at 2 Avenue Gabriel, Paris.

The mailing addresses are, as follows:

1. France address—
   2 Avenue Gabriel
   75382 Paris CEDEX 08
2. U. S. address—
   PSC 116
   APO AE (09777)

U. S. Embassy France Home Page
http://france.usembassy.gov

MONTSERRAT

General	**389**
Buoyage System	**389**
Currency	**389**
Government	**389**
Holidays	**390**
Industries	**390**
Languages	**390**
Navigational Information	**390**
Search and Rescue	**390**
Time Zone	**390**
U.S. Embassy	**390**

General

Montserrat is a volcanic island located near the middle of the Leeward Islands.

The climate is tropical, with little daily or seasonal variation.

The terrain is mostly mountainous, with a small coastal lowland.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation in Montserrat may be missing or unreliable.

Cautions

Volcanic activity on the island has been continuous since 1995. In 1997, the capital was covered with ash and abandoned. An exclusion zone extending 2 miles from the coast has been established between position 16°45.9'N, 62°09.8'W and position 16°44.0'N, 62°14.1'W.

The area W of Montserrat is subject to heavy ash falls. The underwater hydrography may differ considerably from that charted due to volcanic activity.

Abnormally high seas may be expected S of the island.

Currency

The official unit of currency is the East Caribbean dollar.

Government

Flag of Montserrat

Montserrat is a dependent overseas territory of the United Kingdom, with Queen Elizabeth II as its chief of state. The island is divided into three parishes.

Montserrat is governed by a Governor appointed by the Queen. The Chief Minister is appointed by the Governor. The 11-member unicameral Legislative Council consists of two appointed members and nine directly-elected members who serve

5-year terms.

The legal system is based on English common law and statutory law.

The capital is officially Plymouth. However, the city was abandoned in 1997 due to damage caused by volcanic eruptions. Interim government buildings have been built in the Carr's Bay/Little Bay area in the NW part of the island.

Holidays

The following holidays are observed:

January 1	New Year's Day
March 17	St. Patrick's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
First Monday in May	Labor Day
Whitmonday	Variable
Second Saturday in June	Queen's Birthday
First Monday in August	August Day
December 25	Christmas Day
December 26	Boxing Day
December 31	Festival Day

Industries

The main industries are tourism, rum, textiles, and electronic appliances.

The main exports are electronic components, plastic bags, apparel, hot peppers, limes, live plants, and livestock. The main export-trading partners are the United States and Antigua and Barbuda.

The main imports are machinery and transportation equipment, foodstuffs, manufactured goods, fuels, lubicants, and related materials. The main import-trading partners are the United States, the United Kingdom, Trinidad and Tobago, Japan, and Canada.

Languages

English is the official language.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Montserrat are, as follows:

Territorial Sea	3 miles.
Fisheries or Economic Zone	200 miles.

Search and Rescue

The Montserrat Marine Police Unit is responsible for coordinating search and rescue operations in association with MRCC Fort de France (Martinique).

MRCC Fort de France can be contacted, as follows:

1. Telephone: 596-596-709292
   596-596-731616
2. Facsimile: 596-596-632450
   596-596-735730
3. Telex: 298-912008 COSMA A
4. E-mail: antilles@mrccfr.au

A continuous listening watch for distress traffic is maintained on 7850 kHz and VHF channel 16.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

Montserrat is a dependent territory of the United Kingdom. There is no diplomatic representation.

MONTENEGRO

General	**391**
Buoyage System	**391**
Cautions	**391**
Currency	**392**
Government	**392**
Holidays	**392**
Industries	**392**
Languages	**392**
Navigational Information	**392**
Pollution	**392**
Pilotage	**392**
Regulations	**392**
Search and Rescue	**392**
Ship Reporting System	**393**
Time Zone	**393**
U.S. Embassy	**393**

General

Montenegro is located on the eastern Adriatic Sea. The country has a short coast line between Bosnia-Herzegovina and Albania.

The climate along the coast is hot and dry in the summer and fall; winters are cold, with heavy snow inland.

The coast, which is generally high, with steep cliffs in places, is backed by the high mountains of the Dinaric Alps.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Lights on Naval Vessels

In addition to their normal navigation lights, vessels of the navy of Montenegro operating in company may show fixed or flashing red, blue, or green white lights from their masts; the lights are visible at ranges up to 2 miles all around the horizon.

Marine Exploitation

Vessels engaged in seismic surveys and other research projects may be encountered in the Adriatic Sea, normally inside the 200m depth curve.

Offshore Depths

Mariners are cautioned that charted depths off the coast of Montenegro are unreliable, the coastline may differ from that charted, and certain harbors have been damaged and are unfit for berthing. Mariners must proceed with caution; they are ad-

vised to keep offshore and contact the port authorities before entering port.

Currency

The official unit of currency is the Euro.

Government

Flag of Montenegro

Montenegro is a republic. The country is divided into 21 municipalities.

Montenegro is governed by a directly-elected President who serves a 5-year term. The president names the Prime Minister, who is approved by the Assembly. The unicameral Assembly consists of 81 directly-elected members serving 4-year terms.

The legal system is based on civil law.

The capital is Cetinje, although the administrative capital is Podgorica.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 6	Orthodox Christmas Eve
January 7-8	Orthodox Christmas
Orthodox Good Friday	Variable
Orthodox Easter Sunday	Variable
Orthodox Easter Monday	Variable
April 27	Constitution Day
May 1	May Day
November 29	Republic Day

Industries

The main industries are steelmaking, aluminum, agricultural processing, consumer goods, and tourism.

Languages

Serbian (the Ijekavian dialect) is the official language.

Navigational Information

Enroute Volume

Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

Maritime Claims

The maritime territorial claims of Montenegro are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	12 miles.

* Claims straight baselines.

Pilotage

Pilotage is compulsory for all vessels over 500 gross tons and for all vessels carrying dangerous chemical or combustible substances while proceeding between ports in Montenegro and while within the coastal waters of Montenegro.

Pollution

Any overboard discharge of harmful waste material into the waters of Montenegro should be reported to the nearest harbormaster's office.

Vessels bound for a port in Montenegro or navigating in the territorial waters of Montenegro should forward any reports of pollution to Bar Radio Coast Radio Station (4OB), which can be contacted, as follows:

1. Telephone: 382-30-313088
2. Facsimile: 382-30-313600
3. E-mail: barradio@pomorstvo.me
   msd.mrccbar@cg.yu

The preferred contact language is English.

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

ETA Messages

All vessels calling at harbors in Montenegro should send their ETA 24 hours prior to arrival through any coast radio station in Montenegro.

Search and Rescue

The harbormaster's offices in Bar and Kotor are responsible for distress and safety communications and operations within the coastal waters of Montenegro. The Maritime Rescue Coordination Center (MRCC) Bar can be contacted, as follows:

1. Telephone: 382-30-313088
2. Facsimile: 382-30-313600
3. E-mail: barradio@pomorstvo.me

The preferred contact language is English.

Barradio Coast Radio Station (4OB) maintains a continuous listening watch for distress traffic on 2182 kHz, 2187.5 kHz, VHF channel 16, and VHF channel 70.

Ship Reporting System

The Adriatic Ship Reporting System (ADRIREP), a mandatory system for certain vessels, is in effect for the Adriatic Sea N of latitude 40°25'N. For further information, see **Italy—Ship Reporting System**.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is observed from the last Sunday in March until the last Sunday in October.

U.S. Embassy

The U.S. Consulate is situated at Dzona Dzeksona, 81000 Podgorica. The mailing address is the same.

U. S. Consulate Montenegro Home Page
http://podgorica.usconsulate.gov

MOROCCO

General	**395**
Buoyage System	**395**
Cautions	**395**
Currency	**396**
Firing Areas	**396**
Fishing Areas	**396**
Government	**396**
Holidays	**396**
Industries	**397**
Languages	**397**
Navigational Information	**397**
Pollution	**397**
Regulations	**397**
Search and Rescue	**397**
Ship Reporting System	**398**
Signals	**398**
Submarine Operating Areas	**398**
Time Zone	**398**
Traffic Separation Schemes	**398**
U.S. Embassy	**398**
Vessel Traffic Service	**398**

General

Morocco is located in Northern Africa and borders Algeria and Western Sahara. The North Atlantic Ocean lies to its W and the Mediterranean Sea lies to its N.

The climate is Mediterranean and becomes extreme in the desert interior.

Morocco has varied topography. It is dominated by several rugged mountain ranges, divided by fertile river valleys. There are extensive lowlands on the W coast. The Sahara Desert occupies a large part of the interior of the country.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Special Warning 89 (Issued 16 October 1992)

1. Prior to the September 1991 cease-fire between Morocco and the Polisario, unprovoked attacks on shipping off the coast of Western Sahara by Polisario guerillas using machine guns, grenades, and mortars occurred, resulting in the loss of life and property.

2. Despite the cease-fire, the potential for violent incidents still exists. Mariners are advised to continue using extreme caution and remain well offshore when transiting the waters off the W coast of Africa between 27°40'N, 13°11'W and Cap-Blanc (20°47'N., 17°03'W.) and particularly between Dakhla (23°42'N., 15°56'W.) and Cape Corbiero (21°48'N., 16°59'W.).

3. The publication of this notice is solely for the purpose of advising U.S. mariners of information relevant to navigational safety and in no way constitutes a legal recognition of the validity of any foreign rule, regulation, or proclamation so published.

Special Warning 82 (Issued 31 August 1990)

1. U.S. mariners advised to exercise caution within the territorial waters claimed by Morocco. Moroccan coastal protection warships, while engaged in anti-drug smuggling activities or enforcing territorial fishing rights, have been known to open fire on innocent vessels.

2. The publication of this notice is solely for the purpose of advising U.S. mariners of information relevant to navigational

safety and in no way constitutes a legal recognition of the validity of any foreign rule, regulation, or proclamation so published.

High Speed Craft

High speed craft operate in the Strait of Gibraltar. Vessels are advised to maintain a good lookout. Some high speed craft can generate large waves which can have a serious impact on small craft and their moorings close to the shoreline and on shallow off-lying banks.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

Tide Rips

In the E approaches to the Strait of Gibraltar, tide rips have been reported to occur under certain weather conditions during a W current. These tide rips, which have been detected on radar, may be up to 4 miles long.

Whales

From April through August, a sperm whales conservation areais in effect in the Strait of Gibraltar. For further information, see **Mediterranean Sea—Cautions—Whales**.

Currency

The official unit of currency is the dirham, consisting of 100 centimes.

Firing Areas

Zone Alpha.—A sector with a radius of 20 miles between the bearings of 270° and 000°, centered on position 33°41'N, 8°03'W.

Zone Bravo.—A sector with a radius of 20 miles between the bearings of 270° and 000°, centered on position 29°53'N, 10°15'W.

Zone Delta.—A sector with a radius of 20 miles between the bearings of 270° and 000°, centered on position 23°35'N, 17°00'W.

Zone Aerora Goulmine.—An air-to-air and air-to-surface firing range bounded by a line joining the following positions:

a. 28°46.5'N,10°48.5'W.
b. 29°08.0'N,11°28.0'W.
c. 29°18.0'N,11°06.0'W.
d. 29°12.8'N,10°56.7'W.

Firing exercises are carried out in a sector with a radius of 20 miles between the bearings of 270° and 000°, centered on position 35°22'N, 4°04'W.

Firing exercises are carried out from the coast, for a distance of 2 miles seaward, from N of Melille to Punta Tarquiat.

Fishing Areas

Tunny nets may be found up to 7 miles off the coast of Morocco. For general information on tunny fishing, see **Spain—Fishing Areas**.

Fishing vessels may be encountered off the entire coast of Morocco and Western Sahara.

For information on blurfin tuna fishing in the approaches to the Strait of Gibraltar, see **Mediterranean Sea—Fishing Areas**.

Government

Flag of Morocco

Morocco is a constitutional monarchy. The country is divided into 15 regions. The coastal enclaves of Ceuta and Melilla, in addition to the islands of Penon de Velez de la Gomera, Penon de Alhucemas, and Islas Chafarinas, are under Spanish sovereignty.

Morocco is governed by a king. The Prime Minister is appointed by the king. The bicameral Parliament consists of a Chamber of Counselors (upper house) composed of 270 members, appointed by local councils, chambers of commerce, and labor organizations, serving 9-year terms, and a Chamber of Deputies (lower house), consisting of 325 directly-elected members serving 5-year terms.

The legal system is based on Islamic law, French civil law, and Spanish civil law.

The capital is Rabat.

Western Sahara, a former Spanish province, was partitioned by Morocco and Mauritania in 1976. In 1979, Mauritania withdrew from the territory and Morocco asserted control of the entire area. A liberation movement, Frente Polisario, continues to claim the territory. This movement, which consists of Saharawi guerrillas, has renamed the area the Saharawi Arab Democratic Republic. A United Nations-administered cease-fire has been in effect since 1991. The capital of the territory is El-Aaiun. The population is Arabic-speaking.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 11	Independence Manifesto Day
May 1	Labor Day
July 30	Feast of the Throne
August 14	Reunification Day
August 20	King's and People's Revolution Day

August 21	King Mohamed's Birthday (Youth Day)
November 6	Anniversary of the Green March
November 18	Independence Day

Islamic holidays, which are subject to the appearance of the moon, include Eid Al-Fitr (End of Ramadan), Eid Al-Adha (End of Pilgrimage), Hijrah (Islamic New Year), and the Prophet's Birthday.

Industries

The main industries are agriculture, phosphate mining and processing, food processing, leather goods, textiles, construction, and tourism.

The main exports are clothing, fish, inorganic chemicals, transistors, crude minerals, fertilizers (including phosphates), petroleum products, fruits, and vegetables. The main export-trading partners are France and Spain.

The main imports are crude oil, textile fabrics, telecommunications equipment, wheat, gas and electricity, transistors, and plastics. The main import-trading partners are France, Spain, Saudi Arabia, Germany, Italy, and China.

Languages

Arabic is the official language. Several Berber dialects are also spoken, particularly in the mountainous regions.

French and Spanish are widely used in the urban areas.

Navigational Information

Enroute Volumes

Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Maritime Claims

The maritime territorial claims of Morocco are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines.

Maritime Boundary Disputes

Protests Spanish control over the coastal enclaves of Ceuta and Melilla, as well as the offshore islands of Penon de Velez de la Gomera, Penon de Alhucemas, and Islas Charfarinas.

Rejected Spain's 2002 unilateral designation of a median line from the Islas Canarias (Canary Islands) to set limits to undersea resource exploration and refugee interdiction. In 2003, Spain and Morocco agreed to discuss comprehensive maritime delineations.

Pollution

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Pollution

Single-hull tankers over 15 years old carrying heavy fuel, bitumen, or other polluting substances may not enter the Exclusive Economic Zone of Morocco without prior permission of the Directorate of the Moroccan Merchant Marine.

Permission must be requested 24 hours in advance; the following information should be included in the request:

1. Vessel name.
2. Call sign and IMO number.
3. Name and address of owner.
4. Name and address of charterer.
5. Classification society.
6. Position.
7. Last port of loading and destination.
8. Type and quantity of cargo.
9. Name of technical management company.

Prohibited areas

Morocco prohibits navigating, anchoring, or maritime activity in an area in an area extending 21 miles from the coast between Rabat and Mohammedia and bounded by lines joining the following positions:

a. 34°02.2'N, 6°50.5'W.
b. 34°15.2'N, 7°09.5'W.
c. 34°01.0'N, 7°33.0'W.
d. 33°47.3'N, 7°15.2W.

Navigating and fishing are prohibited until further notice in an area extending 13 miles from the coast between Agadir (30°27'N., 9°37'W.) and Punta Guera (20°49'N., 17°06'W.).

A prohibited entry area is bounded by lines joining the following positions:

a. 33°52'36"N, 7°02'36"W.
b. 33°54'24"N, 7°03'24"W.
c. 33°54'18"N, 7°04'12"W.
d. 33°52.21"N, 7°03'30"W.

Vessels calling at Layounne (27°05'N., 13°26'W.) or Dakhal (23°42'N., 15°56'W.) should report their intentions 24 hours in advance.

Search and Rescue

The Ocean Fisheries Department of the National Commission for Coordinating Search and Rescue is responsible for coordinating search and rescue operations.

An Ocean Fisheries Department Station at Rabat maintains a continuous listening watch on international distress frequen-

cies. A Merchant Marine Station and a Coast Radio Station, both located in Casablanca, maintain a continuous listening watch on international distress frequencies.

Maritime Rescue Coordination Centers (MRCC) and Maritime Rescue Coordination Subcenters (MRSC) are located, and can be contacted, as follows:

	Telephone	Facsimile
Mediterranean Coast		
MRSC Al-Hoceima *	212-39-982730	212-39-982547
Atlantic Coast		
MRCC Rabat *	212-6-61-730190	2125-37-688112
	212-5-37-688174	
MRSC Tanger *	212-39-932090	212-39-932093
MRSC Agadir *	212-28-842964	212-28-842820
	212-28-842984	
MRSC Dakhla	212-28-897300	212-28-898381
* Can be contacted by e-mail at mrcc.rabat@mpm.gov.ma		

Ship Reporting System

GIBREP

GIBREP, a mandatory Vessel Traffic Service, is in operation in the Strait of Gibraltar, including the TSS and Inshore Traffic Zones. The reporting system covers the area between longitudes 5°58'W and 5°15'W. Further information can be found in Pub. 131, Sailing Directions (Enroute) Western Mediterranean (paragraph 1.1).

Signals

The following storm signals may be displayed in Moroccan ports:

Day signal	Night signal	Meaning
Black ball	Red light	Bad weather probable
Two black balls, vertically disposed	Two red lights, horizontally disposed	Violent gale probable
Black cylinder	No signal	Wind expected to veer
Two black cylinders, vertically disposed	No signal	Wind expected to back
One black ball over one black triangle, point down	Three green lights, vertically disposed	Dangerous swell, with height greater than 4m, is expected
One black ball over two black triangles, points down, vertically disposed	One green light, one red light, one green light, vertically disposed	Very dangerous swell expected

Submarine Operating Areas

Submarines frequently exercise E of the Strait of Gibraltar. For further information, see **Spain—Submarine Operating Areas**.

Submarines frequently exercise in an area about 25 miles ESE of Punta Almina (35°54'N., 5°17'W.).

Time Zone

The Time Zone description is ZULU. Daylight Savings Time (ALFA (-1)) is observed from the beginning of April until the end of July; the exact changeover dates should be obtained from local authorities.

Traffic Separation Schemes

An IMO-approved Traffic Separation Scheme is located off the coast of Morocco in the Strait of Gibraltar.

Traffic Separation Schemes located off Morocco are, as follows:

1. Banco del Hoyo. (IMO adopted)
2. In the Strait of Gibraltar. (IMO adopted)

U.S. Embassy

The U.S. Embassy is situated at 2 Avenue de Mohamed el Fassi, Rabat.

The mailing addresses are, as follows:

1. Morocco address—
   2 Avenue de Mohamed el Fassi
   Rabat
2. U. S. address—
   PSC 74, Box 021
   APO AE (09718)

U. S. Embassy Morocco Home
http://www.usembassy.ma

Vessel Traffic Service

Vessel Traffic Services are in operation, as follows:

1. Casablance[1] (36°43'N., 2°12'W.).
2. Strait of Gibraltar [2] (33°37'N., 7°36'W.).
3. Tanger-Mediterrane [2] (35°54'N., 5°30'W.).

[1] For further information, see Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

[2] For further information, see Pub. 131 (Sailing Directions (Enroute) Western Mediterranean.

NETHERLANDS

General	**399**
Areas to be Avoided	**399**
Buoyage System	**399**
Cautions	**400**
Currency	**400**
Firing Areas	**400**
Government	**401**
Holidays	**401**
Industries	**401**
Languages	**402**
Meteorology	**402**
Mined Areas	**402**
Navigational Information	**402**
Pilotage	**402**
Pollution	**404**
Regulations	**404**
Search and Rescue	**405**
Signals	**405**
Submarine Operating Areas	**406**
Time Zone	**406**
Traffic Separation Schemes	**407**
U.S. Embassy	**407**
Vessel Traffic Service	**407**

General

The Netherlands is located in Western Europe, bordering the North Sea, between Belgium and Germany.

The climate is temperate and marine, with cool summers and mild winters.

The terrain is mostly coastal lowland and reclaimed land area with some hills in the SE. Several thousand square miles of the W part of the country lie below sea level and must be protected by an elaborate system of dikes.

Areas to be Avoided

North Hinder Junction.—An IMO-adopted Area to be Avoided is located in the North Hinder Junction Precationary Area, which is the junction of the Noord Hinder North, the Noord Hinder South, the Maas West Outer, and the Maas West Inner Traffic Separation Schemes. The area is a circle, with a radius of 1 mile, centered on North Hinder Lighted Buoy (52°00'05.4"N., 2°51"05.4"E.).

Maas Centre.—An IMO-adopted Area to be Avoided is located in the Maas Centre Precationary Area, which is the junction of the Maas West Outer, the Maas West Inner, the Maas Northwest, and the Maas North Traffic Separation Schemes. The area is a circle, with a radius of 0.6 mile, centered on position 52°01'40.8"N, 3°53'06.6"E.

Buoyage System

Netherlands

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

In inland water, the Signalisation de Navigation Interieure (SIGNI) system is used. In the SIGNI system, the main channel buoyage is compatible with the IALA system. The point where a channel divides is marked by buoys which indicate whether the main channel is to port or starboard, or the channels are of equal importance. In addition, supplementary marks are used to indicate navigable waters which lie outside the main buoyed channel.

In inshore waters, some aids may be withdrawn or altered during the winter, or when ice is forming or breaking up. Lighted buoys may be replaced by unlighted buoys; unlighted buoys may be replaced by spar buoys or floating beacons. The replacements have the same charactaristics at the original buoyage but may be without topmarks. Changes may be announced by Notice to Mariners. Buoyage may be damaged, displaced, or sunk if subject to heavy ice movement.

Bonaire, Saba, and Sint Eustatius

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation in Saint Barthelemy, Sint Eustatius, and Saba may be missing or unreliable.

Cautions

General

As a consequence of their special construction, some warships of The Netherlands cannot comply with the requirements regarding the number and installation of their navigational lights mentioned in Regulations 23, 24, and 27, and Appendix I of the *Rules for the Prevention of Collisions at Sea (1972)*.

High Speed Craft

High speed ferries operate in Die Ems between Emden (53°20'N., 7°11'E.) and Borkum (53°33'N., 6°45'E.).

Bonaire, Saba, and Sint Eustatius

It has been reported that oil rigs working on Saba Bank are well lit, but the off-lying buoys used are not lit.

Fish pots may be encountered up to 3 miles off the W side of Sint Eustatius.

Many small fishing vessels may be found anchored up to 3 miles off the coast of Bonaire. It is very common for these vessels not to show any lights.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Firing Areas

NETHERLANDS

Petten

Two firing practice areas are located in this vicinity, as follows:

1. Firing practice with artillery takes place from position 52°47.1'N, 4°40.3'E. The firing area consists of a danger sector between 254° and 327° or between 327° and 000°, measured from the battery, over a maximum distance of 9 miles.

When firing is in progress, two red flags will be hoisted as a warning signal, one near beach pole 19 and the other about 300m further N.

2. Firing practice with artillery takes place from one of four battery positions on a line joining the following positions:

a. 52°47.7'N, 4°40.3'E.
b. 52°47.8'N, 4°41.0'E.

The firing area consists of a danger sector between 225° and 345°, measured from the battery, over a maximum distance of 14 miles.

When firing is in progress, the Netherlands flag will be flown from a flagstaff on the radar tower (52°47.7'N., 4°40.5'E.) as a warning signal. Red flags will also be displayed on the dunes N and S of the battery and on the shore.

West of Haaksgronden

An anti-aircraft firing practice range is bounded by 53°05'N, 53°13'N, 3°45'E, and 4°10'E.

Zeegat van Texel—W of Kaap Hoofd

Firing practice involving artillery and machine guns at air and sea targets takes place each working day from 0800 until 1200 and from 1400 until 1700 at the following areas:

1. A danger sector with a radius of 10 miles centered on position 52°57.8'N, 4°44.3'E, between the bearings 265° and 337°.
2. A danger sector with a radius of 1.6 miles centered on position 52°57.8'N, 4°44'.3'E, between the bearings 260° and 010°.

A red flag is hoisted on a radar signal mast during firings; the flag is lowered upon completion of the exercises.

Ijsselmeer—Breezanddijk

Artillery firing takes place within the area bounded by lines joining the following positions:

a. 53°01'04.2"N, 5°12'28.2"E.
b. 52°53'42.2"N, 5°15'55.2"E.
c. 52°53'25.2"N, 5°11'06.2"E.
d. 52°48'36.2"N, 5°10'11.2"E.
e. 52°48'44.2"N, 5°07'28.2"E.
f. 52°50'50.2"N, 5°07'44.2"E.
g. 52°55'57.2"N, 5°03'28.2"E.

Warnings are transmitted, as follows:

1. West Terschelling—VHF channel 25.
2. Wieringerwerf—VHF channel 27.
3. Lelystad—VHF channel 83.

During firings, the Netherlands flag is shown from a mast situated near position 53°01.1'N, 5°12.5'E.

During firings, the firing battery can be contacted, as follows:

1. VHF channel 71—call sign “Schietterrein Breezanddyk.”
2. VHF channel 1—Reporting Point “IJsselmeergebied.”

Vlieland—Viliehors

Firing practice from aircraft at ground targets takes place in a sector area centered on position 53°14.4'N, 4°55.3'E, with a radius of 4 miles, between the bearings 275° and 355°.

This area is normally used during daylight hours only if the visibility is greater than 2 miles. When the red warning flag is hoisted, vessels should remain at least 2,000m outside the LW mark and not remain in the the area any longer than necessary for direct passage. Range Control (call sign: Vliehors Range Control) can be contacted on VHF channel 74.

Lauwersmeer—Marnewaard

Firing practice takes place in an area bounded by lines joining the following positions:

a. 53°25'09.0"N, 6°14'34.8"E.
b. 53°25'28.8"N, 6°15'09.0"E.
c. 53°25'33.0"N, 6°15'58.8"E.
d. 53°25'40.8"N, 6°16'52.2"E.
e. 53°25'46.2"N, 6°17'42.0"E.
f. 53°25'46.8"N, 6°18'33.0"E.
g. 53°25'54.0"N, 6°19'07.8"E.
h. 53°25'57.0"N, 6°19'52.8"E.
i. 53°25'27.0"N, 6°19'58.2"E.
j. 53°25'01.8"N, 6°20'04.2"E.

Firing exercise may be held daily from 0800 until 2300. The above positions are each marked by a lighted beacon.

North Sea—North of the Wadden Islands

Firing practice from aircraft at airborne targets takes place in an area bounded by lines joining the following positions:

a. 53°59'57.4"N, 4°45'55.1"E.
b. 53°59'57.4"N, 6°06'21.2"E.
c. 53°51'03.4"N, 6°13'53.2"E.
d. 53°37'35.3"N, 5°05'55.1"E.
e. 53°35'57.4"N, 4°45'55.1"E.

These firing practices, which normally occur from sunrise to sunset, may constitute a danger for vessel traffic.

Westerschelde Approach—Northwest Zebrugge

Firing practice takes place year round in an area bounded by lines joining the following positions:

a. 51°26'45.0"N, 2°21'00.0"E.
b. 51°26'45.0"N, 2°48'00.0"E.
c. 51°36'00.0"N, 2°48'00.0"E.
d. 51°40'00.0"N, 2°42'00.0"E.
e. 51°40'00.0"N, 2°34'00.0"E.

Shipping will be informed of activities in this area.

BONAIRE, SABA, AND SINT EUSTATIUS

An air and surface firing exercise area is located up to 46 miles NE of Bonaire.

Government

Flag of the Netherlands

The Netherlands is a constitutional monarchy. The country is divided into 12 provinces.

With the dissolution of the Netherlands Antilles in 2010, the islands of Bonaire, Saba, and Sint Eustatius became special municipalities within the Netherlands.

Queen Beatrix is the Head of State. The Prime Minister is appointed by the Queen. The bicameral States General consists of the 75-member First Chamber (upper chamber), indirectly elected by the 12 provincial councils, serving 4-year terms, and the 150-member Second Chamber (lower chamber), directly elected using a system of proportional representation, serving 4-year terms

The legal system is based on civil law incorporating French penal theory.

The capital is Amsterdam, but the government resides at The Hague.

Holidays

The following holidays are observed in the Netherlands:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
April 30	Queen's Birthday
May 5	Liberation Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
December 25	Christmas Day
December 26	Second Christmas Day

The following additional holidays are observed in Bonaire, Saba, and Sint Eustatius:

May 1	Labor Day
July 1	Emancipation Day
July 2	Flag Day
Last Monday in July	Carnival Day
September 6	Bonaire Flag Day
November 16	Sint Eustatius Flag Day
December 2	Saba Flag Day

Industries

Netherlands

The main industries include agricultural industries, metal and engineering products, electrical machinery and equipment, chemicals, petroleum, fishing, construction, and microelectronics.

The main exports are machinery and equipment, chemicals, fuels, and foodstuffs. The main export-trading partners are Germany, Belgium, France, the United Kingdom, and Italy.

The main imports are machinery and transport equipment, chemicals, fuels, foodstuffs, and clothing. The main importtrading partners are Germany, Belgium, China, the United States, the United Kingdom, and Russia.

Bonaire, Saba, and Sint Eustatius

The main industries include tourism, petroleum refining and transshipment, offshore banking, and light manufacturing.

The main export is petroleum products. The main exporttrading partners are the United States, Panama, Bermuda, Mexico, and Haiti.

The main imports are crude oil, food, and manufactured goods. The main import-trading partners are Venezuela and the United States.

Languages

Dutch is the official language.

In Bonaire, Saba, and Sint Eustatius Dutch is the official language, although Papiamento, a Spanish-Portuguese-Dutch-English dialect, predominates. English is also widely understood.

Meteorology

Marine weather forecasts in Dutch and English are available from the Koninklijk Netherlands Meteorologisch Instituut (http://wwwkndmi.nl).

Mined Areas

Mine Exercise Areas

Practice mines are laid off the Belgium and Netherlands coasts in a number of fixed Mine Exercise Areas, as follows:

1. **NB1 (West Hinder).—**Area bounded by lines joining the following positions:
   a. 51°29'52.2"N, 2°44'55.1"E.
   b. 51°26'45.0"N, 2°44'55.1"E.
   c. 51°26'45.0"N, 2°35'31.1"E.
   d. 51°28'52.2"N, 2°35'31.1"E.
2. **NB4 (Schouwenbank).—**A circular area with a radius of 2 miles centered on position 51°48'01.1"N, 3°14'17.3"E.
3. **NB6 (Westgat).—**A circular area with a radius of 1.5 miles centered on position 51°39'57.1"N, 3°34'55.2"E.
4. **NB7 (Everingen).—**Area bounded by lines joining the following positions:
   a. 51°24'21.1"N, 3°44'49.3"E.
   b. 51°23'39.1"N, 3°46'43.3"E.
   c. 51°23'03.0"N, 3°46'07.3"E.
   d. 51°23'45.0"N, 3°44'13.3"E.
5. **NB8 (Molengat).—**A circular area with a radius of 1.5 miles centered on position 53°05'57.2"N, 4°36'25.1"E.
6. **NB9 (Goeree).—**A circular area with a radius of 1 mile centered on position 51°54'27.1"N, 3°43'35.4"E.
7. **NB10 (Wenduine).—**Area bounded by lines joining the following positions:
   a. 51°21.0'N, 2°57.1'E.
   b. 51°21.0'N, 3°00.7'E.
   c. 51°18.7'N, 2°55.8'E.
   d. 51°19.8'N, 2°54.5'E.
8. **NB12 (Callantsoog).—**Area bounded by lines joining the following positions:
   a. 52°53'57.2"N, 4°22'55.1"E
   b. 52°53'57.2"N, 4°29'55.1"E.
   c. 52°49'57.2"N, 4°29'55.1"E.
   d. 52°49'57.2"N, 4°22'55.1"E.

Mine Detonation Area

Mine detonation exercises may be conducted in an area with a radius of 4 miles centered on position 51°29'04.2"N, 2°49'55.2"E. Warnings of the procedure will be broadcast on VHF channel 16. Vessels are to avoid this area from 2 hours before until just after the detonation.

Mined Areas

Former NEMEDRI Danger Area No. 9 is an area in which danger due to mines laid between 1939 and 1945 still exists. For further information, see **North Sea and English channel—Mined Areas**.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1. (Saba and Sint Eustatius)

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2. (Bonaire)

Pub. 192, Sailing Directions (Enroute) North Sea.

Maritime Claims

The maritime territorial claims of the Netherlands are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles. **

* Claims straight baselines. Claims the Westerschelde as internal waters, through which passage requires prior permission. Requires advance permission or notification for innocent passage of warships in the territorial sea.

** To defined limits.

Pilotage

Netherlands Pilotage

Compulsory pilotage in the Netherlands depends on the following factors:

1. The vessel's destination.
2. The fairway being used.
3. The vessel's measurements.
4. The vessel's cargo.
5. If exemption/dispensation has been given to certain vessels.

Pilotage is compulsory in the following regions:

1. Noord Region—Delfzijl, Eemshaven and the Ems estuary, and the Terschelling estuary (Lauwersoog, Harlingen, West-Terschelling, Vlieland, Komwerderzand, and Den Oever).
2. Amsterdanm/IJmond Region—Amsterdam, IJmuiden, and the Texel estuary (Den Helder, Den Oever, Oudeschild, and Kornwerderzand).
3. Rotterdam/Rijnmond Region—Maasmond, Nieuwe Waterweg, Breeddiep, Beerkanaal, Calandkanaal, Hartelkanaal, Nieuwe Maas, Koningshaven, Noord, Rietbaan, Oude Maas, Spui, Beningen, Hollandsche IJssel up to the

barrage at Krimpen aan de IJssel, Beneden Merwede up to Hardinxveld-Giessendam and the tidal flat, Dordtsche Kil, Krabbengeul, Mallegat, Hollandsch Diep W of Moerdijkbrug, Haringvliet, Vuile Gut, Krammer N of Krammersluizen, Zuid Vlije, and Volkerak.

4. Scheldemonden Region—The River Scheldt, the Temeuzen-Ghent Canal, the Zuid Beveland Canal, the Walcheren Canal, Veerse Meer, Oosterschelde, Keeten, Krammer to the Krammer Locks, and the Schelde-Rhine connection to the Kreekrak Locks and Bergen op Zoom with dangerous cargo on board.

Exceptions to compulsory pilotage are given in the accompanying table.

In some cases, the pilot will be unable to board to perform pilotage duties, as follows:

1. Due to bad weather conditions.
2. If the design of the vessel does not allow the pilot to embark offshore.
3. Other extraordinary circumstances.

Unless prohibited by the harbormaster, shore-based pilotage will take place, in the above-mentioned circumstances, by VHF, but only on the open water sea routes. In general, the pilot will be able to board the vessel once the vessel is inside.

Vessels should send a request for pilots to the appropriate pilot station at least 6 hours in advance including the following information:

1. Vessel's name, call sign, and flag.
2. Date and time (state difference from UTC).
3. Port of destination.
4. Request for pilot and ETA boarding position.
5. Draft (in meters and centimeters).
6. Cargo—including description of any dangerous cargo.
7. Name of agent or owner.
8. Length, beam (in meters and centimeters), and grt.
9. Any other information.

If the original ETA becomes more than 1 hour 30 minutes in error (or 30 minutes for Den Helder, IJmuiden, or Amsterdam), the message should be repeated with the revised ETA.

The ETD should be sent 1 hour in advance.

Interruption or resumption of the Netherlands Pilotage Service will be announced in the navigational warnings broadcast by Scheveningen (PCH) Radio.

A pilotage agreement based on an international treaty between Belgium and the Netherlands applies to the estuary of the Westerschelde. Both countries have authority to pilot vessels from sea to Antwerpen and Ghent and conversely.

Exemptions to Compulsory Pilotage

Region	Fairway(s)	Exemption to compulsory pilotage
Noord	Westerems to Borkum (general traffic)	Maximum length: 150m or Maximum breadth: 25m or Maximum draft: 7m
Noord	Westerems to Borkum (car ferries)	Maximum length: 120m or Maximum breadth: 20m or Maximum draft: 7m
	Borkum to Eemshaven	Maximum length: 90m or Maximum breadth: 13m or Maximum draft: 7m
	Texel Roads to Den Helder (Nieuwe Diep)	Maximum length: 90m and Maximum draft: 7m
	Texel Roads to Den Helder (Koopvaardersbinnenhave)	Maximum length: 90m and Maximum draft: 5m
	Den Helder to Kornwerderzand	Maximum length: 60m or Maximum draft: 4m
	Harlingen to Kornwerderzand, Den Helder to Den Oever, and the remaining Waddenzee	Maximum length: 60m or Maximum draft: 2.5m
	Harlingen to Vlierede	Maximum length: 70m Maximum draft: 6m
Amsterdam/IJmond	All fairways with compulsory pilotage	Maximum length: 70m
Rotterdam/Rijnmond	All fairways with compulsory pilotage	Maximum length: 70m

Exemptions to Compulsory Pilotage		
Region	**Fairway(s)**	**Exemption to compulsory pilotage**
Scheldemonden	Schouwenbank to Vlissingen Oost	Maximum length: 75m or Maximum draft: 5.5m
	All other fairways with compulsory pilotage	Maximum length: 75m
Note.—Vessels with an exemption to compulsory pilotage or vessels sailing in fairways with ad hoc compulsory pilotage can be ordered by the authorities to make use of a pilot due to weather conditions or when deviating circumstances to the vessel, passengers and/or crew, traffic, or fairway occur.		

Pilot vessels on station or engaged in pilotage duties fly, at the masthead, a blue flag with a white L.

In addition to the lights prescribed in Rule 29 of COLREGS 72, pilot vessels in Dutch waters also exhibit a white flare at intervals of up to 10 minutes.

Deep Sea Pilotage

For information concerning Deep Sea Pilotage in the North Sea, the English Channel, and Skagerrak, see **United Kingdom—Pilotage**.

Pollution

Vessels navigating within the Netherlands Exclusive Economic Zone (EEZ) are requested to send pollution reports to Netherlands Coastguard Radio.

The message should contain the following information:

1. Name and call sign of reporting vessel.
2. Date and time (UTC) of observation.
3. Position, size, and type of pollution (heavy or light oil, color, thick or thin layer, etc.).
4. Name, port of registration or nationality, and type of discharging vessel.
5. Course and speed of discharging vessel.
6. Any other relevant information.

The Netherlands Coast Guard Radio (call sign: PBK)/MRCC Den Helder can be contacted, as follows:

1. VHF channel 16 (MMSI 002442000)
2. DSC channel 70 and 2187.5 kHz (MMSI 002442000)
3. Telephone: 31-223-542300 (operations)
   31-900-0111 (emergency)
4. Facsimile: 31-223-658358
5. Telex: 44-71088 KUSTW NL
6. INMARSAT (AOR-E): 424426512=CGHQ X
7. E-mail: ccc@kustwacht.nl

Regulations

Under certain conditions in the interests of national security, or for other causes, it may be necessary to prohibit navigation within the Netherlands zeegats or harbors, or to allow vessels to enter only under certain conditions. In such cases, the following signals will be shown in a conspicuous position:

1. By day—Three red balls, vertically disposed; or two cones, points together, over a ball.
2. By night—Three red lights, vertically disposed; or three lights vertically disposed; green over red over white.

If an incoming vessel approaching a zeegat should observe such a signal as above, the master must, unless wind and sea prevent it, proceed toward the examination vessel, which displays the same signal.

The examination vessel will give further instructions and in certain cases the vessel will be allowed to enter; the entering vessel must have a pilot onboard or be preceded by a pilot vessel or warship.

Should a warning shot be fired, all vessels in the vicinity must stop immediately, so far as their safety will allow. In no case will vessels then be allowed to enter. Non-compliance with these instructions expose a vessel and its crew to danger.

As a rule, entering at night is prohibited. If an examination vessel is not met in the entrance, then the vessel must heave to or anchor outside.

If off the entrance of the Westerschelde, vessels may proceed inward until an examination vessel is met. No previous announcement will be made of the enforcement of these measures for any particular zeegat or harbor.

Particularly Sensitive Sea Areas (PSSA)

The Wadden Sea and adjacent parts of the North Sea in the common Wadden Sea area of Denmark, Germany, and the Netherlands were granted (2002) the status of PSSA by the International Maritime Organization. For further information, see **North Sea and English Channel Sea—Regulations**.

Single Hull Tanker Restrictions

Single hull oil tankers are prohibited to enter or depart from a port or offshore terminal in Netherlands based on the anniversary date of the vessel's delivery, as given in the accompanying table.

The following single hull tankers are also prohibited to enter or depart from a port or offshore terminal in the Netherlands:

1. Category 1, 2, and 3 oil tankers carrying heavy grades of oil.
2. Oil tankers greater than 600 dwt but less than 5,000 dwt beginning on the 2008 anniversary of the delivery date of the vessel.

Category 1, 2, and 3 oil tankers are defined, as follows:

1. Category 1—Oil tankers of 20,000 dwt and over carrying crude oil, fuel oil, heavy diesel oil, or lubricating oil, or of 30,000 dwt and over carrying oil other than those just listed, which **does not** comply with the requirements for

new oil tankers as defined in Regulation 1(26) of Annex I of MARPOL 73/78.

2. Category 2—Oil tankers of 20,000 dwt and over carrying crude oil, fuel oil, heavy diesel oil, or lubricating oil, or of 30,000 dwt and over carrying oil other than those just listed, which complies with the requirements for new oil tankers as defined in Regulation 1(26) of Annex I of MARPOL 73/78.

3. Category 3—Oil tankers of 5,000 dwt and over but less than the limits specified for Category 1 and category 2 oil tankers.

Single hull tankers of 5,000 dwt and over carrying heavy grades of oil are prohibited from anchoring in areas under the jurisdiction of the Netherlands.

Single Hull Tanker Restrictions		
Category	**Delivery year**	**Prohibition year**
Category 1 Oil Tankers	1980 or earlier	2003
	1981	2004
	1982 or later	2005
Category 2 Oil Tankers	1975	2003
	1976	2004
	1977	2005
Category 2 Oil Tankers	1978 or 1979	2006
	1980 or 1981	2007
	1982	2008
	1983	2009
	1984	2010

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU. For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Quarantine

The master of the vessel must complete and sign a Maritime Declaration of Health. Standard IMO FAL Form No. 1 must be used. The following circumstances must be reported:

1. De-ratting Exemption Certificate expiration date.
2. Number of passengers and crew.
3. Are there any cases or suspected cases of plague, cholera, yellow fever, or smallpox?
4. Has plague occurred or been suspected among the rats and mice on board during the voyage or has there been abnormal mortality among them?
5. Has any person died on board during the voyage that has not been the result of an accident?
6. Is there on board, or has there been during the voyage, any case of disease which you suspect to be of an infectious nature?
7. Are there any sick persons on board?
8. Are you aware of any other condition on board which may lead to infection or spread of disease?

If any of the above circumstances is present, or in the case of other quarantine problems, the following actions must be taken by the vessel:

1. Advise the pilot and the vessel's agent.
2. Contact the Department of Infectious Diseases of the Municipal Health Services (GGD) immediately by telephone (31-10-4339897) and ask for the physician for infectious diseases on duty.
3. Keep the Maritime Declaration of Health on hand and request the person responsible for medical care to remain on board to answer any questions.
4. Maintain the International Code of Signals Quebec flag (quarantine) on display until clearance.

If none of the above circumstances are present, the form can be mailed to the following address:

Municipal Health Services (GGD)
PO Box 70032
3000 LP Rotterdam
Netherlands

Search and Rescue

The Netherlands Coastguard is responsible for coordinating search and rescue operations through the Joint Rescue Coordination Center (JRCC) Den Helder, which can be contacted, as follows:

1. Telephone: 31-9000111 (24-hour emergency)
   31-223-542300 (24-hour operations)
2. Facsimile: 31-223-658358
3. E-mail: ccc@kustwacht.nl

The Netherlands Coastguard Radio (PBK) maintains a continuous listening watch for distress traffic on 2187.5 kHz, VHF channel 16, and VHF channel 70.

The Royal Netherlands Lifeboast Society (KNRM) maintains lifeboats, as follows:

1. Breskens (51°24'N., 3°34'E.).
2. Noordland (51°37'N., 3°41'E.).
3. Stellendam (51°50'N., 4°02'E.).
4. Hoek van Holland (51°59'N., 4°06'E.).
5. Scheveningen (52°06'N., 4°16'E.).
6. IJmuiden (52°28'N., 4°34'E.).
7. Den Helder (52°58'N., 4°47'E.).
8. West Terschelling (53°22'N., 5°13'E.).
9. Harlingen (53°11'N., 5°25'E.).
10. Lauwersoog (53°25'N., 6°12'E.).
11. Eemshaven (53°27'N., 6°50'E.).

Signals

In Nieuwe Waterweg, vessels with bow rudders navigating stern-first shall display from the yardarm, by day, two cones, 0.6m long, points down.

Storm Signals

Netherlands storm signals are shown only at Flushing and Hoek van Holland. The signals are the same as the night signals for gales and strong wind as given for Belgium.

Sluicing Signals

In Netherland waters, the following sluicing signals are shown:

1. By day—A blue board, with the word SPUIEN painted on it, often displayed in addition to the three red lights.
2. By night—Three red lights exhibited in a triangle, point up.

Port Closure Signals

Port closure signals are described under Regulations.

Dredge Signals

Bucket or suction dredges without their own means of production show additional signals, as given in the accompanying table titled **Netherlands—Dredge Signals**.

Vessels Under Pilotage

The Dutch Pilotage Service, the Flemish Pilotage Service, and the Joint Nautical Service have introduced signals to be used on vessels under pilotage, as given in the accompanying table titled **Netherlands—Signals for Vessels Under Pilotage**.

Submarines Operating on the Surface

Dutch submarines operating on the surface display an all round rotating amber light showing about 90 flashes per minute.

Submarine Operating Areas

Submarines exercise in an area SW of Bonaire.

Time Zone

The Time Zone description for the Netherlands is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is observed from the last Sunday in March until the last Sunday in October.

The Time Zone description for Bonair, Saba, and Sint Eustatius is QUEBEC (+4). Daylight Savings Time is not observed.

Netherlands—Signals for Vessels Under Pilotage

First Character	Overall Length of Vessel	Second Character	Destination
1	Vessels up to 120m	W	Wandelaar
2	Vessels between 120m and 170m	O	Steenbank
3	Vessels between 170m and 200m	Z	Zeebrugge
4	Vessels between 200m and 250m	A	Antwerpen
5	Vessels between 250m and 300m	H	Hansweert
6	Vessels over 300m	G	Ghent
7	Vessels on second course with no pilot	T	Terneuzen
8	No change of pilot at Vlissingen Rede	E	Everingen (anchorage)
9	No change of pilot at Vlissingen Rede; however, passenger embarkation/disembarkation	VT	Total Zeesteiger
		S	Slowhaven
		V	Vlissingen
		R	Rede Vlissingen Anchorage

Netherlands—Dredge Signals

Meaning	Day signal	Night signal
Side on which the vessel may pass	Two green diamonds, vertically disposed	Two green lights, vertically disposed
Side on which the vessel may pass without causing any wash	Red board over a white board; or a single board, with the upper half red and the lower half white	One red light over one white light
Side on which passing is prohibited	Red ball or red board at the same height as the upper board on the passing side	Red light at the same height as the upper light on the passing side

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in the Netherlands are, as follows:

1. At North Hinder (comprising Noord Hinder North and Noord Hinder South Traffic Separation Schemes). (IMO adopted)
2. In the approaches to the Hook of Holland (comprising Maas West Outer, Maas West Inner, Maas Northwest, and Maas North Traffic Separation Schemes). (IMO adopted)
3. At West Hinder. (IMO adopted)
4. German Bight Western Approach. (IMO adopted)
5. Vlieland North. (IMO adopted)
6. Off Vlieland. (IMO adopted)
7. Off Texel. (IMO adopted)
8. Off Brown Ridge. (IMO adopted)
9. West Friesland. (IMO adopted)
10. Terschelling—German Bight. (IMO adopted)
11. East Friesland. (IMO adopted)
12. Off Botney Ground. (IMO adopted)

U.S. Embassy

The U.S. Embassy is situated at Lange Voorhout 102, The Hague.

The mailing addresses are, as follows:

1. Netherlands address—
   Lange Voorhout 102
   2514 EJ, The Hague
2. U. S. address—
   PSC 71, Box 1000
   APO AE (09715)

U. S. Embassy Netherlands Home Page
http://thehague.usembassy.gov

Vessel Traffic Service

Vessel Traffic Services are in operation, as follows:

1. Delfzijl/Eemshaven (53°19'N., 7°00'E.).
2. Den Helder (52°58'N., 4°47'E.).
3. Nieuwe Waterweg (52°03'N., 3°35'E.), consisting of three Traffic Centers.
4. Amsterdam (Noordzeekanaal) (52°29'N., 4°20'E.).
5. Scheldemond (51°27'N., 3°25'E.), consisting of eight Traffic Areas in the Westerschelde along the Belgium/Netherlands border
6. Terschelling (53°21'N., 5°09'E.).

For further information, see Pub. 192, Sailing Directions (Enroute) North Sea.

NICARAGUA

General	**409**
Buoyage System	**409**
Cautions	**409**
Currency	**410**
Fishing Areas	**410**
Government	**410**
Holidays	**410**
Industries	**410**
Languages	**410**
Navigational Information	**410**
Search and Rescue	**411**
Time Zone	**411**
U.S. Embassy	**411**

General

Nicaragua, which borders Costa Rica and Honduras, is located in Central America. The Caribbean Sea lies to its N and the Pacific to its S.

Both coasts lie within the hot tropical zone; however, the temperatures become cooler in the interior highlands.

The Atlantic coast has expansive coastal plains rising to central interior mountains. Inland, the country is spanned diagonally by two high mountain chains.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Special Warning 124 (Issued 10 June 2008)

1. Mariners operating small vessels such as yachts and fishing boats should note that Nicaragua has boundary disputes with its neighbors in both its Caribbean and Pacific waters, and should exercise caution.
2. The Caribbean waters lying generally S of the 15th parallel and E of the 82nd and up to the 79th meridians are subject to a current dispute between Nicaragua and Colombia.
3. The International Court of Justice has delineated a new maritime boundary line awarding maritime areas to the government of Nicaragua previously claimed by Honduras above the 15th parallel and apparantly E of the 82nd meridian.
4. The Nicaraguan navy is patrolling portions of this maritime space, enforcing the requirement that fishing vessels hold a valid Nicaraguan fishing license and has seized vessels not in compliance.
5. There have been cases where Nicaraguan authorities have seized foreign-flagged fishing and other vessels off the Nicaraguan coast. The government of Nicaragua imposes heavy fines on parties caught fishing illegally within waters of Nicaragua's jurisdiction.
6. While in all cases passengers and crew have been released within a period of several weeks, in some cases the ships have been searched, personal gear and navigation equipment has disappeared, and Nicaraguan authorities have held seized vessels for extensive periods.
7. Prompt U.S. Embassy consular access to detained U.S. citizens on Nicaragua's Caribbean coast may not be possible because of delays in notification due to the relative isolation of the region.

8. There have been reported incidents of piracy in Caribbean and Pacific waters off the coast of Nicaragua, but the Nicaraguan navy has increased its patrols and no recent incidents have been reported.

Currency

The official unit of currency is the cordoba, consisting of 100 centavos.

Fishing Areas

The coastal areas on the Caribbean Sea coast are extensively fished by local vessels working out of small harbors and rivers. Fishing vessels are also found on Miskito Bank (14°28'N., 82°42”W.).

Government

Flag of Nicaragua

Nicaragua is a republic. The country is divided into 15 departments and two autonomous regions.

Nicaragua is governed by a directly-elected President serving a 5-year term. The unicameral National Assembly is composed of 92 members; 90 members are directly elected using a system of proportional representation, with one seat designated for the previous President and one seat designated for the runner-up in the previous presidential election. All members serve a 5-year term.

The legal system is based on a civil law system.

The capital is Managua.

Holidays

The following holidays are observed:

January 1	New Year’s Day
Holy Thursday	Variable
Good Friday	Variable
Easter Sunday	Variable
May 1	Labor Day
May 30	Mother’s Day
July 19	National Liberation Day
August 1	Fiesta Day
September 14	San Jacinto Battle Day
September 15	Independence Day
November 2	All Souls’ Day
December 8	Immaculate Conception
December 25	Christmas Day

Industries

The main industries are agriculture and food processing, chemicals, machinery and metal products, textiles and clothing, petroleum refining and distribution, beverages, footwear, and wood.

The main exports are coffee, beef, shrimp and lobster, tobacco, sugar, gold, peanuts, textiles, and apparel. The main export partners are the United States and El Salvador.

The main imports are consumer goods, machinery and equipment, raw materials, and petroleum products. The main import-trading partners are the United States, Mexico, Venezuela, Costa Rica, and Guatemala.

Languages

Spanish is the official language. English and Indian are widely spoken on the Atlantic coast.

Navigational Information

Enroute Volumes

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2.

Pub. 153, Sailing Directions (Enroute) West Coasts of Mexico and Central America.

Maritime Claims

The maritime territorial claims of Nicaragua are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Requires advance permission or notification for innocent passage of warships in the territorial sea.

Maritime Boundary Disputes

Dispute with Colombia over using the 82°W meridian as the maritime boundary.

Colombia, Honduras, Nicaragua, Jamaica, and the United States assert various claims to Bajo Nuevo and Seranilla Bank.

Legal dispute with Costa Rica over navigational rights on the San Juan River.

Advised by the ICJ to adopt a triparite resolution with El Salvador and Honduras to establish a maritime boundary in Golfo de Fonseca which considers Honduran access to the Pacific Ocean.

Search and Rescue

The Nicaraguan Air Force coordinates search and rescue operations. The Maritime Rescue Coordination Center (MRCC) is situated at the international airport in Managua and can be contacted, as follows:

1. Telephone: 505-223-31428
2. Facsimile: 505-223-31981
3. E-mail: fzaaerea@tmx.com.ni

Nicaragua is part of the Corporacion Centroamericana de Servicios de Navegacion Aerea (COCESNA), the Central American aeronautical search and rescue network. Rescue Sub-Center (RSC) Nicaragua works with RCC Centro America and can be contacted, as follows:

1. Telephone: 505-276-8580
   505-233-1602
2. Facsimile: 505-276-8580
   505-233-1602

Further information on COCESNA can be found in **Honduras—Search and Rescue**.

Time Zone

The Time Zone description is SIERRA (+6). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at Kilometer 5.5 Carretera Sur, Managua.

The mailing address is APO AA (34021).

U. S. Embassy Nicaragua Home Page
http://nicaragua.usembassy.gov

NORTH ATLANTIC OCEAN

General 413
Cautions 413
Climatology 416
Currents 425
Ice 427
Navigational Information 427
Pollution 429
Regulations 430
Routes 434
Ship Reporting System 434
Tides 434
Appendix I—Western Europe Tanker Reporting System (WETREP) 435
Appendix II—Routes Across the North Atlantic Ocean to the Strait of Gibraltar and Bishop Rock 439
Appendix III—Routes to and from Canada, the United States, and the Caribbean Sea 443

General

The North Atlantic Ocean is bounded on the E by the NW coast of Africa and the W coast of Europe, on the N by the Arctic Ocean, and on the W by the E coast of North America and the NE coast of South America. Its S limit is considered to be the Equatorial Countercurrents, at about 8°N.

The Mid-Atlantic Ridge, an immense median mountain range, is the most outstanding feature of the ocean floor. It extends throughout the length of the Atlantic Ocean, claiming the center third of the sea bed and reaching 1,000 miles in width. The depth of water over the ridge is less than 2,700m in most places. The ridge divides the ocean into two large troughs, with depths averaging between 3,700m and 5,500m. A central valley, 900m deep, cuts into the crest of the ridge and extends its full length. This valley is intersected at nearly right angles by deep fissures which stretch from continent to continent. In some areas, these fracture zones provide conduits for the flow of the deep waters from basin to basin.

Transverse ridges running between the continents and the Mid-Atlantic Ridge divide the ocean floor into numerous basins; some of the larger basins in the North Atlantic Basin are the Guiana Basin, the North American Basin, the Cape Verde Basin, and the Canaries Basin.

The deep ocean floor is thought to be fairly flat, although numerous seamounts and some guyots exist. The Puerto Rico Trench is stated to be the deepest part of the North Atlantic Ocean, with a depth of 9,219m in position 19°35'N, 68°08'W.

The Sargasso Sea, well defined on its W side by the Gulf Stream between 20°N and 30°N, is a thick mass of warm saline water covered by millions of tons of sargassum weed. It is a calm area of high evaporation and low precipitation.

Cautions

Piracy

The security of vessels off the West African coast and at some ports is a serious problem. Numerous attacks by gangs of thieves, some of whom were armed, have occurred. These attacks generally took place in the outer roadsteads, but some were carried out on vessels berthed alongside, anchored in inner harbors, or at sea. In addition to the loss of property and injury to crew members, the thieves used naked lights for illumination which created a serious fire risk.

The International Maritime Bureau (IMB) of the International Chamber of Commerce has established a Piracy Countermeasures Center at Kuala Lumpur. This center operates for the Southeast Asian Region and is able to receive reports from vessels concerning attacks and advise of danger areas. Piracy warnings are broadcast by the center.

For further details the IMB Center can be contacted, as follows:

IMB Piracy Reporting Center
ICC IMB (Asia Regional Office)
P.O. Box 12559
50782 Kuala Lumpur
Malaysia
Telephone: 60-3-2078-5763
Facsimile: 60-3-2078-5769
Telex: MA34199 IMBPCI
E-mail: imbkl@icc-ccs.org
piracy@icc-ccs.org
Web site: http://www.icc-ccs.org (click on IMB Piracy Reporting Center)

It should be noted that mariners can use the above web site to access the following information promulgated by the IMB Piracy Reporting Center:

1. IMB Piracy Alert.
2. IMB Weekly Piracy Report.
3. IMB Live Piracy Map.

A 24-hour Anti-Piracy Helpline has been established at the IMB Piracy Reporting Center to report information concening maritime crime and security, including terrorism, piracy, and other illegal activities. All information will be treated in strict confidence and will be passed on to relevant authorities for further action. The Anti-Piracy Helpline can be contacted 24 hours, as follows:

1. Telephone: 60-3-2031-0014
2. Facsimile: 60-3-2078-5769
3. Telex: MA 34199 IMBPCI
4. E-mail: imbsecurity@icc-ccs.org

Guidance regarding practices recommended for vessels operating in high risk areas have been published by the International Maritime Organization's (IMO) Revised Maritme Safety Committee (MSC) Circulars, which can be accessed on the Internet, as follows:

IMO Revised MSC Circulars

http://www.imo.org/safety/mainframe.asp?topic_id=114

Particularly Sensitive Sea Areas (PSSA)

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

The following areas have been declared by the IMO to be a PSSA:

1. The Wadden Sea—Denmark, Germany, and the Netherlands.
2. Western European waters—Belgium, France, Ireland, Portugal, Spain, and the United Kingdom.
3. Spain—Islas Canarias (Canary Islands).

Special Warning 121 (Issued 20 March 2003)

1. Coalition naval forces may conduct military operations in the Eastern Mediterranean Sea, Red Sea, Gulf of Aden, Arabian Sea, Gulf of Oman, and Arabian Gulf. The timely and accurate identification of all vessels and aircraft in these areas are critical to avoid inadvertent use of force.

2. All vessels are advised that Coalition naval forces are prepared to exercise appropriate measures in self-defense to ensure their safety in the event they are approached by vessels or aircraft. Coalition forces are prepared to respond decisively to any hostile acts or indications of hostile intent. All maritime vessels or activities that are determined to be threats to Coalition naval forces will be subject to defensive measures, including boarding, seizure, disabling, or destruction, without regard to registry or location. Consequently, surface vessels, subsurface vessels, and all aircraft approaching Coalition naval forces are advised to maintain radio contact on bridge-to-bridge channel 16, international air distress (121.5 MHz VHF), or military air distress (243 MHz UHF).

3. Vessels operating in the Middle East, Eastern Mediterranean Sea, Red Sea, Gulf of Oman, Arabian Sea, and Arabian Gulf are subject to query, being stopped, boarded, and searched by U.S./Coalition warships operating in support of operations against Iraq. Vessels found to be carrying contraband bound for Iraq or carrying and/or laying naval mines are subject to detention, seizure, and destruction. This notice is effective immediately and will remain in effect until further notice.

Special Warning 120 (Issued 16 November 2001)

1. Due to recent events in the Middle East and the American homeland, U.S. forces worldwide are operating at a heightened state of readiness and taking additional defensive precautions against terrorist and other potential threats. Consequently, all aircraft, surface vessels and subsurface vessels approaching U.S. forces are requested to maintain radio contact with U.S. forces on bridge-to-bridge channel 16, international air distress (121.5 MHz VHF), or MILAR Distress (243 MHz UHF)

2. U.S. forces will exercise appropriate measures in self-defense if warranted by the circumstances. Aircraft, surface vessels, and subsurface vessels approaching U.S. forces will, by making prior contact as described above, help make their intentions clear and avoid unnecessary initiation of such defensive measures.

3. U.S. forces, especially when operating in confined waters, shall remain mindful of navigational considerations of aircraft, surface vessels, and subsurface vessels in their immediate vicinity.

4. Nothing in this special warning is intended to impede or otherwise interfere with the freedom of navigation or overflight of any vessel or aircraft, or to limit or expand the inherent self-defense right of U.S. forces. This special warning is published solely to advise of the heightened state of readiness of U.S. forces and to request that radio contact be maintained as described above.

Locust Reports

Many countries in Africa and Southwest Asia are, from time to time, invaded by swarms of Desert Locust. These locusts are capable of traveling for hundreds of miles and have repeatedly been seen in flight at sea off the NW coast of Africa and within the Mediterranean Sea. The adult Desert Locust is about 60mm long, with a wingspan of about 120mm. They vary in color from red to yellow according to their state of maturity.

Reports of locusts in all infested countries are exchanged through the Desert Locust Information Service, Food and Agriculture Organization (FAO) of the United Nations, Rome. To

assist in the provision of appropriate warnings to countries threatened by locust invasion, mariners sighting locusts are requested to report by radio or, as follows:

1. Telephone: 39-06-570-52420
2. Facsimile: 39-06-570-55271
3. E-mail: eclo@fao.org
4. Web site below:

http://www.fao.org/news/global/locusts/locuhome.htm

The report should include the following particulars:

1. Date and time (specifying UT/GMT or zone time) when locust first seen.
2. Latitude and longitude, if possible to nearest second, where locusts first seen.
3. Time and position at which locusts were last seen.
4. Whether isolated locusts (seen in flight singly), locust groups(s) (flying locusts seen intermittently in numbers), swarm (flying locusts seen continuously in numbers over a period of at least a minute), dense swarm (obscuring part of horizon or other background), or locusts appearing on board or floating dead (isolated, groups, or swarms).
5. Color of locusts (yellow, pink, red, or gray).
6. Wind direction and speed.

The cost of these messages will be defrayed by the FAO Desert Locusts Information Service.

Forecasts by the international bodies in charge of monitoring the desert locust indicate there is a certain risk of an invasion of Mauritania, Morocco, and Algeria, and, with favorable winds, the Islas Canarias and the areas to the S and SE of Spain. Mariners are requested to communicate any possible sightings of the swarm to the nearest Maritime Radio Station or Maritime Rescue Coordination Center.

Off-lying Islands

Arquipelago de Azores (39°42'N., 31°07'W.) lies nearly in the mid-Atlantic Ocean. These islands are the summits of immense volcanic mountains, some of which are active, lying in a region of temperate climate known as the Azores High.

Arquipelago de Madeira (Madeira Islands) (32°45'N., 17°00'W.), about 400 miles W of the coast of Morocco, are the summits of dormant volcanoes rising sheer from the ocaen depths. The climate is usually mild, marred occasionally by the "leste," a hot dry wind off the Sahara Desert.

Islas Canarias (Canary Islands) (28°30"N., 16°00'W.), volcanic islands with active and extinct craters, lie close of the coast of Western Sahara. Hot dry winds from the Sahara Desert are moderated by the cool Canaries Current, which branches from the North Atlantic Current and sets S off the NW coast of Africa.

Arquipelago de Cabo Verde (Cape Verde Islands) (15°00'N., 24°00'W.) are peaks of immense volcanoes, one of which is active, rising from the ocean depths.

Dangerous Waves

Along the Gulf Stream.—Winter and spring storms passing over the Gulf Stream along the E coast of the United States may be modified rapidly enough to create dangerous wind and wave situations. This is particularly true in the North Wall, a narrow band of extreme horizontal water temperature change that marks the N edge of the Gulf Stream. In early winter, cold air outbreaks along this N edge sometimes result in a doubling of the wind speed compared to the wind speeds of surrounding seas. During February and March, the waters N of the Gulf Stream are at their coldest while the Gulf Stream remains relatively warm. Also from the North Wall to 10 to 20 miles into the Gulf Stream, strong NE currents are encountered. The strong NE winds on intense coastal storms tend to pull cold Arctic air across the slope water to near Cape Hatteras. As this cold air reaches the Gulf Stream, it encounters rapidly increasing sea surface temperatures. This sudden warming produces an increase in wind speeds and gustiness. This in turn causes higher and confused seas. In addition, these NE seas encounter opposing currents of 3 to 5 knots, resulting in a sharp increase in wave heights and much steeper wave slopes. Waves may even break. This action causes problems for small craft navigating inlets in wave heights of less than 1m. With 6.1to 9.1m seas, the result is dangerous to any ship. To avoid this problem, it is often best in late winter and spring to cross the Gulf Stream as far E as possible, since the cold air should be modified somewhat, reducing the instability effect.

Newfoundland.—The waters off Newfoundland are among the stormiest in the world. In the SE part of this region, the frequent passage of intensifying extratropical cyclones is reflected in a high frequency of rough seas. During late autumn and winter, seas exceed 1.5m more than 90 per cent of the time. Although mountainous seas (equal to or greater than 12m) have never been reported in this region, there have been numerous reports of 6.1m waves near the E apex of this region. Waves as high as 15m have been observed in nearby waters on several occasions during the winter months. Although storms are less frequent and less intense in summer, seas 2.4m or higher nevertheless have been observed as much as 50 per cent of the time in some years.

Fishing Vessels

Concentrations of fishing vessels can be encountered off the African coast and in the SW approaches to the Strait of Gibraltar.

Autonomous Temperature Line Acquisition System (ATLAS) Buoys

The National Oceanic and Atmospheric Administration (NOAA) maintains an array of ATLAS buoys, known as the Pirata array, in the equatorial Atlantic Ocean. ATLAS buoys are yellow 2m toroid buoys with radar reflectors; the buoys, which should be given a berth of 5 miles, are located in the following positions:

a. 0°01.9'N, 0°00.7'E.
b. 0°00.8'N, 9°54.1'W.
c. 6°03.4'S, 10°00.1'W.
d. 9°58.6'S, 9°58.6'W.
e. 20°27.1'N, 23°07.9'W.
f. 11°27.9'N, 23°00.2'W.
g. 4°02.3'N, 22°58.6'W.
h. 0°00.6'S, 23°00.7'W.
i. 7°52.9'S, 30°29.1'W.
j. 13°31.6'S, 32°37.4'W.
k. 18°53.6'S, 34°40.0'W.
l. 0°03.8'N, 35°04.0'W.
m. 20°01.4'N, 37°51.1'W.

n. 14°58.9'N, 38°01.5'W.
o. 11°30.2'N, 38°02.6'W.
p. 7°48.5'N, 38°07.2'W.
q. 4°06.5'N, 37°59.0'W.

Climatology

General

The Naval Research Laboratory Monterey, a corporate research laboratory for the United States Navy and Marine Corps, publishes port studies and forecaster handbooks that may be of use to the mariner. These publications can be accessed at the Naval Reserach Laboratory web site.

Naval Research Laboratory Monterey Home Page
http://www.nrlmry.navy.mil/pubs.htm

The African Severe Weather Port Guide contains information on the following ports:

1. Cape Verde Islands—Mindelo.
2. Morocco—Tangier.

The European Severe Weather Port Guide contains information on the following ports:

1. France—Brest.
2. Ireland—Cobh.
3. Morocco—Tangier.
4. Portugal—Lisbon.
5. Spain—Ferrol and Rota.
6. United Kingdom—Faslane and Greenock.

The Hurricane Haven Handbook North Atlantic contains information on the following ports:

1. Bermuda.
2. Canada—Halifax, Nova Scotia..
3. Portugal—Ponta Delgada, Azores.

Northwest North Atlantic Ocean (including the Bay of Fundy; the Gulf of St. Lawrence; the St. Lawrence River; the Atlantic coasts of Nova Scotia, Newfoundland, and Labrador; and Hudson Bay)

General.—The climate of these coasts, which are under both maritime and continental influences, is one of cold snowy winters and mild rainy foggy summers. The N part of the region, unnavigable during a good part of the year, presents fewer navigational weather hazards than the waters off Nova Scotia, Newfoundland, and southern Labrador, where storm-generated gales and freezing temperatures in winter, and frequent dense fog in summer, are constant problems. This area lies in the path of several climatic storm tracks and is even occasionally whipped by winds from tropical cyclones or their remnants.

Extratropical Cyclones.—The storms that move across this region are abundant year round; however, they are more severe from fall through spring than in summer. During winter about one-half of these storms generate winds of 28 knots or more over a fairly large area. During the spring this figure drops to one-third. By summer, less than 20 per cent of the extra-tropical systems are generating near-gale or gale-force winds, with occurrences of less than 10 per cent in some areas.

Strong summer winds are most likely in the Strait of Belle Isle and in Hudson Strait. Throughout the year, storms move across this region on a NE or E track. In the N part of the area some storms move toward the SE. Under average conditions, two or three storm centers pass within 150 miles of any location each month.

General Winds.—The abundance of extratropical cyclones from fall through spring accounts for the strength and the variability of the winds in the offshore waters. Gales are most frequent off Labrador, where they blow 20 to 25 per cent of the time from December through February. On the Grand Banks of Newfoundland, they occur 10 to 12 per cent of the time from December through March. While strong winds most often blow from the SW through NW, as do all winds during this period, gales also ride SE and NE wind.

Wind shifts are frequent. During the transitional period in spring and fall, winds are even more variable than in winter. Gales blow less often as summer approaches. By July, they are occurring less than 2 per cent of the time in the open seas. During the summer, winds with a S component blow more often; SW and S winds occur about one-half of the time. September winds are quite variable, while October marks a return to winter conditions.

Coastal and Local Winds.—Topography and a slight sea breeze effect are the main differences between coastal and offshore winds.

In the Bay of Fundy in winter, prevailing winds are from the N through NE compared to the SW through NW winds that blow along the exposed E coast of Nova Scotia. From December through March or April in both these areas, gales blow on 2 to 4 days per month and wind speeds average 8 to 14 knots. From May through November, winds are mostly S through SW in the Bay of Fundy and S through W along the E coast of Nova Scotia. Gales are rare and average wind speeds range from 6 to 10 knots. Sea breezes are most likely in spring when there are some days with sunny weather.

In the Gulf of St. Lawrence and the St. Lawrence River, winds, particularly strong winds, tend to blow along the lie of the land. In straits and channels, winds tend to blow along, rather than across, the passages. A slight land-sea breeze effect is noticeable in summer, particularly along the N shores of the St. Lawrence River. In general, winds along the Gulf of St. Lawrence coasts are similar to those in the open sea, with W through N winds common in winter and SW through W favored in summer. Winds often blow along the St. Lawrence River, giving rise to an abundance of SW and NE winds. Gales are most likely from November through March and can be expected on 2 to 4 days per month in the Gulf of St. Lawrence and on 1 or 2 days per month along the St. Lawrence River.

The E coasts of Newfoundland and Labrador are high and rugged, with deep indentations and fjords that result in many local winds. The general wind pattern in fall and winter is SW through NW. South winds are frequent at Cartwright, while at Hebron, W winds blow 60 per cent of the time. Winds are often strong from September through April, when they average 12 to 16 knots and gales blow on 1 to 4 days per month. Spring winds are variable, but there is an increase in NE and N winds at many locations. In the summer, SW through W winds are common. At Argentia, these winds are almost exclusively S. If conditions are right, an afternoon sea breeze will bring winds out of the N through E along these coasts.

Coastal winds in the Hudson Strait-Hudson Bay region are influenced by topography and, in the summer, the land-sea effect, during periods of quiet weather. At Cape Hopes Advance

in Hudson Strait, NW winds are frequent year round and blow more than 30 per cent of the time from September through June. Ship observations in the early fall seem to verify this preponderance of these NW winds. During the spring, there is a noticeable increase in E and SE winds; they become most common in summer. Gales can occur in summer, but are most likely from September through January, when they blow on an average of 4 to 8 days per month; wind speeds average as much as 17 knots during this time. The effect of topography can be seen at Lake Harbour, on the N side of Hudson Strait, where N winds prevail from fall through spring and S wind are the most common wind in summer; N winds are second most frequent.

Along the shores of the frozen Hudson Bay in winter, SW through NW winds prevail. Along the W coast, N winds are also frequent, as are S winds in southern James Bay. Spring winds become more variable and there is an increase in winds with an E component. In summer at many locations, NE and E winds blow as much as, or more than, S through NW winds. At Port Nelson in June, NE wind blow about 30 per cent of the time in the morning and more than 50 per cent of the time during the afternoon, while NW winds, off the land, decrease in frequency during the day. Autumn winds are variable, as SW through NW winds begin to take over. Gales are most likely from fall through spring, when they blow on 1 to 4 days per month on the average. During the summer, they can be expected usually on no more than 1 day per month.

Summer wind speeds average 8 to 12 knots; these increase to 12 to 15 knots by autumn.

Precipitation.—Days with rain and snow are plentiful along the shores of this region. On the average precipitation falls on 100 to 180 days annually. There is no dry or rainy season, but summer may have slightly fewer rainy days. Amounts vary, but in general they range from 890 to 1,525mm per year S of northeastern Labrador. Spring is often the least rainy period. Because of the cold temperatures decreasing the moisture-carrying ability of the air and the lack of moisture in winter over frozen Hudson Strait and Hudson Bay, annual average precipitation amounts in the N range from 255 to 510mm. Precipitation still falls on 100 to 150 days annually in this N region. The snow season runs from October through April or May in the S and from September through June in Hudson Bay and Hudson Strait.

Along the Atlantic coasts of Newfoundland and Nova Scotia and on the Bay of Fundy shores, 76 to 152mm of precipitation occur on 8 to 15 days per month on the average; low precipitation day figures occur most often in summer, while the lowest amounts are often recorded in spring. Snow is most likely in January and February. Along the Newfoundland coast, 510 to 890mm fall on 8 to 15 days; a little less falls around Nova Scotia. Maximum 24-hour snowfalls of up to 76cm have occurred. Extreme 24-hour rainfall amounts range from 125 to 250mm; most have been recorded in the fall.

Along the shores of the Gulf of St. Lawrence and up the St. Lawrence River, an average of 75 to 125mm of precipitation occurs on 10 to 20 days per month. Average amounts are generally lowest in spring while rainy days are least in summer. While snow falls from October through April, it is worst from December through February, when an average of 50 to 100cm falls on 10 to 15 days per month. Extreme 24-hour snowfalls of 15 to 25 inches have occurred. Maximum 24-hour rainfall amounts range from 75 to 150mm and have occurred most often in summer and fall.

Along the Labrador coast, precipitation amounts decrease N. In the S, 50 to 100mm fall on 13 to 16 days per month, while in the N, less than 25 to 50mm fall on 8 to 15 days per month. At Cartwright, 50 to 90cm of snow fall on 12 to 15 days per month from December through April; 90cm fell once in a 24-hour period. At Resolution Island, 12.5 to 25cm of snow fall on 7 to 15 days per month from October through April; 38cm once fell in a 24-hour period. In Hudson Strait and along the shores of the Hudson Bay, less than 25 to 50mm of precipitation are recorded on 5 to 17 days per month. Highest amounts and most precipitation days occur from July through November. Precipitation during this period occurs on 10 to 17 days per month. Snow is most likely in October and November, when an average of 20 to 40cm falls on 10 to 16 days per month; maximum 24-hour snowfalls of 25 to 35cm have been recorded.

Temperature.—Temperatures in this region show a wide annual and area variation as well as large changes within a day and within a month. Along the coasts exposure to the sea is an important factor in the temperature regime. Many locations in the Gulf of St. Lawrence and upriver are continental in nature, resulting in large diurnal variations. Temperature in a winter month can vary by as much as 28°C. Extreme highs in the Gulf of St. Lawrence have climbed into the upper single digits (°C) in winter while lows have reached the -34° to -21°C range. At maritime locations the difference in extremes shrinks. For example, at Sable Island the January high is 8.9°C, while the low is -12.2°C The annual range in temperatures is greatest in the Hudson Bay region, where the difference between average winter and summer temperatures may exceed 39°C.

Along the shores of the Bay of Fundy and the Gulf of St. Lawrence and on the Atlantic coasts of Nova Scotia and Newfoundland, winter daytime highs range from the low single digits below 0°C at sheltered ports to the low single digits (°C) at those that are exposed to the sea. Nighttime lows on the average drop to the low single digits to upper teens below 0°C range. Extremes drop to below 18°C and in the Gulf of St. Lawrence range from -26° to -34°C. Temperatures are more continental up the St. Lawrence River, where average daily maximums are in the single digits below 0°C. Average daily minimums range from about +13.3° to -22.2°C, with extremes of -34.4° to -48.3°C. In this region, high temperatures in winter have reached the low to upper teens (°C).

Winter temperatures change drastically along the Labrador coast. Daytime highs in the upper single digits below 0°C in the S drop to the lower teens below 0°C in the N, while nighttime lows are in the teens below 0°C. Extremes have reached the -34.4°C. In the unnavigable Hudson Strait and Hudson Bay in midwinter, daytime highs range from the low teens to the low 20s below 0°C, while average nighttime lows drop to the mid 20s to mid 30s below 0°C. Extremes have been recorded in the -45° to -51°C range.

Temperatures begin to climb everywhere in March and by May daytime highs in the mid single digits to mid teens (°C) are common S of Labrador, except along the St. Lawrence River, where they have already climbed into the upper teens (°C). They remain above freezing, on the average, along the Labrador coast and range from -3.9° to 4.4°C in the Hudson Strait and Hudson Bay. Nighttime lows are usually about 5.6° to 8.3FC cooler, except up the St. Lawrence River, where they run 11.1° to 10.9°C cooler.

July and August are the warmest months. South of Labrador, daytime highs usually climb into the upper teens to low 20s (°C), except along the St. Lawrence River, where the continental effect boosts some averages to near 26.7°C. Nights are usually 8.3° to 11.2°C cooler on the average. Extremes range from 29.4° to 37.8°C, depending upon exposure to the sea. Along the coast of Labrador, daytime temperatures in the low to upper teens (°C) are common, with nighttime temperatures dipping into the upper single digits (°C). Extremes range from 29.4° to 37.8°C.

In Hudson Bay and Hudson Strait in summer, average daily maximums range from the upper single digits (°C) at exposed locations to the upper teens (°C) at more continental ports. Nights are generally 8.3° to 11.2°C cooler. Extremes range from 22.8°C at Nottingham Harbor to 33.3°C at Port Nelson.

Temperatures begin to fall in September. By October, average daytime highs are running in the upper single digits to low teens (°C) along the coasts S of Labrador. Nighttime lows range from freezing to the mid single digits (°C). Along the Labrador coast, daytime highs in the mid to upper single digits (°C) and nighttime lows below freezing are common. In Hudson Strait and Hudson Bay, average daily maximums are in the low single digits (°C), while daily minimums are mostly in the low single digits below zero (°C), but do fall into the upper single digits below zero (°C) in some sheltered spots.

Humidity.—Like temperatures, relative humidities are affected by exposure.

Around the shores of the Bay of Fundy, the Gulf of St. Lawrence, and the Atlantic shores of Newfoundland and Nova Scotia, average relative humidities in the late fall and winter are in the 80 per cent range. This is usually either the annual high or low average, depending upon exposure. At maritime locations like Cape Race, Belle Isle, Sable Island, and Yarmouth, it represents a low, and relative humidities increase to the upper 80s to mid-90s (per cent) in summer. The diurnal variation is small at these locations, but humidities are highest in the early morning and lowest during the afternoon. At more continental locations like Chatham and Charlottetown, highest relative humidities occur in late fall and winter when temperatures are low. Average relative humidities at these locations reach a minimum in May, when they drop to the 70 per cent range. This annual variation also holds for the St. Lawrence River, except that late fall and winter values are in the low 80s (per cent), while May humidities are in the low 60 to 70 per cent range. Diurnal variations are large, particularly in summer, at continental locations. In the N, lowest relative humidities (70 per cent range) are recorded during the frozen winter when moisture is scarce. Humidities climb into the mid-80 to 90 per cent range in spring and fall, when more moisture is available and temperatures are still cold enough that the air is easily saturated. Early morning highs and afternoon lows are apparent along these N coasts, especially in summer.

Cloud Cover.—South of Labrador it is cloudiest in winter and usually least cloudy in fall, except along the St. Lawrence River, where fall is often the cloudiest time and summer least cloudy. In areas susceptible to sea fog, summer is almost as cloudy as winter, when skies are overcast (cloud cover equal to or greater than 8/10) three-quarters of the time. During the least cloudy seasons, skies are overcast about one-half the time. Along the Labrador coast and in Hudson Strait and Hudson Bay, fall and spring are the grayest seasons, while the period January through March is least cloudy. In September and October, skies are overcast about three-quarters of the time, while during February and March this condition occurs about one-third of the time.

Visibility.—The coastal waters of E and southeastern Newfoundland are among the foggiest in the world. When warm air over the Gulf Stream is carried across the cold Labrador Current, a thick fog forms. While this advection (sea) fog occurs most often in summer, when the necessary S winds are frequent, it can and does occur in any season. It may persist for more than a week and blanket several thousand square miles. During the summer, visibilities of less than 12 mile persist for more than 1 day about 30 per cent of the time. While this fog is most frequent off Cape Race, it occurs all along the Labrador Current from the N tip of Labrador to the Bay of Fundy. Advection fog also occurs over the Hudson Bay in late summer and early fall.

Radiation (land) fog is mainly a fall and winter phenomenon. It forms on calm clear cold nights and drifts out over coastal waters. It usually dissipates during the morning. It is less frequent and much more local than advection fog. Sometimes a steam fog will occur if the air is about 11°C cooler than the sea. This is similar to hot water steaming at normal room temperatures. These unstable conditions exist for short periods, usually along narrow bands of open water immediately adjacent to land or icebound regions. Snow and rain can also reduce visibilities.

July is usually the foggiest month. Off Cape Race, visibilities drop below 0.5 mile 30 per cent to more than 40 per cent of the time. These poor visibilities occur 20 per cent to more than 30 per cent of the time off the northern Newfoundland-southern Labrador coast, eastern Nova Scotia, and in the Bay of Fundy. Frequencies are less than 10 per cent elsewhere and are less than 5 percent in the Hudson Strait, Hudson Bay, and St. Lawrence River. Other summer months are a little less foggy. By September, visibilities less than 0.5 mile occur 10 per cent or more of the time only off eastern Newfoundland and on the Grand Banks of Newfoundland. Poor visibilities are relatively infrequent until May, when the summer buildup begins.

Fog at ports and land stations depends very much on exposure. At Cape Race and Belle Isle, visibilities drop below 0.5 mile on an average of 10 to 20 days per month from April through September; a July peak of 21 days at Cape Race and 19 days at Belle Isle are this foggy on the average. Along the shores of the Gulf of St. Lawrence and the Bay of Fundy, visibilities drop below 0.5 mile on 5 to 15 days per month from April through September; this occurs on an average of 21 days in July at Yarmouth. However, Wolfville in the Minas Basin records only 14 days each year with these visibilities. At continental locations like Montreal and Quebec, visibilities drop to less than 0.5 mile on 25 to 30 days annually; this is most likely to occur from fall through spring. Along the Labrador coast fog occurs on about 1 to 6 days per month from April through September. In Hudson Strait, visibilities drop below 0.5 mile on 5 to 15 days per month from June through September. Along the shores of Hudson and James Bays, these visibilities occur on about 4 to 8 days per month from June through September. At exposed Inoucdjouac (Port Harrison), this frequency increases to 6 to 12 days per month, while at sheltered Moosonee, in James Bay, it drops to 2 to 4 days per month.

Northeast North Atlantic Ocean (including Foroyar (Faeroe Islands), the British Isles, the W coast of Europe from Ile d'Ouessant to the Strait of Gibraltar, and the Arquipelago dos Acores)

General.—The climate in this region is influenced by the North Atlantic Ocean, particularly the remnants of the Gulf Stream, the wintertime Icelandic Low and the storms that create it, and the North Atlantic Subtropical High. These features result in mild rainy (particularly in the N) winters and cool relatively dry summers. Weather is in general more variable and windier in the N. The Subtropical High is a quieting influence in the S, even in winter. Its control is strongest in summer and extends to all but the most N regions, where weak lows still bring rain and clouds. Sea fog occasionally hampers visibilities.

Arquipelago dos Acores (Azores) are under the influence of extratropical lows throughout most of the year. The weather is therefore variable, with considerable cloudiness and some rainfall in all seasons. Normally only 7 or 8 lows actually pass over the islands each year and severe storms are neither common nor prolonged, yet the weather is constantly disturbed by the S extremities of weak cold fronts sweeping E over the North Atlantic Ocean. Only in the months of July and August when the North Atlantic High moves N over the area do periods of ideal weather persist. Conditions are most favorable for navigation from June through September. At this time winds are light, depressions infrequent, and visibilities good. Winter and early spring would be the least favorable because of the frequency of strong winds, reduced visibilities, and rough seas.

Extratropical Cyclones.—North Atlantic Ocean storms are the most important weather producers in these waters. While they most often move to the N of the British Isles, their circulations and fronts can produce weather over the entire region. Sometimes they rapidly move through, one storm following another, while at other times they lumber through at a snail's pace. Most dangerous are those large storms that stall over the central North Atlantic Ocean and sweep the area with strong SW winds, creating heavy seas for long periods. These extratropical cyclones are plentiful year round, but are most severe in winter.

General Winds.—In the offshore waters, winter is the windiest season. In the seas between northwest Ireland and Foroyar (Faroe Islands), gales are encountered 12 to 18 per cent of the time in the worst month, which is usually December. Winter gales are only a little less frequent (10 to 16 per ent) off southern Ireland and in the Irish Sea. Winter winds north of the English Channel are mainly out of the Sthrough NW, and these are also usually the strongest winds; sometimes gales ride SE winds between Scotland and Foroyar (Faroe Islands).

In the Bay of Biscay, SW through NE winds are frequent. Gales blow 10 to 13 per cent of the time in December, usually the worst month. This frequency drops to 4 to 9 per cent in January. South of Cabo Finisterre, the Subtropical High is partly responsible for the frequent N through NE winter winds; E winds are also common E of Cabo de Sao Vicente. Winter gales become less frequent toward the S. They blow about 10 per cent of the time off Cabo Finisterre, but only about 3 per cent of the time near the entrance to the Strait of Gibraltar. Just W of the Strait of Gibraltar, E winds, known as levanters, blowing at 15 to 20 knots, are encountered about 15 to 20 per cent of the time in winter.

In the N, spring winds are even more variable, due to closer passage of lows, while off the Atlantic coasts of Spain and Portugal, the building North Atlantic High has begun to stabilize wind directions. As storms become less intense, winds weaken throughout the region. Gales are most likely NW, of Ireland where they blow about 5 to 6 per cent of the time. North of the English Channel, S through NW winds are still common, while in the Bay of Biscay they frequently blow from the W through NE; this reflects the changeover to summer. This changeover is more apparent S of Cabo Finisterre, where N winds blow one-third of the time and NW through NE winds prevail. West of the Strait of Gibraltar, E winds remain frequent (15 to 20 per cent) and strong (15 to 17 knots).

Summer winds blow out of the SW through NW more than one-half the time from the Bay of Biscay to Foroyar (Faroe Islands). South of Cabo Finisterre, N winds prevail, with frequent NW through NE winds off Cabo Finisterre and E winds still fairly common near the Strait of Gibraltar. Summer gales are encountered less than 2 per cent of the time in all offshore waters except W of Ireland in August, where they occur about 4 per cent of the time.

During autumn, gales become more frequent while wind direction becomes more variable. September gales are infrequent. October gales are encountered more than 5 per cent of the time N of the English Channel and up to 14 per cent of the time W of Ireland. By November, they are blowing at a frequency close to that of winter. North of the Channel, S and SW winds are occurring up to 40 per cent of the time. In the S, N winds, while still prevailing, are waning; winds with E components are becoming more frequent. Near the Strait of Gibraltar, E winds are blowing 18 to 20 per cent of the time at speeds of 12 to 14 knots.

In Arquipelago dos Acores, the surface wind direction is variable throughout the year, although NW winds prevail over the W islands. The average wind speed is about 16 knots in winter and 9 knots in summer over the ocean. Along the coast, wind speed and direction vary widely according to exposure. Thus, wind speeds at Horta are slightly higher than over the adjoining water areas, while at Ponta Delgada, the exposure is such that wind speeds are only half that of the adjoining water area. Land and sea breezes are well developed throughout the year, resulting in morning calms an hour or two after sunrise, and a similar calm period near sunset. Gale force winds are most frequent in winter (6 per cent) and least in summer (less than 1 per cent).

Coastal Winds.—Descriptions of coastal winds in this region are, as follows:

1. **British Isles.—**Along the W coasts of England and Scotland and on the shores of Ireland, winds blow most often from the S through W. Since these coasts are irregular, there are many local wind effects. In narrow inlets, winds may follow the direction of the inlet and increase in strength. Winds are usually strongest from October through March when gales blow on 3 to 10 days per month along the Atlantic coasts and 1 to 5 days per month along other shores.

   Strong winds are most frequent along coasts exposed to winds from the S through W. Along the Atlantic coasts, gales often ride southwest winds. Winds have gusted to 80 to 100 knots along these exposed shores. December and January are usually the roughest months. Along these exposed coasts, average wind speeds run 14 to 18 knots from October

through March. In more protected waters like the Irish Sea, winds blow at about 8 to 12 knots.

In spring, winds are quite variable. In addition to the S through W flow, N and NE winds are common in St. George's Channel, while E and SE winfd blow often in the Irish Sea. South winds are common in the North Channel and along the S coast of Ireland. Northwest through E winds are frequently encountered along the Atlantic coasts.

The sea breeze is most apparent in summer, particularly at sheltered locations. In many places along these coasts it simply reinforces the prevailing onshore winds, making them more persistent and stronger during the afternoon. For example, at Pointe du Rocher, S winds that blow 8 per cent of the time on July mornings blow 21 per cent of the time during the afternoons. An increase in wind speeds, usually 2 to 5 knots, during the day is often a clear indication of the sea breeze effect. Afternoon wind speeds range from 8 knots in protected waters to about 14 or 15 knots along exposed shores. Gales are infrequent from May through September.

2. **Bay of Biscay.—**Along the shores of the Bay of Biscay, gales are most likely from October through March. North of Rochefort they occur on an average of 5 to 10 days per month. To the S, the average is 1 to 4 days per month.

Along the coast of France, winds out of the SW through W are common all year round. They are most persistent during spring and summer afternoons when reinforced by the sea breeze. Northwest winds are also frequent during summer afternoons for the same reason. Winds from the SE and E are common in winter while NE winds often blow in fall and spring.

Along the N coast of Spain, winds are most often out of the NE through SW at 8 to 10 knots from October through March. By March there is the hint of a sea breeze as afternoon winds often blow from the N; W and NW winds are also common on spring and summer afternoons. Morning winds blow most frequently from the S through SW. This pattern lasts until October.

3. **West Coasts of Spain and Portugal.—**Winter storms and their associated fronts bring variable, sometimes strong, winds from about October through March. North winds are frequent, but winds are often from the N through NE. However, the strongest winds are often out of the S through SW.

Gales usually occur on no more than 1 day per month during this period and are most likely N of Lisboa. In the summer, the land-sea breeze regime modifies the normal clockwise flow around the North Atlantic High within 10 to 15 miles of the shore. Morning winds of about 6 to 8 knots are mainly out of the N, while afternoon breezes usually have an offshore component at speeds of 10 to 15 knots; SW through NW winds are common.

When the pressure gradient is strong, N winds can prevail all day; these are part of the Northeast Trade Winds. The persistent winds from the NW through NE are also known as the Portuguese Trades. At Lisboa, they blow about 78 per cent of the time in July.

4. **Gulf of Cadiz.—**Late fall and winter winds are quite variable. Calms, as well as light winds from the N through SE, are frequent during the morning hours. By afternoon, winds often blow from the W through N. Gales are infrequent, but most likely in winter and spring. Wind speeds are highest in spring and early summer afternoons when they average 6 to 12 knots, thanks to the sea breeze effect; morning winds range from 4 to 8 knots.

From March through November, the land-sea breeze effect and the clockwise flow around the Subtropical High influence wind directions. Morning winds are usually off the land, out of the E through SE along the E shore of the Gulf of Cadiz. By afternoon, SW through W winds off the water are common. Similar conditions of onshore-offshore winds also exist along the N shore, where the N clockwise flow exerts a strong influence.

Local Winds.—Descriptions of local winds in this region are, as follows:

1. **Foroyar (Faroe Islands).—**Fjeldkasten are squalls that blow down the hills and through the gorges in Foroyar. They are often violent and there is little warning of their onset, as they can occur even in fair weather.

2. **Coasts of Spain and Portugal.—**The vendavales is a SW gale that may occur anywhere along the Spanish-Portuguese coast. It often precedes a cold front or low moving into the Mediterranean Sea, and is most likely in the winter half of the year.

The nordeste pardo is a NE gale that occasionally blows off the NW coast of Spain. Pub. 140, 3rd edition 1988

A strong NW wind, often reaching gale force, that blows along the N coasts of Spain is called a galerna. These coasts, protected by mountains against the strong S flow ahead of a storm to the N, are fully exposed to the strong NW winds that follow the passage of a cold front or storm to the N. This wind is usually accompanied by rain squalls and occasionally snow showers in winter. In summer, it often causes a rapid drop in temperature and sometimes comes in on showers or thunderstorms.

The foehn is a wind that occurs in mountainous regions throughout the world. Sometimes with a low to the W of Spain and a high to the E, strong S winds may occur. They are intensified by local topographic conditions as they blow into the Bay of Biscay along the N coast of Spain. A ship report of this condition one February had winds of 60 to 70 knots at anchorage at Ria del Barquero.

3. **Strait of Gibraltar.—**The levanter is an E wind in the Strait of Gibraltar that usually blows at 15 to 20 knots and occurs with a low centered over the western Mediteranean Sea. It is most frequent from October through May.

Poniente are frequent W winds in the Strait of Gibraltar and its vicinity.

Contraste is the Spanish nautical term for a sudden change of wind by which it becomes foul or contrary.

The leveche is a hot, dry, and often dusty S wind which may be encountered in the vicinity of the Strait of Gibraltar. Its approach is heralded by an arch of brownish cloud on the southern horizon. It is often an extension of the sirocco, a hot dry wind from the Sahara Desert.

Precipitation.—In the offshore waters, precipitation is most frequent from November through April, with a peak occurring usually in December or January. During the peak months, precipitation can be expected 18 to 25 per cent of the time in the seas off Ireland and Scotland, decreasing to 7 to 9 per cent of the time in the entrance to the Strait of Gibraltar. Most of this winter precipitation falls as rain. Snow is rare S of the entrance to the English Channel. It falls less than 1 per cent of the time in the waters off Ireland and about 2 per cent of the time in Jan-

uary in the sea area between Northern Ireland and the Hebrides Islands. Snow is most likely N of Scotland, where it falls from 1 to 3 per cent of the time from December through February. Summer is usually the driest time of the year in offshore waters. Rain falls about 10 per cent of the time N of the entrance to the English Channel and less than 5 per cent of the time to the S.

Along the coasts of Ireland, England, and Scotland, an average of 760 to 1,250mm of rain falls on about 200 to 250 days annually. This breaks down into quite a few days with drizzle and light rain, particularly when compared with a tropical port like Freetown, which averages 3,480mm of rain over 148 days annually. While rain falls year round on these shores, it is a little more frequent in August, and from October through January; in December an average of 75 to 175mm falls on 20 to 26 days. Even in the driest months of May and June, about 50mm of rain fall on 13 to 16 days each month on the average.

Snow is most frequent on Scottish shores, where it falls on about 25 to 35 days from October through March. Along the coasts of England and Ireland, it snows on about 5 to 15 days total from November through March. Thunderstorms occur on about 3 to 10 days each year along these coasts. They are most likely during the summer.

Along the French shores of the Bay of Biscay S to about Bordeaux, about 635 to 890mm of rain falls on 150 to 200 days annually; frequencies in general increase N. October through March are the rainy months. December is often the rainiest, when an average of 75 to 100mm falls on about 18 to 22 days. From November through March, snow is likely on a total of 3 or 4 days. Summer is the driest time. Thunderstorms, however, are most likely in summer, when they develop on 10 to 25 days on the average. They are most frequent at upriver ports like Bordeaux, occurring on 3 to 4 days per month from April through September. Rain is even more likely S of Bordeaux and along the N coast of Spain. Annual averages range from 760 to 1,520mm on 130 to 160 days. Some of this increase in amounts is due to the coastal mountains. December is usually the wettest month, when 100 to 200mm of precipitation falls on 15 to 18 days; snow is infrequent close to sea level. July and August are usually the driest months of the year; an average of 25 to 75mm of rain falls on about 6 to 8 days each month. Thunderstorms develop on a couple of days each month during the summer.

Along the Atlantic coasts of Portugal and Spain about 1,010 to 1,525mm of rain is measured along the N shores, decreasing to about 635mm around Lisboa and to 405mm at Cabo de Sao Vicente. October through March is the rainy period, when measurable rain falls on 10 to 16 days per month in the N and 5 to 10 days per month in the S; snow is rare. Thunderstorms are infrequent, occurring on about 1 day per month N of Lisboa and less to the S. At high elevations near the coast, like Porto, thunderstorms occur on 2 to 3 days during some months, but there is not necessarily a summertime maximum.

The dry region extends from Cabo de Sao Vicente along the southern coasts of Portugal and Spain. Annual averages of 380mm increase E to about 635mm at Rota. During the rainy period from October through April, rain falls on about 6 to 14 days per month. Thunderstorms occur on about 8 to 17 days annually and are most likely in autumn.

In Arquipelago dos Acores, the average monthly rainfall is greatest in January. About one-third of the annual rainfall occurs in April through September. June, July, and August account for only about one-tenth of the annual rainfall. Even in the driest months of the year, however, Arquipelago dos Acores have appreciable rainfall. The annual number of thunderstorm days increases from E to W, with 8 days in Ponta Delgada and 13 days in Santa Cruz. There is little seasonal variation; however, thunderstorms are least frequent in May through September. Snow is not observed on the coasts.

Temperature.—January and February are the coolest months of the usually mild winter. Winds off the water keep temperatures an average of 5.5° to 11.0°C higher along these coasts than along the North American coast. Winter temperatures N of Bordeaux on the average reach the to upper single digits (°C) during the day. Daytime temperatures to the S range from the low teens (°C) to around 15.6°C at Rota. At night, temperatures fall to the low to mid single digits (°C) from the shores of the Bay of Biscay N. South of Cabo Finisterre, minimum temperatures are usually in the upper single digits (°C). Temperatures are most likely to drop below freezing at continental ports like Bordeaux. and Nantes, where this occurs on 35 to 45 days annually. North of the English Channel, below-freezing temperatures occur on the average of less than 35 days annually; less than 15 days at many exposed locations. South of the English Channel, freezing temperatures can be expected on only a couple of days, except at sheltered ports along the French coast.

July and August are the warmest months. Daily maximums range from the upper teens (°C) in the British Isles to the mid 20s (°C) along the Bay of Biscay and the Atlantic coasts of Spain and Portugal to the upper 20s (°C) along the S coasts. Temperatures at Rota reach 32.2°C or more on about 16 summer days. This is common along the S coasts and also at well-sheltered Atlantic ports like Lisboa and Bordeaux. However, at exposed locations along all coasts 32.2°C temperatures are rare. During the summer, night minimum temperatures range from the upper single digits (°C) in the N to the upper teens (°C) near the Strait of Gibraltar.

In Arquipelago dos Acores, temperatures are coolest from January through March, when average daily maximums are in the mid teens (°C) with minimums in the low teens (°C). Temperatures hit a peak in August, when daytime highs often reach the mid 20s (°C) and nighttime lows fall into the upper teens (°C). Extremes have reached the low 30s (°C) in summer and low single digits (°C) in winter.

Humidity.—At sea, relative humidity is dependent on temperature; along the coast both temperature and exposure affect it. Daily minimum values usually occur during the afternoon when temperatures are highest, while maximum relative humidities occur during the early morning hours.

In the offshore waters, humidities are high year round, with a slight peak in the summer months. Average relative humidities range from about 80 to 90 per cent, the lowest values usually occurring in spring or late fall. The diurnal variation is about 15 per cent or less. In the entrance to the Strait of Gibraltar, the air is a little drier; average relative humidities are in the 70 per cent range year round, with a maximum in summer.

At some coastal locations in N waters, the diurnal variation is very small. At Wick, Scotland, for example, early morning relative humidities reach the low 90 per cent range year round. During the afternoon they drop 1 to 3 per cent in winter and about 7 per cent in summer. This compares to Rota, Spain,

where the difference between morning and afternoon relative humidities runs 10 to 12 per cent in winter and up to 20 per cent in summer.

Over most of the region, early morning, late fall or winter relative humidities reach 80 to 90 per cent. By afternoon, they drop into the 70 per cent range, except at exposed coastal locations along French and English coasts, where they fall about 5 per cent or so. Relative humidities are more complex during the summer. Along exposed coastlines, maximum relative humidities are often highest in late summer or early fall. However, minimum relative humidities may be lower than in winter. In general, they reach the upper 80 per cent range in the morning and fall to the upper 60 to mid 70 per cent range during the heat of the day. This does not hold, however, along the S coasts of Spain and Portugal, where summer humidities are lowest. Here they reach the mid 70 per cent range during the morning and fall to the mid 50 per cent rance during the afternoon, mainly due to the warmer temperatures along these coasts.

In Arquipelago dos Acores, the mean relative humidity throughout the year is about 75 to 80 per cent, with a maximum at night and a minimum in the afternoon.

Cloud Cover.—Winter cloudiness is abundant, a result of extratropical storms. On the coast, land fog adds to this cloudiness, particularly in the morning. Summer is less cloudy in the S waters, where the Subtropical High dominates. However, it is abundant in the N, where weak lows and sea fog are frequent. In winter, cloud cover averages 4/8 to 6/8 in the offshore waters of this area; the cloudiest region is from the entrance to the English Channel to the N, while the least cloudy area is Golfo de Cadiz. Overcast or obscured sky conditions occur on about 15 to 20 per cent of all winter days in Golfo de Cadiz and 20 to 30 per cent of all winter days along the Atlantic coasts of Spain and Portugal. These figures rise to 30 to 40 per cent in the Bay of Biscay and 30 to 50 per cent farther N.

Extratropical lows, sea fog, and land fog help keep the coasts of Ireland, England, and Scotland cloudy all year round. Many places have a slight summer maximum, while some are cloudiest in the fall. Except for a few well-sheltered locations like Donaghadee, cloudy skies (cloud cover 2/8 or more) are observed on 150 to 250 days each year. A peak often occurs in July, with an average of 20 to 25 days per month. As in open waters, cloudiness decreases S. It is cloudiest in the N in winter and least cloudy in the S in summer.

In some places along the Spanish and Portuguese coasts, a sea breeze blowing against coastal mountains produces an abundance of afternoon cloudiness in summer. In Lisboa cloudy days (cloud cover equal to or greater than 2/8) occur an average of seven to eleven times per month from October through April and just once in July and in August. Clear days (cloud cover equal to or less than 2/8) occur an average of 18 to 19 times in July and in August. In Golfo de Cadiz, the levanter brings the most cloudiness. At Rota, cloudy conditions occur on about 8 to 14 days per month from October through May and just 2 to 3 days in July and August. Clear skies are most frequent during July and August, when they occur on an average of 25 days.

In Arquipelago dos Acores, on the average, there are about 10 to 15 cloudy days (cloud cover equal to or greater than 8/10) each month from October through June; 5 to 7 cloudy days occur on the average from July through September. The daily variation of cloudiness is quite definite. Average monthly figures indicate that cloudiness is normally least at night and greatest during the day.

Visibility.—Both sea fog and land fog affect visibilities in these waters. Poor visibilities also occur during showers and sometimes in smoke around industrial areas. Sea fog frequently lowers offshore visibilities from June through August, while land fog forms mostly in fall and winter.

From the entrance to the English Channel N, summer visibilities drop below 2 miles about 10 to 15 per cent of the time and below 0.5 mile from 2 to 6 per cent of the time. Close to the coast, a few exposed locations are also affected by this fog; for example, Holyhead in June is affected by fog on an average of 9 days. However, most of the coast is relatively fog-free in summer. Coastal fog in these waters is worst along the E shores of the Irish Sea, and in St. George's Channe and Bristol Channel. Both land and sea fog are prevalent and local conditions vary considerably. Sheltered spots like Cardiff and Birkenhead experience fog on 80 to 100 days per year, with a peak from about November through March. More exposed locations experience sea fog in the summer, but less land fog. Along the other coasts fog is relatively infrequent, occurring on less than 20 days annually. In the winter, land fog formation is aided by smoke and pollution in industrial areas.

In the Bay of Biscay, fog is less frequent than in offshore waters to the N. There is still a summertime maximum, when visibilities drop below 0.5 mile about 1 per cent of the time. On the coast, winter land fog is often more of a factor, except at locations exposed to S through SW winds, like Punta de la Estaca de Bares; here sea fog is frequent in summer (about 10 days) in June. A definite wintertime fog maximum exists at ports that are located upriver, such as Nantes and Bordeaux, where fog forms on 60 to 80 days annually and about 7 to 10 days per winter month. This compares with 20 to 40 days annually and 2 to 4 days per winter month along the coast.

In the offshore water along the Atlantic coasts of Spain and Portugal, visibilities are poorest from June through September, when they fall below 2 miles about 4 to 7 per cent of the time and below 0.5 mile from 1 to 2 per cent of the time. Offshore visibilities are usually at their best in spring and late fall. On the coast, fog forms on an average of 20 to 40 days annually, with a summer maximum at exposed locations and a winter maximum at sheltered ports.

In Golfo de Cadiz and the entrance to the Strait of Gibraltar, fog is infrequent, dropping visibilities to less than 2 miles about 1 to 2 per cent of the time and below 0.5 mile nearly 1 per cent of the time from May through September. Along the coast fog is infrequent.

In Arquipelago dos Acores, visibility over the open sea is usually good. Restrictions to visibility are almost entirely a frontal phenomenon and is therefore neither persistent nor dense. On no more than 4 days per year does the visibility fall below 0.5 mile. Nearer the larger islands conditions are not quite as good, especially during the morning calms. At coastal stations, visibilities of 1 mile or less are observed less than 1 per cent of the time throughout the year. Visibilities of less than 6 miles occur most frequently in January through March and least frequently in July through September. Poorest visibility usually occurs during the night or early morning. Precipitation and haze are the major restrictions to visibility. Fog is infrequent, but it has been reported in every month.

Southeast North Atlantic Ocean (including the W coast of Africa from the Strait of Gibraltar to Cape Palmas)

General.—The climate of these waters is controlled by the North Atlantic Subtropical High, the South Atlantic Subtropical High, the heat low over Africa, and winter storms to the N. The circulation around the two highs (clockwise N of the Equator and counterclockwise S of the Equator) and their deflection toward the low create the Northeast Trade Winds and the Southwest Monsoon. Between these two systems lies a broad band of light winds, cloudiness, and showers known as the Intertropical Convergence Zone (ITCZ).

The day-to-day movement of this zone is slight but its seasonal variation is important. Moving N, from about 6°N, in spring, it heralds the coming of the Southwest Monsoon and the rainy season up to about 17°N. Moving S in autumn, it is a forerunner of the dry Northeast Trade Winds or harmattan S to about 7°N. These movements are accompanied by a N movement and expansion of the North Atlantic Subtropical High in spring and summer, and its return in fall. The South Atlantic Subtropical High plays its most important role in summer, as does the African heat low.

Few weather problems confront the mariner in these waters. Gales are infrequent and visibility is generally good. Haze and dust in the dry season (winter) and torrential downpours, S of 15°N, in the rainy season (summer) present the greatest problems.

Tropical Cyclones.—The ITCZ is often the spawning ground for E waves that travel across the Atlantic Ocean and sometimes develop into hurricanes. This is most likely to occur off the African coast in September. Such storms are often labelled Cape Verde Cyclones, a tribute to their place of birth. Aside from the showers and squalls, they are not much of a threat since they are usually in the initial stages of development. However, a few storms have developed and reached hurricane intensity (winds equal to or greater than 64 knots) around Arquipelago de Cabo Verde.

General Winds.—Two regimes affect winds over these waters. The Northeast Trade Winds are influential from about 7° to 35°N. The Southwest Monsoon blows over waters S of about 17°N. Distant extratropical storms influence winds in the N. Topography and the land-sea breeze effect alter winds close to the coast and around the islands.

North of the Islas Canarias, from about October through April, the Northeast Trade Winds are occasionally disrupted by E-moving extratropical storms passing to the N. These storms bring an increase in S through NW winds, although N through NE winds remain the most frequent. Gales (wind speeds equal to or greater than 34 knots) occur about 2 per cent of the time during this period. Average wind speeds reach a peak of around 13 knots in March. During the rest of the year, N and NE winds prevail. They are steadiest from June through September. Average wind speeds reach a low of about 8 knots in September. Gales are rare from May through September.

Between the Islas Canarias and Arquipelago de Cabo Verde lies the heart of the Northeast Trade Winds belt. Seasonal changes are mainly fluctuations in persistence. North through NE winds blow 50 to 90 per cent of the time. They are steadiest in summer, when they exceed the persistence of India's Southwest Monsoon and the E monsoon of the Amazon Basin. Wind speeds that average 8 to 12 knots in the morning increase to 12 to 18 knots by afternoon. While these averages are high, gales are infrequent since the winds are steady. Gales are most likely to be encountered in thunderstorms.

During the winter months, the Northeast Trade Winds penetrate as far S as about 7°N. This far S winds are mainly light and out of the NW through N. Farther N they become N through NE.

During the summer, the Southwest Monsoon penetrates to about 15°N. At these latitudes, light S through SW winds prevail. Average wind speeds S of about 15°N range from about 4 to 14 knots. Winds are strongest near Arquipelago de Cabo Verde in winter, when the Northeast Trade Winds hold sway, and S of 10°N in summer, when the Southwest Monsoon prevails. Gales are infrequent in these waters.

Coastal and Local Winds.—Along the Atlantic coast of Morocco, the Northeast Trade Winds that prevail all summer are deflected toward the NW by the sea breeze. Under ideal conditions, this lasts from about 3 hours after sunrise to 1 hour before sunset. A light land breeze often occurs at night. Gales are infrequent during the summer and average speeds run 8 to 12 knots; they are usually strongest during the afternoon.

Sometimes in late summer a hot, dry, and dusty wind will blow out of the SE through S. This wind is known locally as simoun or simoon. From about November through April, the S and SE winds are occasionally interrupted by winds out of the S through NW, associated with extratropical storms. These lows are responsible for the gales that blow on about 2 to 4 days per month during this season. They often ride in on W winds. Average winter wind speeds along this section of coast run 5 to 8 knots.

Strong winds are most frequent along the coast of Western Sahara and northern Mauritania. At Villa Cisneros, wind speeds of 27 knots or more occur on 8 to 15 days per month from April through August. Winds of 31 knots or more occur on 2 to 4 days per month at Nouadhibou (Port Etienne) from February through May.

Along the coast of Western Sahara, the contrast between the heated interior and the cool water along the coast is favorable for the development of local squalls that are accompanied by strong NE winds.

Along the coast of Mauritania, strong E winds often attend the squalls, which are locally called tornadoes (not to be confused with U.S. tornadoes). This temperature contrast is also responsible for a strong diurnal variation in wind speeds as part of the land-sea breeze effect. For example, at Nouadhibou (Port Etienne), average early morning wind speeds of 10 to 14 knots give way to 17 to 21 knot afternoon speeds from about April through September.

Land and sea breezes can be felt up to 20 miles out at sea. They deflect the prevailing N through NE winds to the NW during the day and toward the E at night. North winds are frequent year round, while NE and E winds are most common in winter.

At times, from October through March, SW through W winds blow along the coast of Western Sahara. While these are usually light, they can be strong for short periods. Sometimes a very hot, dry, and dusty wind blows out of the E through S. It is most likely in the spring and fall and is known as irifi.

Along the coast of Mauritania, a wind from the NE or E often comes from deep in the interior and arrives hot, dry, and dusty. This wind is called a harmattan. It becomes increasingly frequent S of about 20°N. It blows as far S as Conakry in win-

ter.

Along the Mauritania coast, the harmattan occurs most often from November through February. The Southwest Monsoon reaches the coast of southern Mauritania in the summer. It is most noticeable during July and August. Average wind speeds along the Western Sahara-Mauritania coast range from 8 to 10 knots in autumn to 12 to 15 knots in spring.

From Cabo Verde to about Conakry, N winds prevail from about November through May (40 to 80 per cent). At Dakar, the sea breeze sometimes deflects the wind toward the NW while the land breeze helps pull it towards the NE. Wind speeds of 6 to 8 knots in the morning increase to 8 to 10 knots by afternoon on the average. Gales are rare.

South of Conakry, the Southwest Monsoon blows during the winter. It is not a strong dominating flow and so is influenced by land and sea breezes. For example, at Freetown during the early morning hours the land breeze opposes the monsoon so that SW and W winds are secondary to calms and even to NE and E winds. During the afternoon, the sea breeze reinforces the Southwest Monsoon so that SW through W winds prevail. This works all year round. Wind speeds generally range from about 2 to 3 knots at night to 4 to 6 knots during the afternoon. Gales are rare and most often encountered in a squall.

In spring, the Southwest Monsoon pushes N. It reaches Dakar by July. The combination of the weak monsoon and the land-sea breeze regime results in light morning winds of about 5 knots from the W through NW, increasing to 6 to 8 knots from the SW through W during the afternoon.

Precipitation.—North of Cap Blanc, the little rain that falls occurs from October through April and is brought by winter storms and their fronts. These storms are usually well to the N; often they move into the Mediterranean basin. Rain is more likely the closer you get to that basin. Average annual totals range from less than 51mm at Nouadhibou to 400mm at Casablanca to about 90mm at Tanger. About 90 per cent falls during the October-April period, often in the form of brief heavy showers. Maximum 24-hour amounts of 50 to 100mm have occurred.

North of Casablanca and in Arquipelago da Madeira and Islas Canarias, about 50 to 125mm of rain fall on 6 to 10 days per month from October through April. From May through September rain is scarce. Thunderstorms occur infrequently along these shores. They develop on about 1 to 12 days a year and are most likely in spring and fall. They are most likely to occur off the northern Morocco coast and in the Islas Canarias.

South of Cap Blanc, the fringes of the Southwest Monsoon bring a summer rainy season. Average annual amounts range from about 125mm at Nouakchott to 585mm at Dakar to 1,750mm at Conakry. The rainy season begins about March near Cape Palmas. It usually reaches Freetown by April or May and finally Nouakchott in August.

From Conakry S, June through September is the heart of the rainy season. During its peak, which varies from place to place within this period, 635 to 1,270mm of rain fall on 18 to 30 days per month. On the average, 20 inches or more fall on 18 days or more during this period.

Around Dakar about 250mm fall on 17 days during August. During the rainy season, thunderstorms occur on more than 20 days per month at some locations, ranging down to 6 to 8 days per month around Dakar. They are most frequent at the beginning and end of the season; therefore S of Conakry they are infrequent in August.

Temperature.—Air temperatures along these shores are influenced by the Canaries Current, cloud cover, and wind direction. North of Dakar, late summer and early fall are the warmest times of the year, while winter and early spring are the coolest. To the S, February and March are usually the warmest months while the coolest temperatures occur during the rainy season (July and August).

During the coolest part of the year afternoon maximums range from the upper 20s (°C) around Dakar down to around 15.6°C at Tanger. January is usually the coolest month by a couple of degrees. Minimums range from the upper teens (°C down to the upper single digits (°C), on the average. Coldest temperatures usually occur in December or January. Extremes of freezing or below have been recorded from Rabat to Tanger. To the S, extreme minimums range from the lower single digits (°C) up to around 15.6°C near Dakar. At Dakar, the extreme is only 4°C below the January average minimum. By March, temperatures begin getting above 32.2°C as far N as Rabat due to the occasional hot winds from the interior. This condition becomes more frequent to the S; Nouadhibou has a 32.2°C reading in every month but December. At Nouakchott, in an average March, 24 days have temperatures above 32.2°C and 9 days see temperatures reach 37.8°C or more.

Temperatures all along the coast north of Dakar are usually the warmest August or September. However, the gradient does not run from N to S as it did in winter. The sea breeze and coastal water temperatures, as well as cloud cover, are important factors. This can result in a striking contrast over a short distance. For example, the average daily maximum temperature at Essaouira, on the Moroccan coast, in August is 21.7°C, while some 60 miles to the N, Sati has an average of 30.0°C.

On the average, daytime highs are most commonly in the upper 20s (°C) and nighttime lows in the upper teens (°C) from Villa Cisneros N. To the S, average maximums reach the low to mid 30s (°C), while average minimums fall into the upper teens to low 20s (°C). Extreme high temperatures have gone over 37.8°C all along this coast. Temperatures near 48.9°C have been recorded from Kenitra to Sidi Ifni. North of Villa Cisneros, these extremes are most likely in July or August. However, around Nouadhibou and Nouakchott, they have occurred in June, while around Dakar extremes are lower (around 37.8°C) and occur about March.

South of Arquipelago de Cabo Verde, the rainy season and the harmattan reverse the temperature pattern. From February through April, temperatures are in the low to mid 30s (°C) during the day, while they fall into the upper teens to low 20s (°C) at night. Extremes are only 2.8° to 5.6°C higher or lower than the average maximums and minimums. July, August, and September bring the lowest temperatures and a low diurnal variation. Average maximums are in the upper 20s (°C), while minimums are in the low 20s (°C). Once again, there is only a 2.8 to 5.6°F difference between average maximums and minimums, and extremes.

Humidity.—Morning relative humidities are high year around along the entire coast. They range from about 80 per cent to more than 90 per cent. Lowest humidities usually occur in winter and early spring. This is most noticeable in the afternoon readings. They fall into the 40 to 50 per cent range S of the Islas Canarias.

Along the Moroccan coast there are local variations. In some

locations, minimum relative humidities are lowest in winter and spring and run in the 50 to 70 per cent range, while at other locations slightly dryer conditions occur in summer. Extremely dry conditions where relative humidities drop to 10 per cent or less can occur all along the coast at times when the winds blow from the interior, particularly during dust storms.

Cloud Cover.—North of Dakar, cloudiness varies locally as well as seasonally. While distant storms bring winter cloudiness to these waters, warm summer winds bring locally extensive morning cloudiness. For example, at Sidi Ifni, overcast conditions (cloud cover equal to or greater than 6/8) prevail on an average of 27 July mornings, but only 12 afternoons. While frequencies are not so high at other coastal points, the diurnal variation is similar. In winter, this variation is less noticeable and about 8 to 15 cloudy days (cloud cover equal to or greater than 6/8) can be expected N of Villa Cisneros and 3 to 6 cloudy days to the S.

South of Arquipelago de Cabo Verde, it is cloudiest during the rainy season, when overcast conditions are observed on up to 28 days per month at Conakry. To the N, the range is about 10 to 20 days per month. Spring is the least cloudy time of the year and overcast conditions are observed on just 2 to 5 days per month.

Visibility.—Fog may form when warm winds blow over cooler coastal water. Like land fog, it is most likely during the night and early morning and usually burns off during the day, although on some occasions it will persist throughout the day as a light fog or haze. Fog is variable as to season and location. It forms on more than 100 days at some locations and on less than 35 at others. At Sidi Ifni, fog forms on 20 to 22 days per month in July and August, but it reduces visibilities to less than 1 mile on about nine of these mornings each month. At Kenitra, visibilities fall below 1 mile on 10 to 15 mornings a month from August through March. South of Villa Cisneros, fog is less frequent, but haze and dust become a problem.

Haze and dust reach the coast when the dry offshore winds from deep in the interior become established. This is most likely from January through March and occurs with increasing frequency S from Cap Blanc to Cabo Verde. Visibilities in this haze usually run 2 to 6 miles but can fall to less than 0.5 mile on occasion. Apart from blurring the horizon and creating a dull yellow sky, the haze makes it difficult to judge distance unless a known object is sighted. Special caution is required when navigating near land, particularly around Arquipelago de Cabo Verde. South of Dakar haze is frequent from about November through April, when it is reported on 15 to 30 days per month. It often reduces visibilities to 2 to 6 miles, as do showers in the rainy season. Occasionally, heavy downpours will briefly reduce visibilities to less than 0.5 mile.

Currents

General.—The current system of the North Atlantic Ocean consists principally of a large and constant clockwise gyre. In the S, the North Equatorial Current flows W; in the W, the Gulf Stream flows N and NE; in the N, the North Atlantic Current flows NE; and in the E, the Canary Current flows S. Away from these currents, toward the center of the North Atlantic Ocean, is the Sargasso Sea, in which currents are sluggish and have no well-defined direction.

Prevailing surface currents in the North Atlantic Ocean, because of their great dependence on winds, occasionally change their speed and direction. The major part of the Gulf Stream is a well-defined swift current which begins N of Grand Bahama Island at the confluence of the Florida Current and Antilles Current and extends NE to about 40°N, 63°W. This flow prevails throughout the year, with only minor seasonal changes in direction and speed (highest during summer and lowest during winter). In the NE part of the current, near 38°-39°N, 64°-67°W, 80 per cent of the 1,650 observations taken throughout the year show an ENE set, a mean speed of 1.2 knots, and a maximum speed of 3.5 knots.

Information about fluctuations of the Gulf Stream is fragmentary, but there is strong evidence that this current meanders from its main axis, especially where it is wide. When the meanders reach a critical size, large cyclonic eddies, with cores of cold water, break off to the N. These pockets have been observed to travel E at a speed of about 0.5 knot, in contrast to the swiftest part of the Gulf Stream, which moves at speeds that may exceed 4 knots.

The Gulf Stream gradually widens and decreases in speed; after passing the Grand Banks, it becomes known as the North Atlantic Current. There is some evidence that the weaker North Atlantic Current may consist of separate eddies or branches which are frequently masked by a shallow wind-driven surface flow called the North Atlantic Drift.

The Labrador Current, originating from cold arctic water flowing SE through Davis Strait at speeds of 0.2 to 0.5 knot and from a W branching of the warmer West Greenland Current, sets SE along the continental shelf of the Canadian coast. Part of the Labrador Current sets into Hudson Strait along its N shore. Fresh water from the large land area surrounding Hudson Bay and Hudson Strait flows out along the S shore to reinforce the main coastal current. The Labrador Current also receives the surface outflow from inlets and fiords along the Labrador coast.

Although the Labrador Current is usually described as being more persistent over the narrow continental shelf than elsewhere, there may be seasonal fluctuations in its strength and volume. These variations depend on the amount of fresh water discharge and runoff along the coast during spring and on tidal influences. The prevailing current, on the basis of movement of ice bergs and surface drift observations, appears to extend some distance offshore. Its speed averages about 0.5 knot but may reach 1.5 or 2.0 knots.

The North Atlantic Current, which results from extensions of the Gulf Stream and the Labrador Current near the edge of the Grand Bank, fans outward and widens as it sets NE through E, while sharply decreasing in speed and persistence. Some influence of the Gulf Stream remains noticeable near the extreme SW boundary. A narrow band of water whose flow is stronger and more constant than those of the currents on either side, sets E along the 43rd parallel. Its width, speed, and persistence gradually diminish to about 29°W. Between 15° and 35°W, at latitude 45° to 50°N, its prevailing set is ENE at a mean speed of 0.4 knot during both summer and winter; its speed seldom exceeds 1.2 knots. About 92 per cent of the speeds are between 0.1 and 0.9 knot.

In the region 55°-60°N, 10°-25°W, the North Atlantic Current sets NE at a mean speed of 0.4 knot. It is only slightly stronger and more persistent in the W part than in the E part. The North Atlantic Current is a sluggish slow-moving flow

than can easily be influenced by opposing winds. Conversely, strong augmenting winds may strengthen it.

The broad slow west-setting Atlantic North Equatorial Current is generated mainly by the Northeast Trade Winds. It originates near 26°W, between about 15° and 30°N, and flows W across the ocean past 60°W, where it forms the Antilles Current N of the West Indies. The surface current migrates N and S seasonally; this migration results from the seasonal displacement of the Azores High between about 29°N, 31°W during winter and 34°N, 35°W during summer.

The mean speed, which differs slightly in different parts of the current, is generally about 0.5 knot; it appears highest in the S part. Speeds are generally lower during winter, when the Atlantic Equatorial Countercurrent is not evident and the westsetting Atlantic North Equatorial Current and Atlantic South Equatorial Current meet at about 9°N. Speeds are highest from July through December, when the Equatorial Countercurrent to the S is best defined.

The Equatorial Countercurrent is located in the doldrums. With no wind support, the water flows E down the sea slope, forming a weak countercurrent between the west-setting Atlantic North Equatorial Current and Atlantic South Equatorial Current, whose extent and strength change with the seasonal variations of the wind. The surface countercurrent is best defined during August and September, when it extends from about 52° to 10°W and joins the Guinea Current close to the coast of Africa. In October it narrows and separates into two branches at about 7°N, 35°W. The W part, which appears to be a region where the countercurrent probably sinks and flows E beneath the equatorial currents and gradually diminishes in size to the WNW, whereas the E part diminishes to the ESE. The greatest separation occurs during March. During April, the W part of the countercurrent disappears, but it reappears in May in the vicinity of 0°, 40°W. The two segments progress WNW without too much change in size. They merge at about 6°N, 43°W during August and continue their E flow uninterrupted through September.

The countercurrent is most pronounced during the N summer. Speeds are highest, sometimes in excess of 3.0 knots, in the W part of the countercurrent.

Northeast North Atlantic Ocean.—A branch of the North Atlantic Current flows along the W coasts of the British Isles at speeds up to 0.6 knot and enters the Norwegian Sea mainly through the E side of the Foroyar (Faeroe Islands)-Shetland Channel. A small portion of this current to W of Foroyar (Faeroe Islands) mixes with part of the flow setting SE from the N coast of Iceland; these two water masses join and form a clockwise circulation around Foroyar (Faeroe Islands). The very weak non-tidal current in the Irish Sea, which averages only about 0.1 knot, depends on the wind. Part of the North Atlantic Current that flows E into the W approaches to the English Channel tends to increase or decrease the speed of the reversing tidal currents.

The prevailing S flow off the Atlantic coasts of Spain and Portugal is known as the Portugal Current and is part of the general clockwise circulation in the North Atlantic Ocean. It is slow-moving, averaging only about 0.5 knot during both winter and summer and seldom exceeding 2.0 knots N of 40°N and 2.5 knots S of 40°N. This current is easily influenced by winds; it is most constant during summer, when the wind blows from the same general direction at least 50 per cent of the time. The wind may cause the current to set in any direction for short periods at any time of the year and the flow may even reverse during persistent S winds. During winter, the current still shows a prevailing S set but with a lesser frequency; the per cent distribution in the other directions based on an 8-point compass ranges between 8 and 13 per cent, with the higher percentages occurring N of 40°N. The current west of 10°W has a mean speed of 0.5 knot and may at times exceed 2.0 knots, with little seasonal change.

The Azores Current is an inner part of the North Atlantic gyre that sets between E through S in the general vicinity of the Azores Islands. It is a slow but fairly constant SE branch of the North Atlantic Current and part of the Gulf Stream System. Its mean speed is only 0.4 knot, and its mean maximum speed is 1.3 knots; there is no discernible seasonal fluctuation. The speed and direction of the current is easily influenced for short periods by changing winds.

The currents in the vicinity of the British Isles are predominantly tidal, being semi-diurnal, with two flood and two ebb currents each tide day. Throughout most of the Irish Sea, the tidal currents turn nearly simultaneously. The flood current sets S in the N part and N in the S part, meeting in a region of weak and variable currents. The ebb currents set in opposite directions.

Southeast North Atlantic Ocean.—In the W approach to the Strait of Gibraltar, the surface currents usually set E, but wind-driven currents may at times set across the entrance. In the central part of the strait, a resultant of tidal, non-tidal, and wind-drift currents usually sets E; it is stronger in autumn and weaker in winter. The resultant current speed decreases when the tidal current sets W and increases when the tidal current sets E. Speeds may reach 5 knots during SW and NW winds; the highest speeds occur in the N half of the narrowest part of the strait. With strong and prolonged E winds, the E flow may temporarily cease or at times reverse and reach speeds as high as 2 knots. A narrow countercurrent, with speeds as high as 2 knots, frequently occurs close to the African coast, at about longitude 5°40'W.

The North Atlantic Current begins to turn S near the Azores and becomes the Canary Current off the coast of Western Sahara. The Canary Current is that part of the clockwise flow of the North Atlantic Ocean that sets S off the NW coast of Africa. In the vicinity of the Cape Verde Islands, the current divides, with one part curving SW and joining the Atlantic North Equatorial Current and the rest turning SE into the Guinea Current. North of 30°N, the current has very little seasonal variation; the flow prevails S about 40 per cent of the time, with a mean speed of 0.4 knot. Between 30°N and 20°N, the set becomes more persistent; the current prevails SW about 55 per cent of the time, with a mean speed of 0.5 knot.

The part of the current S of 20°N appears to differ considerably between summer and winter. During July, August, and September the S part of the current narrows considerably. During January, February, and March, when the Atlantic Equatorial Countercurrent is least evident, the Canary Current is wide, extends close to the African coast as far S as 10°N, and flows into the wide band of W flow in the equatorial region. During this period, the flow in the S part of the current appears more constant, the percent frequency in the prevailing SSW direction is higher (between 45 and 60 per cent), and the mean speed is 0.6 knot.

Toward the shore, in the Strait of Gibraltar, the non-tidal current weakens, and the influence of the tidal currents becomes more pronounced. Inshore, reversing tidal currents predominate and the time of turning is earlier toward shore. Tidal races and eddies may occur in the central portion of the strait but are more common off salient points and in bays.

Northwest North Atlantic Ocean.—The Cape Breton Current originates in the Gulf of St. Lawrence, sets SE in the SW half of Cabot Strait, and merges with the Labrador Current Extension. It may be augmented by a branch of the constant but tide-influenced Gaspe Current to the NW. The Cape Breton Current is steady, with a mean speed of 0.7 knot and a maximum speed between 1.5 and 2.0 knots. Storms cause the current to vary or even reverse its direction for short periods. Direct observations between North Cape and St. Paul's Island obtained during a 20-day period showed a consistent surface flow setting about 125°T at a mean speed of 0.6 knot.

The current setting SW along the NE coast of the United States to Cape Hatteras has no designated name, but is frequently referred to as the Labrador Current Extension. This coastal current originates from part of the Labrador Current flowing clockwise around the SE tip of Newfoundland. Its speed is fairly constant throughout the year, averaging about 0.6 knot. Its size varies seasonally, being widest during winter between Newfoundland and Cape Cod and very narrow during summer. There is little seasonal change to the SW of Cape Cod. It is closest to shore in the vicinity of Cape Sable, Nova Scotia, and between Cape Cod and Long Island in July and August. In some places, it even encroaches on tidal regions.

The prevailing E current in Hudson Strait is often completely masked by strong local tidal currents with speed of 3 knots or more. Strong rips and eddies occur about a 0.5 mile offshore.

The Cape Breton Current appears to be influenced by the tide; observations have shown that the current speed is often higher when the ebb tidal current flows out. Conversely, the speed of the prevailing SE current may be reduced during periods of the ingoing flood tidal current.

Ice

General.—Surface navigation is affected by most forms of sea ice. As their power and structural strength increase, surface ships can penetrate deeper and faster in sea ice of increasing concentration, hardness, and thickness. However, every type of ship, including the most powerful icebreakers presently in service, ultimately encounters impassable sea ice. Thick polar ice of low concentration may be a greater menace to surface shipping than thin or rotten ice of high concentration. Even a few inches of slush may stall a freighter if it has lost its forward momentum.

In the North Atlantic Ocean, sea ice is confined to the NW part of the ocean basin. Ships can usually operate in the waters of southwest Greenland, even when Davis Strait is inaccessible. This maneuver requires the ship to go around "storis" (pack of heavy arctic ice that drifts around Greenland) and follow the shore lead to the port. However, such other problems as fog, snow, and darkness, may also restrict navigation. Vessels headed for Davis Strait usually follow the 55th meridian to take advantage of the path of least ice.

Surface navigation often is made hazardous by the large numbers of icebergs, bergy bits, and growlers that are concentrated in Davis Strait, Hudson Strait, and the Labrador Sea. The dangers include head-on collisions with icebergs, punctures of the hull from submerged rams, and injury or damage from capsizing icebergs. Because ships venturing in heavy sea ice may be forced into and crushed against the side of an ice berg, they must avoid the windward side of these large blocks of ice. It should be noted that radar detection of ice bergs, besides being dependent on the characteristics of the equipment (type of radar, height of antenna, etc.) is affected by the cross-sectional surface of the exposed ice, the smoothness of the ice, and amount of clutter due to waves as distant as 3 miles.

Northeast North Atlantic Ocean.—Sea ice is extremely rare in this region. In exceptionally severe winters, during January and February, some bays and shallow coastal regions of Brittany may freeze over, drift ice may fill the Gironde, and ice may form in the innermost bays of Foroyar (Faeroe Islands). Icebergs have been sighted in various parts of the region as far S as the Azores.

Northwest North Atlantic Ocean.—Ice begins to form along coastlines in early October in the N part of Hudson Bay, late October in the remainder of Hudson Bay and throughout Hudson Strait, early November along the N coast of Labrador, late November along the S coast of Labrador and in the Strait of Belle Isle, early December along the N coast of Newfoundland, and December through January along the S coast of Newfoundland. The navigability of these coastal waters varies from a minimum during late winter, when all coastlines to the W may be blocked, to a maximum in September, when all seas are open. Operations are usually restricted along Baffin Island to the period from late July to late September, and along the coast of Labrador from July to late November. Although fog often reduces visibility in Hudson Strait and Hudson Bay during the shipping season, surface vessels are generally safe from sea ice from August to October. The shipping season may be advanced to mid-July and extended to mid-November with the assistance of icebreakers and the use of coastal leads.

The thickness of local sea ice averages about 1.5 to 2.1m in Hudson Strait, 1.2 to 1.8m along Labrador and southern Greenland, 0.9 to 1.2m in Hudson Bay, and 0.3 to 0.9m along Newfoundland. Mounds of pressure ice, compressed by convergent ice floes, may exceed 3.0 to 4.6mt, particularly when grounded.

Icebergs are numerous along the E coasts of Labrador and Newfoundland but decrease in frequency W of Resolution Island and Cape Race.

Navigational Information

International Ship and Port Facility (ISPS) Code

The ISPS Code applies to ships on international voyages and port facilities directly interfacing with these ships. All vessels should fully comply with the provisions of Chapter XI-Part 2 of the SOLAS Convention and Part A of the ISPS Code. Vessels shall demonstrate that appropriate maritime security measures are in place according to ISPS Code regulations. The following information must be furnished by the vessel when requested:

1. Information on the vessel and making contact.
   - 1.1 IMO Number
   - 1.2 Vessel name.
   - 1.3 Home port.

1.4 Flag.
1.5 Vessel type.
1.6 Call sign.
1.7 INMARSAT call sign.
1.8 Gross tonnage.
1.9 Company name.
1.10 Name of Company Security Officer, including 24-hour contact information.
2. Information about the harbor and harbor facilities.
2.1 Arrival harbor and harbor facilities where the vessel will berth.
2.2 Date and time of arrival.
2.3 Primary reason for entering the harbor.
3. Information required by Rule 9 Paragraph 2.1 of Chapter XI-2 of the Enclosure to the SOLAS Agreement.
3.1 Does the vessel posses an International Ship Security Certificate (ISSC) or an Interim ISSC? (Yes/No)
3.1.1 If yes, list issuer of ISSC or Interim ISSC and expiration date.
3.1.2 If no, give reason why not.
3.1.3 Is there an approved Vessel Security Plan? (Yes/No).
3.2 Current MARSEC Level of the vessel and position of vessel at the time of providing the report.
3.3 The last ten port calls where there was interaction between the vessel and a harbor facility, in chronological order, with the most recent port call listed first. Include the MARSEC Level of the vessel, as well as the harbor name, country, harbor facility, and UN Location Code.
3.3.1 During the previous ten port calls, were additional security measures taken on board the vessel in addition to the measures required by the vessel's MARSEC Level. (Yes/No).
3.3.2 If yes, please detail the additional security measures taken. Include the harbor name, country, harbor facility, and UN Location Code.
3.4 Within the period of the last ten calls at port facilities, list ship-to-ship activities, including position or latitude/longitude of the activities, with the most recent activity listed first.
3.4.1 Were proper security measures taken by the vessel during the ship-to-ship activities? (Yes/No).
3.4.2 If no, list the ship-to-ship activities where proper security measures were not taken and describe the security measures that were taken.
3.5 General description of the cargo on board.
3.6 A copy of the crew list
3.7 A copy of the passenger list.
4. Other safety-related information.
4.1 Are there any other safety-related matters to be reported (Yes/No).
4.2 If yes, provide more detailed information.
5. Agents of the ship in future ports of arrival.
5.1 Name(s) of ship's agent(s) in future ports of arrival including contact information (telephone number).
6. Identification of the person who prepared the information.
6.1 Name.
6.2 Title or function.
6.3 Signature, including date and location of preparation.

Electronic Navigation and Communication

International Maritime Satellite Organization (INMARSAT).—Around the world satellite communication systems have now become synonymous with reliable and quality transfer of information. The International Maritime Satellite Organization (INMARSAT) is an international consortium comprising over 75 partners who provide maritime safety management and maritime communications services.

The INMARSAT system consists of a number of satellites, which maintain geosynchronous orbits, and provides quality communications coverage between about 77°N and about 77°S, including locations with less than a 5° angle of elevation.

INMARSAT-A, the original system, provides telephone, telex, and fax services. However, this system is being replaced by INMARSAT-B, which, by the use of digital technology, is providing the services with improved quality and higher data transmission rates.

INMARSAT-C provides a store and forward data messaging capability, but no voice communication.

Global Maritime Distress and Safety System (GMDSS).—The Global Maritime Distress and Safety System (GMDSS) provides a great advancement in safety over the previous usage of short range and high seas radio transmissions.

The GMDSS has been adopted by the International Convention for the Safety of Life at Sea (SOLAS) 1974. It applies to cargo vessels of 300 grt and over and all vessels carrying more than 12 passengers on international voyages. Unlike previous regulations, the GMDSS requires vessels to carry specified equipment according to the area in which they are operating. Such vessels navigating in polar regions must carry VHF, MF, and HF equipment and a satellite Emergency Position Indicating Radiobeacon (EPIRB).

Information on the GMDSS, provided by the U.S. Coast Guard Navigation Center, is accessible via the Internet, as follows:

U. S. Coast Guard Navigation Center
http://www.navcen.uscg.mil/marcomms/default.htm

Global Positioning System (GPS).—The NAVSTAR Global Positioning System (GPS) is a satellite-based system, operated by the US. Air Force, which provides very accurate positioning, time, and velocity information to multiple users. It is an all-weather system with world wide and continuous usage which will replace OMEGA and other such hyperbolic radio navigation systems. The space component of GPS consists of 24 satellites, of which a minimum of six are observable from any place on earth. GPS receivers convert data from the satellites to produce three-dimensional positions (latitude, longitude, and altitude). They compute information for fixes in terms of the World Geodetic System (1984) reference ellipsoid; hence, a datum shift correction may be required before a position can be plotted on a chart.

GPS provides two services for navigation positioning, as follows:

1. Standard Positioning Service (SPS)—The standard level of positioning and timing accuracy. It is available without restrictions to any user on a continuous worldwide basis. As of midnight (EDT) 1 March 2000, Selective Availability was set to zero; users should experience a GPS hori-

zontal accuract of 10 to 20m or better.

2. Precise Positioning Service (PPS)—An encoded level intended for use by the Department of Defense.

SafetyNET.—NAVTEX is an international automated direct printing service for the promulgation of navigational and meteorological warnings and urgent information to ships. It is a component of the World Wide Navigational Warning Service (WWNWS) and is an essential element of GMDSS.

The SafetyNET broadcast system provides the same information as NAVTEX to vessels on the high seas beyond NAVTEX coverage (generally about 200 miles offshore) and is delivered by the INMARSAT-C system.

General Information.—For further information concerning the International Maritime Satellite Organization (INMARSAT), the Global Maritime Distress and Safety System (GMDSS), the SafetyNET system, and the Global Positioning System (GPS), see Pub. No. 9, The American Practical Navigator (Bowditch-2002 Edition); Pub. 117, Radio Navigation Aids; and Annual Notice to Mariners No. 1.

Enroute Volumes

Pub. 141, Sailing Directions (Enroute) Scotland.

Pub. 142, Sailing Directions (Enroute) Ireland and the West Coast of England.

Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Pub. 145, Sailing Directions (Enroute) Nova Scotia and the Saint Lawrence River.

Pub. 146, Sailing Directions (Enroute) Newfoundland, Labrador, and Hudson Bay.

Pollution

Single-hull Tanker Phase-out Schedule

In accordance with Regulation 13G of Annex I of the MARPOL Convention, single-hull tankers should be phased out or converted to a double-hull configuration according to a schedule based on their year of delivery. These requirements are designed to reduce the risk of oil spills from tankers involved in low-energy collisions or groundings.

The types of vessels affected by these regulations and their phase-out schedule is, as follows:

1. **Category 1—**Commonly known as Pre-MARPOL Tankers, consists of the following types of vessels:

a. Tankers of 20,000 dwt and over carrying crude oil, fuel oil, heavy diesel oil, or lubricating oil as cargo.

b. Tankers of 30,000 dwt and over carrying other oils, which do not comply with the requirements for protectively-located segregated ballast tanks.

The phase out schedule for Category 1 vessels is, as follows:

a. Vessels delivered on or before 5 April 1982—not allowed to trade after 5 April 2005.

b. Vessels delivered after 5 April 1982—not allowed to trade after the anniversary date, in 2005, of their delivery date.

2. **Category 2—**Commonly known as MARPOL Tankers, consists of the following types of vessels:

a. Tankers of 20,000 dwt and over carrying crude oil, fuel oil, heavy diesel oil, or lubricating oil as cargo, which comply with the MARPOL requirements for protectively-located segregated ballast tanks.

b. Tankers of 30,000 dwt and over carrying other oils, which comply with the MARPOL requirements for protectively-located segregated ballast tanks.

The phase out schedule for Category 2 vessels is, as follows:

a. 5 April 2005 for vessels delivered on 5 April 1977 or earlier.

b. Anniversary date in 2005 for vessels delivered after 5 April 1977 but before 1 January 1978

c. Anniversary date in 2006 for vessels delivered in 1978 and 1979.

d. Anniversary date in 2007 for vessels delivered in 1980 and 1981.

e. Anniversary date in 2008 for vessels delivered in 1982.

f. Anniversary date in 2009 for vessels delivered in 1983.

g. Anniversary date in 2010 for vessels delivered in 1984 or later.

3. **Category 3—**Consists of tankers 5,000 dwt and over but less than the tonnage specified for Category 1 and Category 2 vessels.

The phase out schedule for Category 3 vessels is, as follows:

a. 5 April 2005 for vessels delivered on 5 April 1977 or earlier.

b. Anniversary date in 2005 for vessels delivered after 5 April 1977 but before 1 January 1978

c. Anniversary date in 2006 for vessels delivered in 1978 and 1979.

d. Anniversary date in 2007 for vessels delivered in 1980 and 1981.

e. Anniversary date in 2008 for vessels delivered in 1982.

f. Anniversary date in 2009 for vessels delivered in 1983.

g. Anniversary date in 2010 for vessels delivered in 1984 or later.

Single-hull tankers of 5,000 dwt and over are prohibited from carrying heavy grade oil (HGO) after 5 April 2005. Single-hull tankers of 600 dwt and over but less than 5,000 dwt are prohibited from carrying HGO after the anniversary of their delivery date in 2008.

Denmark, Estonia, Finland, Latvia, Norway, and Sweden have enacted measures to monitor these vessels. For further information, see **Denmark—Pollution**.

Ballast Water Management

International guidelines have been adopted by the IMO to prevent the introduction of unwanted aquatic organisms and pathogens from ships' ballast water and sediment discharge into marine ecosystems. The guidelines include the retention of ballast water onboard, ballast exchange at sea, ballast management aimed at preventing or minimizing the uptake of contaminated water or sediment, and the discharge of ballast ashore. Particular attention is drawn to the hazards associated with ballast exchange at sea.

Ship owners and agents are strongly advised to comply with these guidelines, which were introduced under IMO Resolution A.868(20), titled *1997 Guidelines for the Control and*

Management of Ships' Ballast Water to Minimize the Transfer of Harmful Aquatic Organisms and Pathogens.

In February 2004, a diplomatic conference adopted an *International Convention for the Control and Management of Ships' Ballast Water and Sediments*. This *Ballast Water Management (BWM) Convention* will come into force world wide after it has been signed by 30 states, representing 35 per cent of the world's merchant shipping tonnage.

Individual states are currently in the process of introducing national legislation in accordance with the *BMW Convention*. Upon implementation, this legislation will be applicable to commercial vessels that carry out ballast water discharge within a state's jurisdictional waters.

Typical legislation requires that all ships intending to discharge ballast water within a state's jurisdictional waters shall conduct any exchange at least 200 miles from the coast and in waters at least 200m deep. If this is not possible, the exchange should be carried out as far as possible from the nearest land and, in all cases, at least 50 miles from the coast. In cases where the ship is unable to comply, ballast water must be maintained on board, and only a minimum amount may be authorized for discharge, with the prior authorization of the appropriate national maritime authority.

Ballast water management will be conducted in accordance with a *Ship's BMW Plan*. In addition, a *Ballast Water Reporting Form* may be required by the relevant authority as directed, prior to the ETA. The *Ship's BWM Plan* will be approved by the flag administration or relevant classification society.

Violations of the legislation will be sanctioned according to national law, which can include warnings, fines, detentions, or prohibition of the ship's entry into a port or terminal.

MARPOL Special Areas

MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Vessels of 400 gross tons and over are prohibited from discharging into the sea any oil or oily mixtures except when the following conditions are satisfied:

1. The ship is proceeding en route.
2. The oily mixture is processed through oil-filtering equipment meeting the requirements of Regulation 14.7 of MARPOL Annex I.
3. The oil content of the effluent without dilution does not exceed 15 parts per million.
4. The oily mixture does not originate from cargo pumproom bilges on oil tankers.
5. The oily mixture, in the case of oil tankers, is not mixed with oil cargo residue.

Vessels of less than 400 gross tons shall retain on board any oil or oily mixtures for subsequent discharge to reception facilities or discharged into the sea with the following provisions:

1. The ship is proceeding en route.
2. The ship has in operation equipment of a design approved by the Administration that ensures that the oil content of the effluent without dilution does not exceed 15 parts per million.
3. The oily mixture does not originate from cargo pumproom bilges on oil tankers.
4. The oily mixture, in the case of oil tankers, is not mixed with oil cargo residue.

MARPOL Special Areas are defined, as follows:

1. **Northwest European Waters Area.—**The sea area, including the North Sea and its approaches, the Irish Sea and its approaches, the Celtic Sea, the English Channel and its approaches, and that part of the Northeast Atlantic Ocean immediately W of Ireland bounded by the coast and lines joining the following positions:
   a. 48°27.0'N on the French coast.
   b. 48°27.0'N, 6°25.0'W.
   c. 49°52.0'N, 7°44.0'W.
   d. 50°30.0'N, 12°00.0'W.
   e. 56°30.0'N, 12°00.0'W.
   f. 62°00.0'N, 3°00.0'W.
   g. 62°00.0'N on the Norwegian coast.
   h. 57°44.8'N on the Danish and Swedish coasts.
2. **North Sea Area.—**The sea area of the North Sea proper, including the seas within, with the following boundaries:
   a. The North Sea S of latitude 62°00'N and E of longitude 4°00'W.
   b. The Skagerrak, the S limit of which is determined E of the Skaw by latitude 57°44.8'N.
   c. The English Channel and its approaches E of longitude 5°00'W and N of latitude 48°30'N.

Sulphur Emission Control Areas

Sulphur Emission Control Areas (SECA) are areas where special controls are in effect to reduce sulphur oxide (SO_x) emissions from ships. The Atlantic coasts of the United States and Canada are part of the North American Emission Control Area. For further information, see **North Sea and the English Channel—Pollution—Sulphur Emission Control Areas.**

Regulations

Schengen Agreement

General.—The aim of the Schengen Agreement is to create free movement for persons within the European Union (EU) and to intensify the fight against cross-border crime. In practice, the Schengen Agreement means that personal checks on journeys between the member states will cease, while the external frontier controls will be intensified, i.e. towards countries that are not signatories to the Schengen Agreement.

Sweden's operational participation in the Schengen treaty is governed by the Schengen regulations and by national legislation, particularly aliens' legislation. In accordance with the Schengen legislation the check means that merchant ships are obliged to submit details regarding the ship, the voyage and persons on board following a system for Advance Notification.

As from 1 July 2004, the international legislation on enhancing ship and port facility security will comprise all ships of a certain size in international traffic.

The aim of the regulations on ship security is to protect the maritime sector from serious crimes of violence, i.a. terrorism. The legislation requires information of ship security nature in accordance with a system for Advance Notification from all ships over 500 gross tons.

The Schengen legislation as well as the rules and regulations concerning maritime security means that the merchant shipping is required to make an Advance Notification. The information to be given, the time for giving it and the ships concerned are mainly the same in the two regulations, i.e. ships

which are required to make an Advance Notification according to the Schengen legislation are in most cases required to do the same according to the rules and regulations concerning maritime security. There are also certain differences, which are described below.

In order as far as possible to simplify for the shipping trade the fulfillment of its obligations in accordance with the two legislations, the systems for Advance Notification are coordinated so that only one notification has to be made, which fulfills the requirements of both the Schengen and the Rules and regulations concerning maritime security.

Regulation (EC) No.72512004 on enhancing ship and port facility security.—By the EC regulation the rules and regulations concerning maritime security, which were accepted by the members of the International Maritime Organization (IMO) in December 2002, were implemented as legislation in force within the Community. The rules and regulations concerning maritime security are aiming at protecting the maritime sector from serious crimes of violence, i.e. terrorism. Shipping companies, ships, and port facilities shall cooperate in order to reveal and judge threats in the form of criminal actions towards the maritime sector.

Background.—The rules upon which the EC regulation is based are rules decided by the UN maritime organization in London, the International Maritime Organization (IMO). They are fully international. The international legislation has been made legislation immediately in force in all member states of the EC through the regulation mentioned above.

In addition to regulations which supplement the EC regulation on ship security, the Act on ship security and the Regulation (2004:238) comprise regulations on requirements for implementing certain of the new international rules which have been accepted by the IMO but which are not regulated in the EC regulation.

Compulsory to demand security information from ships.—In accordance with the inspection rules in Regulation 9, Appendix 1, of the EC regulation a state may demand information from a ship, which intends to call at a port within the territory of the state. After making an analysis of the information, the inspection authority shall decide whether the ship shall be allowed to call at the port or if further inspection measures shall be taken. In Article 6.1 of the EC regulation the request for such information from each arriving ship is made compulsory to the member states.

Ships covered by the legislation.—According to the EC regulation, the following types of ships in international traffic are covered by the legislation:

1. Passenger ships, including high speed passenger craft (HSC).
2. Cargo ships, including high speed craft, of 500 gross tons and over.
3. Movable oil drilling platforms at sea.
4. Port facilities which serve such ships in international trade

Exceptions.—According to Article 3 of the EC regulation the rules are not applicable to naval ships, troop transport ships, cargo ships smaller than 500 gross tons, ships which are not mechanically run, wooden ships of primitive construction, fishing vessels, and ships which are not used for commercial purposes.

Definitions.—As follows:

1. International Ship and Port Facility Security Code (ISPS Code)—The international code for ship security on board ships and in port facilities. (The code has been annexed to Chapter XI-2 in the SOLAS Convention).
2. International trade—All maritime connections with ships from a port facility in a member state to a port facility, which is located outside this member state, or vice versa.
3. Ship/port interface—The interaction that takes place when a ship directly and immediately is affected by activities that mean transport of people or goods or supply of port services to or from the ship.
4. Port facility—A place where interaction between ship and port takes place.
5. Protection levels—The fixed protection level in force for ships which are operating in the territorial seas of the contracting state or which have reported their intention to enter the territorial seas of that state.
6. International Ship Security Certificate—A certificate issued by competent authority in accordance with the ISPS Code.

Point of Contact.—As per Regulation 7, Appendix 1 of the EC Regulation (threat to ships), contracting governments shall provide a point of contact through which ships operating in their territorial sea or having communicated an intention to enter their territorial sea, can request advice or assistance and to which such ships can report any security concerns about other ships, movements, or communications.

Schengen Rules

Members of the operative Schengen Convention.—Member states are, as follows:

1. Austria.
2. Belgium.
3. Denmark.
4. Finland.
5. France.
6. Germany.
7. Greece.
8. Italy.
9. Luxembourg.
10. The Netherlands.
11. Portugal.
12. Spain.
13. Sweden.

Countries with agreements on Schengen cooperation are, as follows:

1. Norway.
2. Iceland.

Definitions.—As follows:

1. External border—The border of a Schengen state with a third country and the state's ports and airports which have traffic to and from a third country.
2. Third country—Countries that are not included in the Schengen Convention.
3. Border control point—A place approved for crossing an external border.
4. Schengen Informations System (SIS)—The common data system of the Schengen states covering, among other things, wanted persons.

Border control authorities.—The Police have the overall responsibility for border control as regards persons and miss-

ing items, border surveillance, and for the coordination of these tasks with other border control authorities.

The Coast Guard has the overall responsibility for control of the external borders at sea. The Coast Guard also takes part in the mobile controls conducted in near-coastal areas by the Police and Customs.

Customs has the overall responsibility for checks of cargo and assist the police with border control work.

External borders.—The term external border means the border of a Schengen state on a third country and the state's ports and airports which have traffic to and from a third country. A Schengen state's sea border is mainly regarded as an external border since the sea territory borders on international waters (the open sea), which is equivalent to a third country.

Certain ports have acquired the status of border control points. On the external borders, checks are made on both entry and exit.

Checks made on the external borders are of the following three main types:

1. Check that the person entering has got the necessary documents and fulfills other terms for reentry into the Schengen area.
2. Check that the person entering is not likely to be involved in criminal activities.
3. Check to avert a threat against public order and safety.

On exit, necessary checks shall be made in order, for example, to apprehend wanted criminals.

Crossing an external border.—The external borders may in principle be crossed only at border control points during fixed opening hours. Merchant shipping and fishing vessels are subject to special regulations regarding notification in advance.

Anyone crossing a border beyond a border crossing point or at non-opening hours or who otherwise fails to fulfill his/her obligation of notification shall be sentenced to a fine or to imprisonment for a maximum of 6 months.

Check of shipping.—The checking of persons on board a vessel can take place in port, on board the vessel or in special areas in the immediate vicinity of the port. The check may also be carried out at sea. The purpose of the check is to determine whether the crew and passengers meet the requirements for entry into the Schengen area.

Merchant ships are checked by revising the crew and passenger lists and, where necessary, by checks on board the vessel.

The regular ferry services are checked in that the ferries may travel only between appointed terminals (check points) in the ports.

Cruise liners are mainly checked in the same way as merchant ships, but only at the ports of initial arrival to, and final departure from, the Schengen area.

Fishing vessels and leisure boats are checked by on board checking in port or at sea.

Advance Notification.—The Advance Notification shall contain the following information:

1. Ship's call sign.
2. Name of ship.
3. Ship's IMO number.
4. Nationality and port of registry of the ship
5. Type of ship.
6. Port of departure (last port of call).
7. Port of arrival and port of destination (name of port facility to be stated).
8. ETA.
9. ETD.
10. New destination (next port). If new destination is a Swedish port, the whole voyage shall be stated, i.e. until the ship departs from its last Swedish port with destination to a foreign port.
11. Signature by the master or his representative.
12. Contact information (for returning of a stamped copy of the notification) in accordance with the Schengen regulations.
13. List of all persons on board:
    - Family name and given name
    - Date of birth (year, month, date).
    - Nationality.
    - Gender.
    - Passport number/seaman's discharge book number.
14. Signing-off list and signing-on list:
    - Family name and given name.
    - Date of birth (year, month, date).
    - Nationality.
    - Gender.
    - Passport number/seaman's discharge book number.
    - Date and place of signing-on/signing-off.
    - Means of travel and transportation.
    - Information about visas, if applicable.
15. The ship's valid international ship security certificate and the name of its issuing authority.
16. The security level at which the ship is currently operating.
17. The security level at which the ship operated in any of the last ten calls at port facilities where it has conducted ship/port interface.
18. All special or additional security measures taken by the ship in any of the last ten calls at port facilities where it has conducted ship/port interface.
19. The appropriate ship security procedures, which have been maintained during any ship-to-ship activity for the ten latest calls at port facilities.
20. Other practical, security related information as regards the guidelines stated in Part B of the ISPS Code (details of the ship's security plan excepted).
21. Overall description of the ship's cargo.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU, as follows:

1. Vessels eligible for an Expanded Inspection (EI)—The master, operator, or agent of a vessel eligible for an EI shall provide the port an advance notice of arrival 72 hours in advance. The following vessels are subject to an EI:
   a. All vessels with a high risk profile.
   b. All passenger vessels, oil tankers, gas tankers, chemical tankers, and bulk carriers over 12 year old.
2. All other vessels—All other vessels bound for an EU member state must send an advance notice 24 hours prior to arrival. If the voyage from the previous port is less than 24 hours, the notification should be sent when the vessel departs from the previous port. If the port-of-call is not known or is changed during the voyage, the notification should be sent as

soon as the information becomes known.

These reports should be sent to the competent port authority unless otherwise directed. Failure to submit the report is an offense and may subject the vessel to additional inspections.

Further information can be obtained at the European Maritime Safety Agency Home Page.

European Maritime Safety Agency Home Page
http://www.emsa.eu
Choose: Implementation Activities—Ship Safety—Port State Control—2009/106/EC

The participating EU countries are, as follows:

1. * Belgium.
2. * Bulgaria.
3. * Cyprus.
4. Denmark.
5. * Estonia.
6. * Finland.
7. * France.
8. * Germany.
9. * Greece.
10. Iceland.
11. *Ireland.
12. Italy.
13. Latvia.
14. * Lithuania.
15. * Malta.
16. Netherlands.
17. * Norway.
18. * Poland.
19. Portugal (including the Azores and Madeira).
20. * Romania.
21. Slovenia.
22. Spain (including Islas Baleares, Islas Canarias, and the enclaves of Cueta and Melilla in Morocco)
23. * Sweden.
24. * United Kingdom (including the Channel Islands, Gibraltar, and the Isle of Man).

* These countries have more detailed reporting information. For further information, see the Regulations section under the indicated country.

Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR)

The NIR of the PMoU has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage within the Paris MoU region, as follows:

1. Vessels eligible for an Expanded Inspection (EI)—The master, operator, or agent of a vessel eligible for an EI shall provide the port an advance notice of arrival 72 hours in advance. The following vessels are subject to an EI:
   a. All vessels with a high risk profile.
   b. All passenger vessels, oil tankers, gas tankers, chemical tankers, and bulk carriers over 12 year old.
2. All other vessels—All other vessels bound for Paris MoU member port must send an advance notice 24 hours prior to arrival. If the voyage from the previous port is less than 24 hours, not known, or is changed during the voyage, the notification should be sent as soon as the information becomes known.

These reports should be sent to the competent port authority unless otherwise directed. Failure to submit the report may subject the vessel to additional inspections.

Further information can be obtained at the European Maritime Safety Agency Home Page.

European Maritime Safety Agency Home Page
http://www.emsa.eu
Choose: Implementation Activities—Ship Safety—Port State Control—2009/106/EC

The participating Paris MoU countries are, as follows:

1. Belgium.
2. Bulgaria.
3. Canada.
4. Croatia.
5. Cyprus.
6. Denmark.
7. Estonia.
8. Finland.
9. France.
10. Germany.
11. Greece.
12. Greenland.
13. Iceland.
14. Ireland.
15. Italy.
16. Latvia.
17. Lithuania.
18. Malta.
19. Netherlands.
20. Norway.
21. Poland.
22. Portugal (including the Azores and Madeira).
23. Romania.
24. Russia.
25. Slovenia.
26. Spain (including Islas Baleares, Islas Canarias, and the enclaves of Cueta and Melilla in Morocco)
27. Sweden.
28. United Kingdom.

European Union (EU) Advanced Manifest Rule

All cargo vessels sailing from a non-EU port to an EU port must submit an Entry Summary Declaration (ENS) to the first port of call in the EU 24 hours prior to the cargo being loaded.

For short sea shipments, the ENS must be filed 2 hours prior to arrival at an EU port.

An ENS is also required for the following:

1. Cargo remaining on board a vessel and destined for a non-EU port.
2. Trans-shipped cargo to and from non-EU ports.
3. All transit cargo bound for EU and non-EU final destinations.

Routes

The route information in this section considers routes to and from selected ports in the North Atlantic Ocean basin, as well as routes to selected ports outside the Atlantic Ocean basin, including the Caribbean Sea and the North Sea.

In general, these routes are as direct as safe navigation permits. However, in some instances, a divergence is made to avoid dangers to navigation, to take advantage of favorable currents, or to minimize the effects of adverse currents. It should not be inferred that recommendations in this chapter necessarily represent adopted or established sea lanes. Routes between ports consist of a series of rhumb lines unless stated otherwise. When a route may be followed in either direction the reverse route is not described.

Detailed information on these routes can be found, as follows:

1. Appendix II—Routes Across the North Atlantic Ocean to the Strait of Gibraltar and Bishop Rock.
2. Appendix III—Routes to and from Canada, the United States, and the Caribbean Sea.

Ship Reporting System

Western Europe Tanker Reporting System (WETREP)

The Western Europe Tanker Reporting System (WETREP), a mandatory reporting system, is in effect. The following vessels are required to participate in WETREP:

1. Any oil tanker over 600 dwt carrying a cargo of heavy crude oil, meaning crude oils with a density, at 15°C, of greater than 900 kg/m^3.
2. Any oil tanker over 600 dwt carrying a cargo of heavy fuel oil, meaning fuel oils with a density, at 15°C, of greater than 900 kg/m^3 or a kinematic viscosity, at 50°C, of greater than 180 mm^2/s.
3. Any oil tanker over 600 dwt carrying a cargo of bitumen and tar or their emulsions.

Further information on WETREP can be found in Appendix I.

Tides

Astronomical Tides

The different types of tides reflect the characteristic features of the rise and fall of the water level which accompany the tide-producing forces during an average tide day (lunar day, or about 24 hours 50 minutes). Each tide type is defined by a curve that represents the most common tide observed during the month. The three basic tide types are:

1. Diurnal tide, with one high water and one low water each tide day.
2. Semi-diurnal tide, with two nearly equal high waters and two nearly equal low waters each tide day.
3. Mixed tide, with two markedly unequal high and/or two markedly unequal low waters each tide day.

The difference between the heights of two successive high waters or two successive low waters in a tide day is known as the diurnal inequality; this difference changes with the declination of the moon and, to a lesser extent, with the declination of the sun. In general, the inequality tends to become greater with increasing N or S lunar declination and to become less as the moon approaches the Equator. This difference is also used to distinguish between semi-diurnal and mixed types of tides.

In addition to the changing phase relationships of the tide-producing bodies, which result in the different types of tide, bottom topography and wave interference also influence the form of the tide.

Meteorological Tides

Changes in wind and barometric pressure may cause deviations from daily predicted water levels. Prolonged onshore winds and/or low barometric pressure tend to raise the water level; offshore winds and/or high barometric pressure tend to lower it. In coastal regions of Central America N of about 12°N, hurricanes and tropical storms may cause the water level to rise considerably above that of the predicted tide.

Appendix I—Western Europe Tanker Reporting System (WETREP)

The Western Europe Tanker Reporting System (WETREP) is a mandatory reporting system. The following vessels are required to participate in WETREP:

1. Any oil tanker over 600 dwt carrying a cargo of heavy crude oil, meaning crude oils with a density, at 15°C, of greater than 900 kg/m^3.
2. Any oil tanker over 600 dwt carrying a cargo of heavy fuel oil, meaning fuel oils with a density, at 15°C, of greater than 900 kg/m^3 or a kinematic viscosity, at 50°C, of greater than 180 mm^2/s.
3. Any oil tanker over 600 dwt carrying a cargo of bitumen and tar or their emulsions.

The Reporting Area, best seen on the accompanying chartlet, covers the waters off Belgium; the W coast and English Channel coasts of France; Ireland; Portugal; the N and W coasts of Spain; and the English Channel and W coasts of the United Kingdom, including the Shetland Isles and is bounded by lines joining the following positions:

a. 58°30'00.0"N, 3°01'22.2"W (coast of Scotland)
b. 58°30'00.0"N, 0°00'00.0"
c. 62°00'00.0"N, 0°00'00.0"
d. 62°00'00.0"N, 3°00'00.0"W.
e. 56°30'00.0"N, 12°00'00.0"W.
f. 54°41'40.2"N, 15°00'00.0"W.
g. 50°56'45.0"N, 15°00'00.0"W.
h. 48°27'00.0"N, 6°25'00.0"W.
i. 48°27'00.0"N, 8°00'00.0"W.
j. 44°52'00.0"N, 3°10'00.0"W.
k. 44°52'00.0"N, 10°00'00.0"W.
l. 44°14'00.0"N, 11°34'00.0"W.
m. 42°55'00.0"N, 12°18'00.0"W.
n. 41°50'00.0"N, 11°34'00.0"W.
o. 37°00'00.0"N, 9°49'00.0"W.
p. 36°20'00.0"N, 9°00'00.0"W.
q. 36°20'00.0"N, 7°47'00.0"W.
r. 37°10'00.0"N, 7°25'00.0"W. (mouth of the Rio Guardiana)
s. 51°22'25.2"N, 3°21'52.2"E. (Belgium-Netherlands border)
t. 52°12'00.0"N, 1°37'30.0"E. (coast of England close N of Thorpe Ness)

Note.—The line joining point s and point t delineates the NE entrance to the English Channel.

u. 52°10'03.0"N, 6°21'07.8"W. (coast of Ireland near Carnsore Point)
v. 52°01'51.6"N, 5°04'18.0"W. (coast of Wales near Strumble Head)

Note.—The line joining point u and point v delineates the S entrance to the Irish Sea.

w. 54°51'42.6"N, 5°08'46.8"W. (coast of Scotland near Black Head)
x. 54°40'39.0"N, 5°34'33.6"W. (coast of Northern Ireland near Orlock Point, on the S side of Belfast Lough)

Note.—The line joining point w and point x delineates the N entrance to the Irish Sea.

Three types of reports are sent by vessels required to participate in WETREP, as follows:

1. **Sailing Plan (SP).—**To be sent, as follows:
   a. On entering the Reporting Area.
   b. Immediately on departing from a port located in the Reporting Area.
2. **Deviation Report (DR).—**To be sent, as follows:
   a. When deviating from the routing to their original declared destination, port, terminal, anchorage, or position "for orders" given at the time of entry into the Reporting Area.
   b. When a deviation from the planned route is necessary due to weather, equipment malfunction, or a change in navigational status.
3. **Final Report (FR).—**To be sent, as follows:
   a. On leaving the Reporting Area.
   b. On arrival at a port situated in the Reporting Area.

Each report shall begin with the word WETREP and the two letter abbreviation for the type of report. The required information for each type of report can be found in the accompanying table titled **WETREP—Reporting Informatio**n.

Upon entering the WETREP Reporting Area, vessels should notify the Regional Coordination Center (RCC) of the responsible authority of the coastal state participating in this system. Vessels unable to send the report to the nearest RCC should send the report to the next nearest RCC.

Vessels need not report if, while on normal passage routing during the transit of the Reporting Area, the boundary of the Reporting Area is crossed on other occasions apart from the initial entry and final exit.

WETREP—Reporting Information

Designator	Information Required	SP	DR	FR
ALFA	Name and call sign, IMO Number, or MMSI Number of vessel.	X	X	X
BRAVO	Day of month (2 figures) and time in hours and minutes (UT/GMT in 4 figures).	X	X	X
CHARLIE	Latitude (4 figures N) and longitude (5 figures E or W).	X	X	X
ECHO	True course in degrees (3 figures).	X	X	X
FOXTROT	Speed in knots (2 figures).	X	X	X
GOLF	Last port of call.	X		
INDIA	Destination and ETA.	X	X	

WETREP—Reporting Information				
Designator	**Information Required**	**SP**	**DR**	**FR**
PAPA	Oil cargo type(s), quantity, grade(s), and density of heavy crude oil, heavy fuel oil, and bitumen and tar. If the tanker carries other hazardous cargo simultaneously give the type, quantity, and IMO class of that cargo, as appropriate.	X		
QUEBEC	Defects in steering, navigational equipment, etc., and restrictions on maneuverability (Omit if nothing to report).	*	*	*
TANGO	Details of name and particulars of vessel's representative and/or owner for provision of cargo information.	X		
WHISKEY	Total number of persons on board.	X		
XRAY	1. Characteristics and estimated quantity of bunker fuel, for tankers carrying more than 5,000 tons of bunker fuel. 2. Navigational status (underway, at anchor, not under command, restricted in ability to maneuver, constrained by draft, moored, aground, etc.).	X		
* This designator should also be included at any time where defects, including breakdown, damage, deficiencies, and circumstances affecting normal navigation, should occur within the Reporting Area.				

The RCC contact information is, as follows:

Belgium—MRCC Oostende	
Telephone:	32-59-701000 32-59-701100
Facsimile:	32-59-703605
Frequency:	2182 kHz VHF channels 9, 16, 67, and 70
E-mail:	kustwachtoostende@vlaanderen.be

France—MRCC Gris-Nez	
Telephone:	33-3-21872187
Facsimile:	33-3-21877855
Telex:	42-130680
Frequency:	VHF channels 16 and 70
INMARSAT C:	581-422799256

France—MRCC Corsen	
Telephone:	33-2-98893131
Facsimile:	33-2-98896575
Telex:	42-940086
Frequency:	VHF channels 16 and 70

Ireland—MRCC Dublin*	
Telephone:	353-1-6620922 353-1-6620923
Facsimile:	353-1-6620795
E-mail:	mrccdublin@irishcoastguard.ie

Ireland—MRCC Dublin*
* Communications may be sent to MRCC Dublin via MRSC Valentia (EJK) and MRSC Malin Head (EJM).

Portugal—Roca Control	
Telephone:	351-214-464838
Facsimile:	351-214-464839
Frequency:	VHF channels 22 and 79
E-mail:	oper.vts@imarpor.pt

Spain—MRCC Bilbao	
Telephone:	34-944-839286
Facsimile:	34-944-839161
Frequency:	VHF channels 10 and 16
E-mail:	bilbao@sasemar.es

Spain—MRCC Finisterre	
Telephone:	34-981-767500
Facsimile:	34-981-767740
Telex:	52-82268 SAFIN E 52-86207 SAFIN E
Frequency:	2182 kHz VHF channels 11 and 16
E-mail:	finister@sase mar.es

Spain—MRCC Madrid	
Telephone:	34-91-7559133
Facsimile:	34-91-5261440
Telex:	52-41210 SAMAD E
	52-41224 SAMAD E
E-mail:	cncs@sasemar.es

United Kingdom—MRCC Falmouth	
Telephone:	44-1326-317575
Facsimile	44-1326-315610
Telex:	51-45234 FALMCG G
E-mail:	falmouthcoastguard@mcga.gov.uk

WETREP Reporting Area

Appendix II—Routes Across the North Atlantic Ocean to the Strait of Gibraltar and Bishop Rock

Routes leading from North America to the Strait of Gibraltar and Bishop Rock are, as follows:

1. Argentia, Newfoundland, Canada to the Strait of Gibraltar.
2. United States ports to the Strait of Gibraltar.
3. Caribbean Sea ports (including Bermuda and the Straits of Florida) to the Strait of Gibraltar.
4. United States ports to Bishop Rock.
5. Caribbean Sea ports to Bishop Rock.

1. Argentia, Newfoundland, Canada to the Strait of Gibraltar.

Argentia, Newfoundland.—Steer by rhumb line to a position in 45°55'N, 50°00'W. Then steer a great circle course to a position about 10 miles S of Cabo de Sao Vicente, Portugal. Then proceed as direct as navigation will allow to the Strait of Gibraltar.

2. United States ports to the Strait of Gibraltar.

Portsmouth, New Hampshire and Boston, Massachusetts.—Steer as direct as navigation will permit for a point about 30 miles S of Nantucket Light Vessel in position 40°10'N, 70°00'W; then sail by rhumb line to either position 42°00'N, 50°00'W or position 40°30'N, 47°00'W. Then steer a great circle course to a position about 10 miles S of Cabo de Sao Vicente, then as direct as navigation will allow for the Strait of Gibraltar.

Newport, Rhode Island; New London, Connecticut; and New York, New York.—Steer as direct as navigation will permit for position 40°10'N, 70°00'W; then sail by rhumb line to either position 42°00'N, 50°00'W or position 40°30'N, 4°00'W; then steer by a great circle course to a position about 10 miles S of Cabo de Sao Vicente; then as direct as navigation will allow to the Strait of Gibraltar.

Westward passages for low-powered vessels to the above ports from the Strait of Gibraltar for low-powered vessels, depending upon the time of year are, as follows:

1. After leaving the Strait of Gibraltar, pick up the parallel of 36°00'N and steer due W to 6°00'W; then sail by rhumb line to destination.
2. On clearing the Strait of Gibraltar, set a rhumb line course to position 33°15'N, 20°00'W; then sail due W to position 33°15'N, 6°00'W; then sail by rhumb line to destination.

Philadelphia, Pennsylvania; Baltimore, Maryland; and Norfolk, Virginia.—From the Delaware Bay entrance or the Chesapeake Bay entrance, follow a great circle track direct to position 36°55'N, 9°05'W, about 10 miles S of Cabo de Sao Vicente and then continue to destination as directly as navigation will allow.

Note.—The above great circles reach their northernmost points in approximately the following positions:

1. Philadelphia to Gibraltar—position 42°50'N, 45°00'W.
2. Chesapeake Bay to Gibraltar—position 42°00'N, 43°00'W.

During the winter, low-powered vessels are not recommended not to take the whole great circle route because of possibly encountering heavy weather at the northernmost points of the arc, but to first take a great circle course to position 41°00'N, 4°00'W, and a second great circle course to the Strait of Gibraltar.

Note.—The farthest N point on the three routes to Gibraltar will be in position 41°10'N, 40°30'W.

Morehead City, North Carolina.—Steer a great circle course to position 36°55'N, 9°05'W, about 10 miles S of Cabo de Sao Vicente and then continue to destination as direct as navigation will allow. See the **Philadelphia, Pennsylvania; Baltimore, Maryland; and Norfolk, Virginia** route above for low-power and northernmost points.

Charleston, South Carolina.—Steer a great circle course to a position SE of Santa Cruz das Flores in the Azores, in position 39°10'N, 31°00'W; then continue on the same great circle arc to the Strait of Gibraltar.

Jacksonville-Mayport and Port Everglades, Florida.—Join the track through the Straits of Florida, keeping a distance of 20 miles from the Florida coast and taking advantage of the Gulf Stream current, to position 30°00'N, 79°00'W; then continue on a great circle course to a position SE of Santa Cruz das Flores, in the Azores, in position 39°10'N, 31°00'W; and then continue on that same great circle course to the Strait of Gibraltar.

3. Caribbean Sea ports (including Bermuda and the Straits of Florida) to the Strait of Gibraltar.

Bermuda.—Steer a great circle course to a point SE of Santa Cruz das Flores, in the Azores in a position 39°10'N, 31°00'W, and continue on that same great circle course to the Strait of Gibraltar.

Straits of Florida Junction.—From position 24°25'N, 83°00'W, off the Dry Tortugas, pass through the Straits of Florida, keep off a distance of 20 miles from the Florida coast so as to take full advantage of the Gulf Stream current, to position 30°00'N, 79°00'W. Then shape a great circle course to a position SE of Santa Cruz das Flores, in the Azores, in position 39°10'N, 31°00'W. Then continue on that same great circle course to the Strait of Gibraltar.

Cristobal, Panama (via Mona Passage).—Proceed as direct as navigation will allow through Mona Passage to position 18°20N, 68°00'W (12 miles NNW of Mona Island); then steer a great circle course to the Strait of Gibraltar.

Cristobal, Panama (via Anegada Passage).—Proceed as direct as navigation will allow through Anegada Passage to position 18°35'N, 63°50'W (in the middle of the Anegada Passage); then steer a great circle course to the Strait of Gibraltar.

Charlotte Amalie, St. Thomas.—Proceed as prudently as navigation will allow through Anegada Passage to position 18°35'N, 63°50' W, (in the middle of Anegada Passage); then steer a great circle course to the Strait of Gibraltar.

San Juan, Puerto Rico.—Proceed as prudently as navigation will allow to position 18°33N, 66°05' W (about 4 miles NNE of San Juan), then steer a great circle course to the Strait of Gibraltar.

Roosevelt Roads, Puerto Rico.—Proceed prudently and with great caution N and E through Virgin Passage by rhumb line; then join the great circle track from Cristobal to the Strait of Gibraltar as previously described.

Guantanamo Bay, Cuba.—Proceed as prudently and direct as navigation will allow E to Windward Passage. Proceed through Windward Passage to position 21°35'N, 71°10'W in Turk Island Passage; then by rhumb line to position 30°00'N, 35°00'W; then steering E on the parallel of 36°00'N to the Strait of Gibraltar.

4. United States ports to Bishop Rock.

Portsmouth, New Hampshire.—Steer rhumb lines to a position about 60 miles S of Sable Island, then to position 43°00'N, 50°00'W and then by great circle track to Bishop Rock. An alternate route if the time of year is clear of ice is to proceed by rhumb lines to position 45°25'N, 50°00'W and then by a great circle track to Bishop Rock.

Boston, Massachusetts.—From Boston Light, steer rhumb lines to position 42°00'N, 50°00'W and then by great circle track to Bishop Rock.
Note.—A Traffic Separation Scheme is in effect in the Boston approaches.

Newport, Rhode Island and New London, Connecticut.—Steer rhumb lines to a position about 30 miles S of Nantucket Lightship in position 40°10'N, 70°00'W; then by rhumb lines to position 42°00'N, 50°00'W; and then by a great circle track to Bishop Rock.
Note.—A Traffic Separation Scheme is in effect in the Narragansett Bay approaches.

New York City, New York.—Steer by rhumb lines to a position about 30 miles S of Nantucket Lightship in position 40°10'N, 70°00'W; then by rhumb lines to position 42°00'N, 50°00'W; and then by a great circle track to Bishop Rock.
Note.—A Traffic Separation Scheme is in effect in the New York Harbor approaches.
Caution.—Deep-draft vessels should stay outside of Barnegat Lighted Horn Buoy B and Five Fathom Bank Light between New York Harbor and Delaware Bay, and outside of Delaware Lighted Horn Buoy D, Jack Spot Lighted Whistle Buoy 2JS (38°05.3'N., 74°45.1'W.), and Chesapeake Light between Delaware Bay and Chesapeake Bay. Traffic is heavy along this section of coast and a sharp lookout must be kept to avoid collision. Traffic Separation Schemes are in effect in the approaches Delaware Bay and Chesapeake Bay.

Philadelphia, Pennsylvania; Baltimore, Maryland; and Norfolk, Virginia.—For the passages from Philadelphia to the entrance of Delaware Bay, and from Baltimore and Norfolk to the entrance of Chesapeake Bay, see U.S. Coast Pilot 3, Atlantic Coast, Sandy Hook to Cape Henry. From the Delaware Bay entrance or the Chesapeake Bay entrance, proceed by a great circle track to position 42°00'N, 50°00'W and then via a second great track to Bishop Rock.

Morehead City, North Carolina and Charleston, South Carolina.—Proceed by a great circle track to position 42°50'N, 50°00'W and then by a second great circle track to Bishop Rock.

Jacksonville, Mayport, and Port Everglades, Florida.—Join the track through the Straits of Florida, keeping off at a distance of 20 miles from the Florida coast in order to take full advantage of the Gulf Stream current. Set a rhumb line course as prudently as navigation will allow to a position just N of position 30°00'N, 79°00'W and then to position 35°30'N, 72°40'W. From here shape a great circle track to position 42°00'N, 50°00'W and then continuing on a great circle track to Bishop Rock.

5. Caribbean Sea ports to Bishop Rock.

Guantanamo Bay, Cuba.—Proceed as directly as navigation permits through Windward Passage past Turks Island, continue on rhumb line course to position 36°00'N, 35°00'W, and then continue by a great circle track to Bishop Rock.

Low-powered vessels steer by rhumb lines through Windward Passage to position 30°00'N, 45°00'W; then by a great circle track to position 36°40'N, 24°45'W; and then by as second great circle track to Bishop Rock. This distance is about 122 miles longer than the above route.

Roosevelt Roads and San Juan, Puerto Rico.—Proceed by rhumb lines as directly as safe navigation permits through Sombrero Island Passage, then take a great circle track for Bishop Rock.

Low-powered vessels shape a great circle course track from Sombrero Island Passage to position 37°00'N, 24°30'W and then shape a second great circle course to Bishop Rock. This distance is about 172 miles farther than the above route.

Cristobal (via Anegada Passage).—Proceed direct as prudent navigation will allow through Anagada Passage to position 18°35'N, 63°50'W (in the middle of Anegada Passage) and then set a great circle track for Bishop Rock.

Cristobal (via Mona Passage).—Proceed as direct as prudent navigation will allow through Mona Passage to position 18°20'N, 68°00'W (12 miles NNW of Mona Island) and then set a great circle track for Bishop Rock.

Bermuda.—Proceed by a great circle track direct to Bishop Rock.

Straits of Florida Junction.—Proceed as direct prudent navigation will allow through the Straits of Florida, keeping at a distance of 20 miles off the Florida coast so as to take full advantage of the Gulf Strearn current, to position 30°00'N, 79°00'W. Then shape a great circle track for Bishop Rock.

Appendix III—Routes to and from Canada, the United States, and the Caribbean Sea

Routes leading to and from North America to the Strait of Gibraltar and Bishop Rock are, as follows:

1. Routes to and from the Panama Canal at Cristobal, Panama.
2. Routes from Canada to Greenland, Iceland, the E coast of the United States, and the Caribbean Sea.
3. New York to ports in the Caribbean Sea and the Gulf of Mexico.
4. Miscellaneous cross-Atlantic Ocean routes.

1. Routes to and from the Panama Canal at Cristobal, Panama.

Cabot Strait to Cristobal.—From a position about 4 miles E of Scatari Island proceed by a great circle track to a position about 10 miles SE of the SE extremity of Great Inagua Island,. Proceed through Caicos Passage and Windward Passage to a position about 7 miles W of Cap Dame Marie, Haiti, and then directly as safe navigation permits to Cristobal.

Halifax to Cristobal.—Proceed to a position off the W end of Mayaguana Island, and then to a position off the W side of Great Inagua Island. From Great Inagua proceed through Windward Passage into the Caribbean Sea and on to Cristobal, as above.

G**ulf of Maine Ports to Cristobal.—**Proceed by the most direct route within the limits of safe navigation to the vicinity of Nantucket Shoals Light Ship (40"30' N., 69°28' W.). From there proceed to a position off the W end of Mayaguana Island, and then to Cristobal, as in the **Halifax to Cristobal** route above.

New London, New York, and Delaware Bay, and Chesapeake Bay to Cristobal.—Proceed as directly as possible within the limits of safe navigation to the vicinity of San Salvador (Watling Island) (24°00' N., 74°30' W.), passing a safe distance off on either side of it toward Crooked Island Passage. Pass between Castle Island and Mira por Vos Cays and through the Windward Passage, from which rhumb lines may be taken to Cristobal.

Note.—All vessels using the Windward Passage should make a landfall at Navassa Island (18°24' N., 75°01' W.) so as to be certain of clearing the dangers E of Jamaica.

Alternate route Cristobal to New York.—Follow the route through Yucatan Channel to Cabo San Antonio, given below. Round the cape at a safe distance and steer for a position about 13 miles SE of Sombrero Key. From this position follow the main axis of the Gulf Stream to about 20 miles SE of Diamond Shoals Light Tower, and then proceed as directly as possible within the limits of safe navigation to New York.

Ports in the Gulf of Mexico to Cristobal.—Proceed as direct as safe navigation permits to a position about 12 miles W of Cabo San Antonio, Cuba. From there steer to a position outside the 200m curve off SW Point Light on Grand Cayman, and then for a position off the SW extremity of Pedro Bank. From the SW extremity of Pedro Bank, course may be changed to the S to pass between Alice Shoal and Bajo Nuevo, direct to Cristobal; or, if unsure of position, continue SE until such time as vessel is clear of Baja Nuevo. Course can then be changed SSW direct to Cristobal.

Return.—From Colon Breakwater steer NNE to round Bajo Nuevo at a prudent distance. Allowance should be made for the prevailing W current between Panama and Jamaica. The NNE course should not be carried too far beyond Bajo Nuevo because of the dangers on Pedro Bank. Once Bajo Nuevo is cleared proceed direct to a position about 12 miles W of Cabo San Antonio and from there as directly as safe navigation permits to the desired port of call.

Fastnet to Cristobal.—Proceed by great circle track to position 23°00'N, 72°00”W and then through Caicos Passage and Windward Passage to Cristobal as in the **Cabot Strait to Cristobal** route above.

Bordeaux to Cristobal.—From the mouth of the Gironde River proceed to position 18°00'N, 68°30' W in Mona Passage and then as directly as possible within the limits of safe navigation to Cristobal.

2. Routes from Canada to Greenland, Iceland, the E coast of the United States, and the Caribbean Sea.

Goose Bay, Labrador to Churchill, Manitoba.—Proceed as directly as safe navigation permits to position 54°24'N, 56°32'W and then to position 60°45'N, 63°57' W a position E of the Button Islands off the entrance to Hudson Strait. From there steer to a position about 20 miles S of Resolution Island, from which position a course of 293° for 288 miles will lead to a position with the light on the Wend of Charles Island bearing 235°, distant 14 miles. From there a course of 266° for 107 miles will lead to a position with Digges Island Light bearing 180°, distant 8 miles. From off Digges Island steer 253° for 55 miles to position 62°27'N, 80°00'W about 5 miles off the NW end of Mansel Island. This track leads about 6 miles N of Mansel Island Light. From here a course of 243° for 460 miles will lead across Hudson Bay to a position with the radio masts at Churchill bearing 216° and 14 miles distant.

Note.—To avoid Churchill Shoals, vessels should keep outside the 20m curve, and, in thick weather, outside the 40m curve. The above route is for information only and the routes recommended by the Ice Information Officer should be followed.

Goose Bay to Reykjavik.—Proceed as directly as safe navigation permits to position 54°24'N, 56°32'W and then to position 66°45'N, 61°00'W near Cape Dyer on Baffin Island, and then to position 76°20'N, 69°45'W. Proceed from there to the anchorage by the safest route available.

Churchill to Thule.—Follow the reverse of the route through Hudson Strait and Bay, given above, from Churchill to the position 20 miles S of Resolution Island in the entrance to Hudson Strait and then to Thule as directly as possible within the limits of safe navigation via position 76°20'N, 69°45'W.

Churchill to Sondre-Stromfjord.—From the position S of Resolution Island proceed as directly as safe navigation will permit to position 66°01'N, 53°45'W at the entrance to the fjord.

Strait of Belle Isle to Ports in the Gulf of St. Lawrence and the Great Lakes.—Follow the fairway of the Strait of Belle Isle, passing 5 miles S of Amour Pont to a position about 14 miles SE of Cape Whittle Light. Course is then altered to the W to pass N of Anticosti Island through Mingan Passage.

Outbound.—Vessels have the option of passing either N or S of Anticosti Island. Although the S route is 17 miles longer, it allows a vessel to take advantage of the east-going Gaspe Current. To obtain the full benefit of the current keep at a distance of 4 to 5 miles offshore between Cap Chat and Fame Point. From a position abreast of Fame Point steer E to pass about 6 miles S of Heath Point, and then alter course NE to join the inbound track about 14 miles SE of Cape Whittle Light.

Cabot Strait to ports in the Gulf of St. Lawrence and the Great Lakes.-—Steer as directly as safe navigation will permit to pass about midway b tween St. Paul Island and Cape North, Cape Breton Island. Then steer NNW to a position about 6 miles NE of Bird Rocks and then change course for a position about 14 miles NE of Cape des Rosiers. From there pass Fame Point at a distance of about 10 miles and then maintain an offing of 10 miles or more as far as the mouth of the St. Lawrence River between Pointe des Monts and Matane.

If inbound from northern European ports via the Cape Race route, proceed as directly as possible within the limits of safe navigation to a position about 8 miles SW of Cape Ray, Newfoundland, and then to a position about 10 miles off Fame Point, where the above track can be picked up and followed.

Outbound.—In general the reverse of the above routes are followed except that when rounding the Gaspe Peninsula a distance of between 4 and 5 miles offshore is maintained as far as Fame Point and then course is altered to a position about 10 miles NE of Cap des Rosiers to take full advantage of the Gaspe Current.

Halifax to ports in the Gulf of Mexico.—Proceed direct to the vicinity of Matanilla Shoals Buoy (27"24'N., 79°08'W.), being careful to remain N of the 28th parallel until absolutely certain of vessel's position to avoid the shoals E of buoy. From there proceed across the Gulf Stream to Jupiter Inlet Light, allowing for about a 2.25 knot N set. On approaching the Florida coast remain in at least 27.4m of water and from 1 to 1.5 miles offshore. When at the appropriate distance off turn S and follow the general trend of the shore around the S tip of Florida and Keys to Dry Tortugas. Maintain a distance of at least 1 to 1.5 miles offshore as far as Hillsboro Inlet, then 1.5 to 2 miles off to Fowey Rocks, and at least 2 miles off to Dry Tortugas. From Dry Tortugas course may be set to arrive at destination by the safest route.

Alternate routes.—Some vessels proceed directly to the vicinity of Fowey Rocks from Matanilla Shoals. Others maintain their SSW course after passing Matanilla Shoals Buoy until they cross the 200m curve and then turn due S until abeam of Great Issac Light, whereupon they steer 234° to make the Florida Keys in the vicinity of Molasses Reef. Then they follow the general trend of the coast maintaining a distance off of at least 2 miles. All three routes take about the same amount of time although the distances vary.

Halifax to ports in the eastern Caribbean Sea.—Proceed as directly as safe navigation will permit to the vicinity of Mona Island (18°05' N., 67°51' W.), passing W of the island if bound for ports in the Dominican Republic or W of Curacao, and E of the island if bound for ports in Puerto Rico or E of Curacao, into the Caribbean Sea. Once clear of the passage proceed as direct as safe navigation will permit to destination.

3. New York to ports in the Caribbean Sea and the Gulf of Mexico.

New York to San Juan, Puerto Rico.—From Hudson Canyon Traffic Lane Buoy (40°08'N., 73°21'W.) proceed directly to San Juan approach.

New York to Santo Domingo.—From Hudson Canyon Traffic Lane Buoy proceed to a position about 7 miles E of Cabo Engano on Hispaniola and then by the safest and most direct route to Santo Domingo.

New York to Aruba and Curacao.—Follow the **New York to Santo Domingo** route above as far as the position off Cabo Engano and then direct to destination.

New York to ports in the Gulf of Mexico.—From Barnegat Lighted Horn Buoy (39°46'N., 73°46'W.) proceed so as to pass about 12 miles off Diamond Shoals Light Tower. Maintain this course past the tower and across the Gulf Stream to about 34°00'N. Then change course to arrive in the vicinity of Matanilla Shoals Buoy. Then proceed as in the **Halifax to ports in the Gulf of Mexico** route above.

4. Miscellaneous Cross-Atlantic Ocean Routes.

New York to Casablanca.—Proceed via Nantucket Traffic Lane to Nantucket Shoals Light Ship and then by great circle track to the approaches to Casablanca.

New York to Cape Town.—Proceed as directly as safe navigation permits to the vicinity of Hudson Canyon Traffic Lane Buoy (40°08'N., 73°21'W.) and then to Cape Town via a great circle track.

New York to the E Coast of South America.—From Hudson Canyon Traffic Lane Buoy proceed by great circle so as to cross the Equator at the 37th meridian. Then steer for position 5°25'N, 34°25'W and then proceed by coastwise routes to destination.

Norfolk to Port of Spain.—Proceed via Virgin Passage, passing W of St. Croix and Sail Rock and then direct to the Dragons Mouth. From the Dragons Mouth proceed coastwise, having due regard for navigational dangers, to the approaches to Port of Spain.

Norfolk to Dakar.—Proceed direct to Cap Verde by great circle track and then as directly as safe navigation permits to Dakar.

Bordeaux to Belem.—From the mouth of the Gironde River shape a course to give the salient point of NW Spain a wide berth, especially in thick weather. Then proceed by great circle so as to cross the Equator at 47°45'W and from there proceed as directly as safe navigation will permit to Belem.

Bordeaux to the E Coast of South America.—After rounding the NW coast of Spain at a safe distance, shape a route as directly as safe navigation will allow to a position off the desired port

Bordeaux to Cape Town.—After rounding northwestern Spain proceed by a great circle route to position 22°20'N, 17°00'W passing between Gran Canaria and Fuerteventura in the Canary Islands. Then proceed along the African coast, maintaining a safe distance off, to position 11°20'N, 17°10'W and then by great circle track to Cape Town.

NORTH SEA AND THE ENGLISH CHANNEL

General	**447**
Cautions	**448**
Climatology	**448**
Currents	**454**
Navigational Information	**455**
Pollution	**456**
Regulations	**456**
Routes	**457**
Ship Reporting System	**457**
Tides	**458**
Appendix—Routes in and around the United Kingdom and Ireland	**459**

General

North Sea

The North Sea is an epicontinental sea on the shelf area between the British Isles and Norway, Denmark, Germany, Holland, and Belgium. Atlantic Ocean water flows through the English Channel, through the Straits of Dover and into the North Sea. Also, fresh water from the N coast of France enters the North Sea through the English Channel. Generally, in winter there is an E movement of water. During summer, surface water along the coasts of the Netherlands and Denmark moves offshore, and deeper water moves onshore.

The average North Sea depth is 94m. The S part of North Sea is shallow, with an average depth of 50m S of Dogger Bank. Depths decrease from 145 to 165m at its N end to about 27 to 37m at its S end. The bottom is fairly smooth and it slopes upward toward the SSE to the Dutch Wadden Isles. The bottom slopes downward from S to N except for the Dogger Bank area, which shoals to 13m. The Norwegian Trench, with depths of 250 to 600m, follows the S coast of Norway.

Shifting sand waves are located in the S part of the North Sea.

The terrain is mostly mountainous with hills and small plains along the cost.

Hydrographic information for the coast of Albania may be inadequate; charts and publications covering these waters may not be up-to-date. Prudent navigation is advisable.

English Channel

The English Channel connects the eastern Atlantic Ocean with the North Sea. The English Channel constricts to its minimum width of 19 miles at the Straits of Dover. Because of the constriction and shallow depths, tidal flow through the English Channel is strong. In general, water flows from the Atlantic Ocean, through the English Channel, and into the North Sea. The flow may be reversed by strong winds. The climate of the English Channel is temperate. It is generally windy, cloudy, and rainy.

The English Channel bottom depth decreases rapidly at the entrance of the English Channel from over 2,000m in the Bay of Biscay to 120m at the mouth of the English Channel.The floor of the English Channel slopes steeply down from the coast to a depth of 30 to 60m and then becomes generally flat below a depth of 60m. The floor slopes gently from the E end at 40m to about 120m at the mouth of the English Channel.

The mean depth of the English Channel is 53m, varying between a maximum depth of 172m close N of the Iles des Casquets and a minimum of 1.5m near the center of The Ridge.

West of 2°W, the sea floor is broken by islands and shoals.

Sand banks occur in the E part of the English Channel; sand waves occur near the W mouth of the English Channel.

Sand waves extending up to 17m from the bottom were reported (1971) to extend up to 4 miles S of South Falls Lighted Buoy, decreasing the fairway depth to 18.9m.

There are three narrow trenches in the floor of the English Channel, as follows:

1. Hurd Deep near Guernsey.
2. Fosse de l'Ile Vierge
3. Fosse d'Oessant.

Cautions

Special Warning 120 (Issued 16 November 2001)

Information on Special Warning 120 can be found in **North Atlantic Ocean—Cautions**.

Sand Waves

Fields of sand waves are common in the S part of the North Sea. Sand waves are formed where the water moves rapidly over an area of unconsolidated sea bed sediment; the are similar to sand dunes formed on land by the wind. The least depths over sand waves are obtained during routine surveys, but where these fields are mobile, changes to charted depths are likely to occur. Sand waves reach their maximum heights after periods of relatively calm weather or neap tides.

Wind Effects on Water Levels

Bursts of wind of short duration cause inertial oscillations in the waters of the North Sea. If the oscillations are in phase with the tides, they may increase the tidal current 1 knot. These oscillations are important in creating extreme currents.

There are three types of storm surges that create problems in the North Sea, as follows:

1. The first type of storm surge is caused by strong NW winds due to a depression passing over Norway at 8°E and between 60°N and 65°N. Tidal currents are directed into the German Bight, causing high water levels along the German and Danish coasts.
2. The second type is caused by a fast moving depression over the center of the North Sea at 8°E between 50°N and 57°N. The wind pattern sets up a meso-scale residual eddy turning counterclockwise in the central North Sea which produces high water levels along all coasts.
3. The third type of storm surge is caused by strong winds steered by the topographic effect of the Norwegian Mountains. A depression moves north of the center of the North Sea passing 8°E between 57°N and 60°N. The winds cause a clockwise turning residual eddy which sets up high water levels in the middle of the North Sea.

Considerable effort is expanded in forecasting storm surges. An E-W wind is ten times more effective in producing a sea level anomaly in the North Sea than a N-S wind. In general, W and N winds lower the sea level on the English coast and raise the level on the continental shore in the SE part of the North Sea.

Climatology

General

The Naval Research Laboratory Monterey, a corporate research laboratory for the United States Navy and Marine Corps, publishes port studies and forecaster handbooks that may be of use to the mariner. These publications can be accessed at the Naval Reserach Laboratory web site.

Naval Research Laboratory Monterey Home Page

http://www.nrlmry.navy.mil/pubs.htm

The European Severe Weather Port Guide contains information on the following ports:

1. Norway—Bergen and Hakonsvern.
2. United Kingdom—Firth of Forth.

NORTH SEA

General.—Winters along the North Sea coasts are usually mild, drizzly, foggy, and damp. Frequent North Atlantic low pressure systems and infrequent Siberian highs make up the winter climate. The weather at individual ports or along specific coasts depends largely on exposure to prevailing winds, closeness to storm centers, and the industrial makeup of the area. The short winter day also contributes to the North Sea climate.

The numerous storms that frequent the North Sea and nearby waters bring a varied abundant cloud cover that blocks 80 to 90 per cent of the sunshine available on these short days. Cloudy conditions (cloud cover greater than or equal to 6/8) occur on about 18 to 25 days per month, except along the normally leeward E shores of Great Britain, where they are seen on about 12 to 16 days per month. This cloud cover helps keep temperatures down during the day and up at night. The diurnal range averages 6° to 10°F in winter. The cloud cover indicates moisture and is reflected in relative humidities that average in the mid to upper 80 per cent range. Yet with all the moisture, the storms, and the cloudiness, precipitation amounts are, for the most part, light.

The E coasts of Scotland and England benefit from that leeward protection while the SE coasts from Belgium to Denmark are usually too far S of the storm centers and heavy rain areas. Precipitation amounts range from 50 to 75mm per winter month. The SW coast of Norway benefits from neither of these effects; here precipitation amounts range from 100 to 230mm per month. The scanty amounts along the other coasts accumulate over a large number of days. Measurable precipitation (greater than or equal to 0.1mm) is observed on about 14 to 20 days per month. Norway's precipitation falls on about 18 to 24 days per month; much of this falls as snow.

Other areas receive little snow. This is reflected by the temperatures. Average winter daytime maximums range from the low single digits (°C) along the German and Danish shores to the upper single digits (°C) along the SE coast of England. Nighttime lows range from around freezing in Denmark, Norway, Germany and the Low Countries to the low single digits (°C) in England. These are not ideal conditions for frequent snows, particularly since below normal temperatures often occur with clear skies. Minimum temperatures drop below freezing from October through May. In mid-winter this occurs on 18 to 20 nights per month in Denmark and Norway, 10 to 17 nights in the lowland countries, and 6 to 12 nights in Great Britain. These are average general conditions to which there may be exceptions. For example, at exposed Spurn Head below

freezing temperatures occur on a maximum of just 3 to 4 days per month. At Nairn, near Inverness in the Moray Firth, temperatures drop to freezing or below on 12 to 19 days per winter month, with most occurrences in March. However, snow does fall on an average of 10 to 20 days annually along the shores of England, the Netherlands, Belgium and West Germany. This average jumps to 20 to 35 days in Scotland and Denmark and to 35 to 50 days along the southwestern coast of Norway. The snow season runs from November through April except in Scotland and Norway, where it normally extends from October through May.

There are some periods on these North Sea coasts when it isn't raining or snowing. The number of days when clear skies are observed averages between 2 and 8 days per winter month. These periods are most likely between fronts or with the outbreak of a continental high pressure system. These highs are responsible for the coldest winter days. Record low temperatures can be neared or broken during these spells. Extreme low temperatures depend upon exposure and range, as follows:

Great Britain coast:	-8.9°C to -12.8°C
Belgium-Netherlands coast:	-8.9°C to -18.9°C
Interior ports in Germany:	-21.7°C
Jutland coast of Denmark:	-17.8°C
Southwest coast of Norway:	-12.2°C to -22.2°C

Drastic temperature drops of 11° to 17°C can occur in Norway when cold air rushes down fjords. It is during these clear cold periods that most ports are highly susceptible to fog.

Fog is often aided by industrial smoke, which by itself can sometimes lower visibilities to less than 1 mile. Winds can spread this smoke over great distances. Winter fog is local, however, and needs sheltered conditions in order to thrive. For example, along the Netherlands coast visibilities drop to or below 0.6 mile on up to 11 days per month, while nearby lightships experience these conditions on just 4 to 6 days. At sheltered Inchkeith, Scotland, in the Firth of Forth, the fog signal is heard an average of 108 hours in February. A short distance away at exposed St. Abb's Head, their fog signal sounds an average of 21 hours in February. Fog depends on moisture, and relative humidities are high year round on North Sea coasts. The average diurnal range of humidities is small in winter, averaging just 2 to 6 per cent. Along most coasts, relative humidities range from the upper 80s to mid 90s (per cent) in the early morning and from the low to upper 80s (per cent) in the afternoon. Along, the Norwegian coast, this range is from the low 80s to the mid to upper 70s (per cent).

Spring is a pleasant season of transition along the North Sea coasts. As the days grow longer, temperatures rise, cloudiness and rain are less frequent and humidities are lower, although fog is still present. While lows are more likely to move directly over the North Sea, they are much weaker than the severe winter storms. Their southward shift along with an increase in NE winds bring more cloudiness to the former leeward coasts of Great Britain. Cloudy skies (greater than or equal to 6/8) are now observed on up to 20 days per month along the east coasts of England and Scotland. Elsewhere, however, cloudiness is decreasing; by May cloudy conditions are observed on 8 to 16 days. Along with an increase in radiation, this causes temperatures to rise and also causes a greater difference between maximums and minimums. During spring, average maximums rise from the upper single digits (°C) to the mid-teens (°C). Minimums jump from near freezing to the mid to upper single digits (°C). These temperature increases result in a drop in relative humidities and an increase in the diurnal spread. By May morning maximums are in the 75 to 90 per cent range while afternoon minimums range from the upper teens to low 20s (°C). The relative humidities indicate that May and June are the two driest months, This is also reflected by precipitation. From February through May average monthly precipitation amounts range from 25 to 76mm, and up to 152mm along the southwest Norwegian coast. Those bleak rainy days are also on the decline and measurable precipitation can be expected on 8 to 16 days per month in spring. There is a further decline in rainy days during summer but this is offset by heavier falls in showers. Although humidities are lower and rain is less, fog is still a problem in spring. Spring is a season of two fogs: land (radiation) and sea. Some locations are subject to both under the right conditions. Many of these locations reach a peak in fog frequency during March. During this month visibilities fall to or below 0.6 mile on 4 to 8 days. The clear conditions (sky cover less than or equal to 2/8) needed for land fog formation are observed on 3 to 6 days per month. At sheltered locations spring marks the end of the fog season. By May, fog is becoming more infrequent almost everywhere. Frequencies are falling toward a summer minimum.

Summer is a relatively cool wet season with occasional periods of hot dry weather, The length of the day is around 16 to 18 hours, about twice that of winter. Sea breezes and prevailing winds off the water keep maximum daytime temperatures in the upper teens to low 20s (°C) range. Temperatures in general decrease N; the coldest temperatures are found along the coasts of Scotland and Norway. Temperatures are also restricted by cloudiness. In the early morning low clouds, haze and smoke are often present and during the afternoon cumulus type clouds develop. Average cloud cover ranges from 5 to 6 oktas (eighths). Clear days, less common than they were in spring, range from 2 to 8 per month. Cloudy days are more common and range from 14 to 22. Afternoon clouds are often convective giving rise to showers and thunderstorms. Monthly rain amounts usually increase as the summer wears on. By August amounts of 51 to 101mm are common, except in Norway, where the range is from 101 to 178mm. Showers can be heavy and maximum 24-hour amounts are usually in the 51 to 76mm range; Yarmouth Roads measured 122mm during one August shower. Thunderstorms are most likely in the summer and are usually isolated late afternoon occurrences. They are most frequent from southeast England along the Low Countries to Germany. On these coasts thunderstorms occur on 3 to 6 days per month from late spring through early Autumn. Elsewhere they are infrequent and occur on just 1 to 2 days per month. Thunderstorms and showers briefly reduce visibilities. Summer visibilities are usually good.

The northeast coast of Scotland is susceptible to sea fog and at Wick visibilities drop below 0.6 mile on 3 to 4 days per month. Along most coasts a light early morning fog is common; this is mainly radiation or land fog. It is prevalent around industrial areas and can reduce visibilities below 0.6 mile on up to 3 days per month at places like Vlissingen, Emden, Bremen, Hamburg and Stavanger. However, it usually reduces visibili-

ties to just below 2.5 miles in the early morning. During the morning hours, the stable conditions that support this fog disappear as the air is heated and becomes more turbulent. Visibilities quickly improve. The moisture needed to support these fogs is reflected in the relative humidities. If the actual moisture content of the air remained the same year round, then relative humidities would be lowest in summer when temperatures are highest. However, sea breezes and prevailing winds increase moisture and relative humidities are higher than spring and increase throughout the summer. Early morning maximum relative humidities increase from the mid 70s(per cent) and low 80s (per cent) to the mid to upper 80s (per cent) by summer's end. Minimum afternoon relative humidities do not increase and remain in the 0 to mid 70 per cent range.

There are periods of hot dry weather associated with continental highs. During these infrequent spells humidities are low and temperatures are high. Maximum temperatures of more than 30°C may occur on the average of 1 to 4 days per summer. Extreme temperatures along the North Sea coasts are in the low to mid 30s (°C).

Autumn brings a gradual return to hazardous winter conditions. September is closely related to summer while November begins to feel like winter. Often a brief return to pleasant summerlike weather occurs for a week or so in September or early October. This is similar to Indian Summer in the United States.

As storm intensity and size increases and days shorten, temperatures begin to fall. Daytime maximums fall from the mid to upper teens (°C) in September into the mid to upper single digits (°C) by November. Minimums fall from the upper single digits and low teens (°C) into the low single digits (°C). By October, temperatures begin to fall below freezing on 1 to 2 days in many locations; this increases to as many as 12 days by November.

Lowering temperatures bring an increase in relative humidities, particularly minimum relative humidities. Afternoon minimums, which were in the low to mid 70s (per cent) in early fall, rise into the low to upper 80s (per cent) by November. Maximums already in the 80s (per cent) increase by 4 or 5 per cent in most locations. Increasing relative humidities and falling temperatures accompany an increase in fog frequencies along most coasts.

Visibilities in early fall are excellent along the exposed coast of Scotland, where they fall below 0.6 mile on less than 2 days per month. Along the English coasts the frequency of poor visibilities increases during the fall; by November visibilities less than or equal to 0.6 mile can be expected on 3 to 8 days. Along the coasts of the Low Countries and Germany fog occurrences reach a peak from October through January. Low visibilities can be expected on 6 to 9 days each month. Fog frequencies decrease in Denmark and Norway; visibilities of 0.6 mile or less occur on 3 to 5 days per month along the Denmark coast and 1 to 2 days per month on Norwegian shores. The chances of land fog are always increased by clear conditions. Clear skies (less than or equal to 2/8) are seen more often in fall than summer. They are observed on about 4 to 12 days per month and are most frequent in the Netherlands. Cloudy skies are also observed more often as fall turns toward winter. North Sea coastal residents of Norway, Denmark, and Belgium can see cloudy conditions (cloud cover greater than or equal to 6/8) on about 20 to 24 days per month in fall. Elsewhere, these conditions occur on 15 to 22 days per month by late fall.

Rains along most coasts are heaviest in late summer and early autumn. Average amounts are largest along the southwest coast of Norway where they range from 127 to 229mm in the peak month. Along other coasts this range is from 51 to 76mm. These amounts tend to decrease somewhat as winter approaches. However, rainy days increase from 10 to 16 days in early fall to 12 to 20 days by late in the season. There is a chance of snow by October in the N and by November in the S.

Extratropical Cyclones.—The most intense storms affect the North Sea in fall and winter. The main path of storms lies between Scotland and Iceland. Storms also move across the British Isles and then NE to Norway. Occasionally a storm will move across southern England or through the English Channel and into the Baltic Sea. About 60 per cent of all North Sea winter storms develop gale-force winds. Many are intense secondary lows that form S of a major system. These can move across the North Sea at speeds up to 40 knots. Gales most often accompany SW through NW winds. Fronts associated with these storms are most active in winter. A well-developed storm between Iceland and Scotland, with its frontal systems, can cover 1,000 miles.

Most winter storms move well to the N of the SE coast of the North Sea. They bring S to SE winds, rising temperatures, cloudiness, and occasional showers to these shores. As the low passes, winds shift to the SW and W, with cooler weather and showers. When lows pass close to these shores or a vigorous cold front moves in from the N, the accompanying high seas are a menace to the low-lying farmlands and villages. North winds have the longest fetch.

As spring progresses, the primary storm track shifts S into the North Sea. There is, however, a considerable decrease in intensities even though summer brings the greatest number of lows. Less than 10 per cent of these storms generate gales. Frontal activity is at a minimum in summer. Frontal zones are usually narrow with showers and rapid clearing after the front passes.

Winds.—A year round procession of lows and fronts through or near the North Sea produces varying, frequently shifting, winds. When days are long and storms are weak, the seasonal land-sea breeze provides a steadying effect. Topography influences winds on all coasts in all seasons, but is most noticeable in the gusty squalls that come blowing off the Scottish highlands and roaring down the Norwegian fjords.

Since so many winter storms remain N of the area, a general SW to W flow prevails. This flow is deflected to the SE around Norway. Spring and autumn combine the closer-passing but weaker storms with a land-sea breeze effect to produce a varied and complex wind regime. Summer winds are the product of normally weak pressure gradients and the influential land-sea breeze pattern.

Winter winds at Wick, Scotland blow from S through NW about 90 per cent of the time. These are part of the strong shifting winds that blow off the E coasts of Scotland and England. Direction and speed are influenced by exposure. At Inverness, wind directions are more confined to S and SW, while W winds are most frequent at Tynemouth and Spurn Head. Greenwich favors a relatively prevailing SW flow. Exposed locations like Wick are subjected to winds that blow at an average of 15 knots, while protected ports like Inverness register 6-knot averages in winter.

Spring winds are weaker but more complex than the winter

flow. More, but weaker, storms pass directly over the area and the land-sea breeze begins to take hold. Winds in general, and afternoon winds in particular, begin to come more and more off the water during March. While S through W winds still prevail, they are less frequent than in winter. Winds from the N through SE are slowly becoming an accepted afternoon feature. The weaker storms drop wind speed averages to 5 to 12 knots. A slight afternoon increase is apparent. This wind speed increase reaches an average of 3 to 4 knots in summer.

Summer winds are a blend of the variable flow around weak infrequent storms and the steady reversible flow of the land and sea breezes. Sometimes these forces combine to produce a strong flow and other times they are at odds and the flow is weak. On clear mild days, light W to SW morning winds gradually reverse to become N through SE, at average speeds of 12 knots, during the afternoon. When these ideal conditions are not present, the sea breeze may still alter existing flow. For example, at Wick, the sea breeze helps make S winds an important afternoon feature by rerouting existing SW and W flows. When cloud cover prevents sufficient heating of the land or when the pressure gradient is strong, SW to W winds can prevail all day. Summer mornings are often beset by calms, particularly at sheltered locations; an excellent example is Inverness, where morning calms occur 13 to 22 per cent of the time, year round, including 19 to 20 per cent on fall mornings. However, in general, autumn brings an increase in wind speeds and more variable directions as storms become more intense and days grow shorter. Average winds along exposed shores are up to 15 knots again by October. The increase in frequency of S through NW winds signals the approach of winter.

The winter wind season is shorter along the coasts of Belgium, the Netherlands, and Germany. The relatively predictable flow of S through W winds lasts only through January. Late winter storms and increasing daylight are responsible for a noticeable variability in winds by February. Northwest winds, infrequent until now, become more prominent since storms are passing closer to these shores. South to SW winds are the most common in December and January. During February, NW through E winds are on the increase. Average wind speeds also begin to fall from a mid-winter peak of 20 knots along exposed shores and 8 knots at the more protected ports. Zeebrugge, Belgium is an exception that averages 13 to 15 knots year round. By March, a NE through E flow may be as frequent as winds from the SW and W, with winds off the water more frequent during the afternoon. At Hoek Van Holland in April, the frequency of N winds increases from a morning value of 15 per cent to 26 per cent in the afternoon. Here and along most of the coast, the sea breeze merely alters the existing flow. The pure sea breeze is more likely to come from the W at Hoek van Holland and from the W through N along other coasts. At Vlissingen in July, W winds are observed 16 per cent of the time in the morning and 41 per cent of the time during the afternoon. At Bremerhaven, the frequency of the July NW wind increases by 26 per cent from morning to afternoon. The land-sea breeze effect also produces an average 2 to 3 knot increase in average wind speeds. Afternoon speeds average 15 knots along exposed coasts and about 10 knots at more protected locations, such as Hamburg. General summer wind flow ranges from S to NW, with offshore components more likely during the night and early morning hours and onshore components most frequent during the afternoon. The land breeze is weaker and less influential than the sea breeze. Although the land-sea breeze effect extends into autumn, it is made secondary by the major storm systems which once again plague the North Sea. The extremely variable fall winds, including a here-to-fore uncommon SE flow, gradually revert to the S through W winter pattern. Wind speeds increase, with averages of up to 16 knots along unprotected coasts.

Along the North Sea coasts of Denmark and Norway, storms and topography tend to back the general SW winter flow toward the E. Winter winds tend to blow out of the NE through SW in Denmark and out of the E through S along Norway's shores. The E component in Norway is aided by the outflow of cold air from the high interior. Average wind speeds range up to 15 knots along Norway's coasts but most ports are protected and average speeds at these places range from 6 to 10 knots. In an extreme case of sheltering, Sauda, a small industrial town, has an average wind speed of 2 to 3 knots year round. Average winter wind speeds along the Danish coast range from 8 to 12 knots. As winter turns to spring, winds become more variable with an increase in the frequency of SW through NW winds. By late May, the sea breeze helps boost the frequency of afternoon winds from off the water. Wind speeds start to increase during the day. Afternoon speeds average between 8 and 12 knots. This afternoon increase reaches a peak in summer when morning winds are lightest. Summer winds blow mostly from the S through SW along the Danish coast and from the W through N along Norwegian shores. The sea breeze influence is now at its peak. Southwest winds, prevalent on summer mornings in Denmark, become even more persistent during the day, while prevailing NW and N winds in Norway are increased by about 12 per cent during the day. Summer afternoons at Lista give rise to NW winds 38 to 44 per cent of the time. The land breeze is infrequent along these shores since it opposes most normal flow. It appears only on calm clear nights and blows from an E direction. It becomes even less frequent with the coming of fall. During this transitional season, there are quiet times when the sea breeze brings a brief return to summer. Then suddenly a large storm sweeps in off the Atlantic Ocean and the strong shifting winds of winter prevail. Average wind speeds are on the increase. As fall wears on, winds with E components become more and more frequent, heralding a return to winter.

Gales.—Winter storms, with their fronts, are responsible for most of the strong winds and gales along the North Sea coasts. On the prominent shores of Scotland and Norway, topography lends a helping hand. The prevailing winter flow in Scotland comes off high ground and often develops into squalls that blow down slopes and valleys. This can cause gusty winds above gale force along the coast. In Norway, tablelands drop abruptly into the sea and are separated by deep fissures known as fjords. Cold air, which builds up over the highlands in winter, pours down the steep slopes, creating gusts along the coast. This is often triggered by an approaching low pressure system. During these spells, even more violent winds occur in the fjords where cold air outflow is channeled and its speed greatly increased. Squalls build to maximum strength within an hour or two. They are particularly treacherous since they occur in cold, clear weather with little warning. These gales that menace fjord navigation are known locally as "elvegusts." Terrain also provides shelter from gales. For example, Aberdeen, on the section of the Scottish coast protected by mountains to the

west and northwest, experiences fewer days with gales in a year than does nearby Wick in a typical January.

Along the E coasts of Scotland and England, gales are most likely from September through May. Strong winds and gales can occur in a line squall preceding or accompanying a cold front. This event is heralded by a line of low black clouds to the W or NW. These line squalls may occur in any season and are experienced once or twice a season along any section of coast. Local gale frequency is largely determined by exposure to SW through NW winds. At unprotected ports like Wick and Edinburg, gales can be expected on just under 25 days annually. Most ports are more sheltered and experience 2 to 12 gale days in an average year. The infrequent gales of summer are associated with violent afternoon thunderstorms and may come from any direction. Extreme winds are most likely in winter. Record gusts of 88 knots have occurred at Dyce in January and at Bell Rock in November. Edinburg recorded a 75-knot gust in January.

The Netherlands and Belgium coasts are most often exposed to gales from the SW through N. The Netherlands is usually more susceptible to strong winds. Gales occur on 10 to 20 days during an average year and on up to 3 days per month from October through March.

Inland ports such as Amsterdam and Rotterdam are more sheltered. At Amsterdam winds greater than or equal to 28 knots occur on about 17 days annually while gale-force winds are observed on just 2 days each year. Although strong winds are most frequent and most severe in winter, occasionally a violent summer thunderstorm can cause local winds of 50 knots or more along these coasts. On rare occasions, small tornadoes or waterspouts have been sighted with thunderstorm activity. Extreme winds are most likely in winter and register around 60 knots along exposed shores. At Den Helder, sustained winds have reached 56 knots and gusts have reached 78 knots. Zeebrugge has recorded a 54-knot extreme in November and a 50-knot wind in May. At Terschillingerbank, 60-knot winds have been observed in December and March.

Even more exposed than the Low Countries is the coast of Germany, where strongest winds blow from S through W. The rock island of Helgoland, at the mercy of the sea, is besieged by gales on an average of 63 days annually, and a peak of 10 days per month in November and January. Closer to the coast, wind speeds diminish. Borkum, in the East Frisian Islands, experiences winds equal to or greater than 28 knots on 3 to 6 days per month from September through February and 1 to 3 days per month during the rest of the year. At Bremerhaven, winds of 28 knots or more occur on 2 to 3 days per month from October through April.

Hamburg's winds seldom get above 28 knots. Gales are infrequent along Denmark's W shores. They occur on about 5 to 10 days a year and on about 1 day per month from September through April.

The open coastal waters of southwest Norway are subject to frequent gales. At port s, gales are less common. In mid-winter gales occur on up to 12 days per month in coastal seas and on 4 to 6 days per month in summer. Sheltered ports like Lindesnes and Bergen average 1 to 3 gale days per month from September through April. Less protected places such as Lista and Stavanger average 4 to 5 gales days per month during this period. Summer gales are rare.

ENGLISH CHANNEL

General.—Fall and winter are dreary times along the English Channel coasts. Days are cloudy, rainy and mild, while nights are damp and chilly. Cloudy conditions (cloud cover greater than or equal to 8/10) occur on up to 20 days per month while rain, or sometimes snow (1 to 3 days per winter month), can be expected on 15 to 25 days per month. Cloud cover and the relatively warm waters keep temperatures and relative humidities from varying too much from day to night. Relative humidity, dependent on temperature and moisture, varies from 86 to 93 per cent during the early morning hours down to 80 to 85 per cent in the afternoon. Nighttime temperatures range from 1.7 to 4.4 °C while daytime highs climb into the upper single digits (°C).

Sometimes skies clear for a short period between frontal systems or longer when a frigid high pressure system moves over the area from the NE. These clear conditions occur on the average of 4 to 7 days per month. It is during these spells that nighttime temperatures are most likely to fall to freezing or below. When clear conditions persist for a week or more in conjunction with a frigid high, temperatures can fall to -6.7°C or below. How cold it gets depends on the land and water influence. The oceanic Scilly Isles rarely experience temperatures below freezing. At a more land-tempered port like Dungeness, minimum temperatures fall to freezing or below on 9 to 11 days per winter month. Extreme temperatures range from -12.8°C at Dungeness to -6.7°C at Falmouth and -3.9 °C on the Scilly Isles. When a persistent SW flow blows across the channel in winter, unseasonably warm temperatures can occur. Maximum temperatures in extreme occurrences reach 15.6°C.

With the coming of spring and then summer, days turn brighter, rain falls less frequently, and temperatures slowly moderate. Even relative humidities drop off slightly. Cloudy skies are seen on the average of 10 to 20 days per month, while clear skies are observed on up to 10 days per month. Partly cloudy conditions are most prevalent in the afternoon and are often associated with showers. By June, most coastal towns experience measurable rain on just 8 to 13 days. April, May, and June are the driest months of the year. Thunderstorms become more frequent as spring turns to summer. They occur on up to 2 days per month. It is this showery weather that is responsible for the greatest 24-hour rainfalls, which occur in the summer. Extreme 24-hour amounts range from 51 to 102mm along the English Channel coasts. These are scanty totals when compared to the world's 24-hour record of 1,870mm at Cilaos, La Reunion.

The advancing season in combination with less rain and more blue sky moves spring daytime temperatures into the mid to upper teens (°C). Nighttime lows average in the upper single digits (°C). During the hottest part of the year (July and August) average maximums range from 18.3° to 21.1°C while average minimums reach the low teens (°C). Rising temperatures drop relative humidities. However, this is partially offset by sea breezes and other winds from off the English Channel. Afternoon relative humidities reach a low during spring or summer of from about 70 to 75 per cent. During the night they tend to climb back into the 90 per cent range. The English Channel waters continue to moderate temperature extremes. The number of days that maximum temperatures reach or exceeds 30.0°C is practically nil. Extreme record high temperatures are generally somewhere in the low to mid 30s (°C). Extremes at

more exposed stations are usually in the upper 20s (°C).

The turn from summer to fall is gradual. September retains many summer characteristics. Daytime temperatures still reach the high teens (°C); clear skies can be seen on as many as 8 days and rain is observed on less than one-half of all September days. During October the progression toward winter becomes more apparent. Rain is measured on about 15 to 20 days, days become noticeably cooler and clear skies are uncommon.

Extratropical cyclones.—Lows can cause problems in the English Channel year round. By far, the most common situation in any season is a low pressure system N of the British Isles and a high to the S. This is particularly dangerous in winter, when these storms are often intense.

The storms that pass far to the north bring bad weather but changes are gradual. They often trail weather-producing fronts across the English Channel. Cold fronts often bring this sequence of events:

1. Increasing cloudiness and wind speed.
2. Rain and possibly SW gales.
3. Clearing and strong NW winds.

These systems can occur in families, which restrict the clearing period. Open low pressure systems, called waves, can form on these fronts and bring additional trouble. Parent lows and intense waves that pass close to, but north of the English Channel bring bad weather and rapid changes. Winds are variable and shift suddenly. Gales are likely and squalls often accompany fronts.

Storms are most intense in winter, but more pass over the British Isles in spring. In the fall storms often move S of the English Channel. This occurrence causes no sudden changes. Winds back gradually from E through N. This brings a cold flow of air, sometimes from the Greenland-Spitzbergen region. In late fall and winter there is a possibility of snow and gales.

Storms are weakest and farthest N in the summer. Most move well N of the British Isles. The two most common summer situations are a low near Iceland or a low in the Norwegian Sea, with highs S of the English Channel. Occasionally a weak low or a large high will center itself over the British Isles.

Forward speeds of lows are variable and range up to 40 knots. Most common are speeds from 5 to 10 knots. Sometimes a low will become stationary near Iceland. This brings several days or more of SW winds.

Winds.—Winds within 20 miles of the coast are often subject to topographic effects. If a coast is bordered by steep cliffs or there are high hills or mountains paralleling the coast. a short distance inland, then onshore winds inclined to the coast are usually deflected and blow nearly parallel to the coast at an increased speed. This is particularly noticeable in a long narrow strait. When onshore winds blow nearly perpendicular to a high coast, there is often a narrow belt of contrary gusty winds close to the coast. An offshore wind is often squally on the lee side of a hilly coast, especially where the air is much cooler than the sea surface. Land and sea breezes develop near the coast particularly in spring and summer during fine settled weather.

Along the English coast from December through February, winds blow from the SW through NW about one-half of the time. The French coast experiences a fair percentage of S winds, and in some locations they are more prevalent than SW winds. In general, the predominant flow is between S and W. Along both coasts NE and E winds are also common in winter.

Along the Strait of Dover coasts, SW winds are more frequent than anywhere else all year round, and occur 20 to 30 per cent of the time in winter. In the approaches to Brest, NW winds predominate in nearly all months. Brest itself is sheltered somewhat. Even in winter, calms occur 10 to 12 per cent of the time, compared to 2 to 7 per cent at other ports. Coastal wind speeds are highest in winter. Averages range from 16 to 20 knots at exposed locations like the Scilly Isles and Ile d'Ouessant to 8 to 12 knots at sheltered ports like Brest and Dungeness.

In spring, winds become even more variable. On both sides of the English Channel N, NE, and E winds are often slightly more frequent than SW and W winds. At some ports, the two most frequent winds are directly opposite; at Dunkerque, NE and SW winds prevail, while on the Scilly Isles W and E are the two most common directions. Winds from the NW are also frequent. Along the Dover Strait, SW wind still prevail but NE winds are a strong second. Spring brings a decrease in wind speeds. This is reflected in the mean speeds which range from 8 to 17 knots.

With an increase in clear and mild weather from late spring through early fall, the land-sea breeze regime establishes itself. The heating of the land faster than the water during the day sets up an onshore flow. As the land cools quicker at night, an offshore flow is established. When there are no interfering weather systems, this flow prevails with unerring frequency, at other times it superimposes itself on the existing flow to some degree and can reinforce, oppose or deflect this flow. Along both English Channel coasts, the daytime sea breeze often reinforces and increases the frequency of southwesterly and westerly winds in summer, when it is strongest. At Calais, SW winds make up 45 per cent of the observations during July and August. In general, near the coast the frequency of SW and W winds increase during the day, while NE winds, NW winds, and calms increase at night. Coastlines with a N exposure to the sea tend to experience an increase in N onshore winds during the day. At Falmouth, morning calms occur 9 per cent or more of the time from April through September. By early afternoon calms are observed only 3 to 4 per cent of the time. The land-sea breeze effect at Falmouth is reinforced by the configuration of the Penryn River. The result is a high frequency of SW winds in the afternoon and NE winds in the morning. Plymouth experiences this same effect. At Portland Bill, the sea breeze effect results in a tendency for N and NE winds to veer toward the E and for W to NW winds to back toward the SW At Dungeness, SW winds occur 32 per cent of the time on July mornings and 54 per cent of the time in the afternoon. Around the Isle of Wight, winds often blow along the Solent and Spithead under the sea breeze system. On a quiet warm day, the main breeze will blow either from the SW up the Solent or from the SE up Spithead. Sometimes a morning SE wind will veer SW during the day. The land breeze blows on clear nights throughout the year and is often more marked in winter. It flows most often from the NW down to Southhampton Water. Wind speeds are lightest during the summer and show a noticeable diurnal variation. Mean speeds increase from 6 to 9 knots during the morning to 12 to 14 knots in the afternoon. Afternoon sea breezes can reach 20 knots.

Autumn brings a return to the more variable, less predictable conditions that existed in spring. Even along the Strait of Do-

ver, where SW winds prevail, there is a significant increase in winds from the W through N. The highest frequency along the English Channel coasts is in winds from the SW through NE, but at some locations E winds prevail and at others SE winds are the most common. At Brest during October and November, calms are the prevailing condition, occurring 14 to 17 per cent of the time. Autumn wind speeds are on the increase toward the winter maximums. The mean speeds range from 6 to 8 knots at sheltered locations to 15 knots at exposed sites.

Gales.—Coastal gales, like lighter winds, are influenced by exposure. Gale frequencies near the coast may be less than one-half of nearby open water frequencies. Whether a stretch of coast is sheltered depends on wind direction. A coast sheltered from a S gale may suddenly be exposed if the gale veers to the W. This occurs in Mounts Bay and Portland Harbor. High ground to windward may not always provide the shelter expected. For example, along the Dartmouth coast, a wind blowing from off the high ground often generates turbulent squalls in coastal waters. This is particularly true with a WNW flow in Dartmouth Harbor.

Along the English coast, the average annual number of days with gales ranges from 3 days at Dover to 35 days at Falmouth. Gales are most likely from October through April; December and January are the heart of the season. Falmouth is particularly exposed to strong winds and gales. It has an average of 7 gale days per month in December and January. The Scilly Isles and Portland Bill are exposed locations subject to nearly three-quarters of the gales that occur in open waters. Coastal gales are most common from the SW through NW. A SW gale will sometimes veer to the NW or N without losing strength. In April and May, the infrequent gales are often from the NE. Gales vary in duration. Along the W shore they usually last 4 to 5 hours. Along the English coast in the eastern English Channel, gales usually last about 2 hours.

The French coast is more exposed to gale-force winds than the English coast. Gales are most likely from September through May. Gale days range from 69 at Brest to 13 at Jersey Airport. December through February are the roughest months. Cherbourg is a well-sheltered port, while nearby Cap de la Hague is exposed to gales on about 6 days in December. This compares to an average of 3 gale days in December at Cherbourg, which is exposed to gales from the NE At St. Inglevert near Calais, gales occur on an average of 47 days a year and 5 to 7 days per month from October through February. St. Inglevert is particularly exposed to SW gales. The direction of strong winds along the French coast is important to sea state. Between Brest and Cherbourg roughest seas are generated by strong SW through NW winds. From Cherbourg to Dunkerque, roughest seas are associated with strong winds from the NW through NE.

Visibility.—Fog is responsible for most of the poor visibilities that occur in the English Channel. Near industrial areas fog is often intensified and prolonged by smoke. Sea fog and land fog affect the English Channel and both have favored locations.

Sea fog, which forms when warm moist air moves over cooler water, occurs most often from late spring through fall. Favorable conditions are found in the warm sector of a low and the fog can occur in fresh winds or even gales. It is most likely with SW to W winds. While mainly a summer hazard, sea fog occurs two or three times in winter and can penetrate E as far as Dungeness. In general, however, sea fog is most prevalent in summer in W waters. At times, it is possible to find an open area near the coast when mid-channel is foggy. Near the coast, summer sea fog is most frequent in morning.

Land radiation fog, which forms when moist air is cooled below its dew point by contact with the cold ground, is prevalent from late fall through early spring. Favorable conditions are found in the clear skies and light winds of a large high pressure system. Inland, radiation fog often dissipates during the day, but near the coast, particularly in mid-winter, it can persist for a day or more. It may also drift into the English Channel and persist if it remains over cool waters. On 2 days per winter month, radiation fog will completely enshroud the Strait of Dover. This is a real navigational hazard. Radiation fog is aided by smoke. Plymouth Hoe experiences about 4 to 5 days per winter month of radiation fog infused with industrial smoke. Less than 1 mile away, across Cattewater, Mount Batten is relatively fog-free during this period.

Radiation fog is local and very liable to form in hollows or over low-lying ground near rivers, particularly near smoke sources.

Sea fog is prevalent along. the English Channel coasts W of Portland Bill and Cherbourg. In spring and summer, visibilities drop below 0.5 mile at a peak of 3 to 8 days per month. At Lizard and Cap de la Hague, this peak is in July. At Portland Bill and Falmouth, May is the peak fog month; both types of fog occur during May. Summer sea fogs are most common with S to W winds. In winter, radiation fogs, and occasionally a sea fog, occur along these coasts on usually less than 3 days per month.

Radiation fog prevails E of Cherbourg and Portland Bill. Poor visibilities occur most often in winter. While radiation fog is local, it often becomes widespread in the Strait of Dover. Winter visibilities along the coasts drop below 0.5 mile about 4 to 6 days per month at a peak. Visibilities of less than 5 miles can occur on up to 15 days per month. At Southampton and Southampton Water, industrial smoke pollution helps keep visibilities below 0.5 mile on 5 to 6 days per winter month. Summer visibilities along these coasts drop below 0.2 mile on less than 2 days per month at most locations. At St. Inglevert and Le Havre they occur on 2 to 4 days per month in summer.

Currents

NORTH SEA

North Sea circulation in winter is driven by wind stress and in summer by density gradients. In general, surface circulation is counterclockwise. The current is S along the E coast of England with a speed of 0.1 knot, E in the South Bight and N along the Danish coast. The main part of the flow, the Jutland Current, enters the Skagerrak; a minor part follows the Norwegian Trench N, joining with Baltic Sea waters to form the Norwegian Coastal Current.

Southwest wind stress over the North Sea drives the water flow at right angles to the wind direction, which sets up the cyclonic vorticity. Large scale advection from the Atlantic Ocean, low salinity Baltic Sea outflow, and fresh water discharge from rivers and fjords are important for stratification and the maintenance of the cyclonic circulation during the summer. Current directions are irregular at the bottom of the North Sea.

Current speeds vary locally and seasonally. Around the Shetland Islands and the Orkney Islands, where most of the new At-

lantic Ocean water enters the North Sea, current speeds are 0.5 to 0.7 knot in spring and summer, and 0.25 to 0.35 knot in fall and winter. Over the entire North Sea in winter, winds from the W produce S to SE surface currents while winds from the E produce N to NW surface currents. Non-tidal currents are 0.2 knot in August under light winds.

Frictional effects and coastal restraints become increasingly important in shallow water where the flow aligns itself with the wind direction or with the coastline. Dogger Bank shoals to 13m. Currents deflect to the right of the wind during maximum tidal streaming over Dogger Bank. Silver Pit, with a depth of 50m, is located just S of Dogger Bank. The current slows as water flows over the shallow bank and into deeper water.

Wind driven currents are much larger than the tidal currents in the Skagerrak. The current is 0.6 knot under SW winds in the shallow water near the Danish coast. Most of the low-water salinity leaving the Skagerrak flows into the Norwegian Trench along lines of constant density which follow the Norwegian coastline. The Norwegian Current is the most intense non-wind driven circulation in the North Sea.

Currents along the bottom in the North Sea are weak and variable in direction. The flow is topographically steered. The water movement is S along the coast of Scotland following the l00m contour, then E across the northern North Sea. The bottom water is entrained in the S flow along the Norwegian Trench and into the Skagerrak. There is also a N flow along the bottom from the South Bight along the coast of Denmark into the Skagerrak.

In the North Sea the predominant tidal currents show rotary characteristics; nearshore they tend to be reversing. The times, direction and speeds of the tidal currents differ for different parts of he sea. In the middle of the sea and in the N entrance, the speeds do not exceed 1.0 knot at springs. In coastal regions, tidal current speeds at times are as high as 2.5 knots.

Tidal currents in the open sea reach 2 to 3 knots in general and are higher in some areas near the straits. The current speed reaches 3 knots off the River Thames and 5 knots near Cuxhaven, in places in the German Bight, and in the Straits of Dover. Tidal currents frequently exceed 2 knots on the European shelf.

At neap tides, the tidal streams are about half the spring tide values. The maximum tidal current off the coast of the Nether lands is 1.6 knots. Semidiurnal tides during winter produce current speeds between 0.3 and 0.8 knot in the central North Sea NW of Dogger Bank. With a strong E wind, the current over Dogger Bank may reach a speed of 1.8 knots.

ENGLISH CHANNEL

In open waters, where the direction of flow is not restricted, tidal currents are rotary and flow through all points of the compass during a tidal cycle. Nearshore, tidal currents are usually reversing, flooding toward and ebbing from the coast, or flooding and ebbing parallel to the coast in opposite directions.

In the Irish Sea, the flood sets S in the N part and at the same time sets N in the S part; these flood currents meet in the central part of the sea, where they become weak and variable. The ebbs set in the opposite directions. Tidal currents attain speeds of 3.5 knots in the fairway and are also strong at times near prominent headlands and banks.

In the W approach of the English Channel, the tidal currents are rotary clockwise. The currents in the vicinity of Ile d'Ouessant are generally stronger than those off Lizard and will attain speeds of almost 3.0 knots about 3 hours before and after lunar transit. Between Start Point and Guernsey, the channel narrows and the current is reversing, with mean speeds 0.5 to 1.0 knot greater near Guernsey than along the English coast. Between Portland and Cape de la Hague, the current speeds are strongest in the fairway, about 3.0 knots S of Portland and 4.5 knots north of Cape de la Hague 5 hours before and 1 hour after lunar transit. At headlands the currents may attain 6.0 knots at springs. In the vicinity of the Channel Islands, the tidal currents tend to be rotary counterclockwise.

In the English Channel tidal currents are semi-diurnal; in some localities there are diurnal inequalities in duration and speed. Because of the differences between the times of high water at the W and E ends of the channel, tidal currents are not readily identified as flood and ebb, but are usually described as east-going from the Atlantic Ocean and west-going from the North Sea. They do not set uniformly in the same direction throughout the channel at any given time, but may have separate current patterns simultaneously in the W, middle, and E sectors of the channel.

Mined Areas

Former NEMEDRI Danger Area No. 9 is an area in which danger due to mines laid between 1939 and 1945 still exist and comprises all waters bounded by the line joining the following approximate positions:

a. The coast of Denmark in longitude 9°00'00"E.
b. 57°20'00"N, 9°00'00"E.
c. 57°12'00"N, 8°30'00"E.
d. 57°00'00"N, 8°14'30"E.
e. 56°58'36"N, 8°12'36"E.
f. 56°58'30"N, 8°08'00"E.
g. 56°53'00"N, 7°54'00"E
h. 56°50'00"N, 7°45'30"E.
i. 56°00'00"N, 7°45'00"E.
j. 56°00'00"N, 7°00'00"E.
k. 54°50'00"N, 7°00'00"E.
l. 54°50'00"N, 7°06'00"E.
m. 54°40'00"N, 7°06'00"E.
n. 54°40'00"N, 7°39'00"E.
o. 54°10'00"N, 7°39'00"E.
p. 54°10'00"N, 4°58'00"E.
q. 54°00'00"N, 4°46'00"E.
r. 53°30'00"N, 4°46'00"E.
s. 53°30'00"N, 4°30'00"E.
t. 53°17'42"N, 5°01'18"E.

The risk to surface navigation in this area is now considered, owing to the lapse of time, to be no more dangerous than the ordinary hazards of navigation, but a risk still exists with regard to anchoring, fishing, or any form of submarine or sea bed activity.

Navigational Information

Electronic Navigational Communications

For information on the International Maritime Satellite Organization (INMARSAT), the Global Maritime Distress and Safety System (GMDSS(), the Global Positioning System (GPS), and SafetyNET, see **North Atlantic Ocean—Naviga-**

tional Information.

International Ship and Port Facility (ISPS) Code

The ISPS Code applies to ships on international voyages and port facilities directly interfacing with these ships. All vessels should fully comply with the provisions of Chapter XI-Part 2 of the SOLAS Convention and Part A of the ISPS Code. Vessels shall demonstrate that appropriate maritime security measures are in place according to ISPS Code regulations. For further information, see **North Atlantic Ocean—Navigational Information**.

Enroute Volumes

Pub. 191, Sailing Directions (Enroute) English Channel.
Pub. 192, Sailing Directions (Enroute) North Sea.

Pollution

Single-hull Tanker Phase-out Schedule

In accordance with Regulation 13G of Annex I of the MARPOL Convention, single-hull tankers should be phased out or converted to a double-hull configuration according to a schedule based on their year of delivery. These requirements are designed to reduce the risk of oil spills from tankers involved in low-energy collisions or groundings. For further information, see **North Atlantic Ocean—Pollution—Single Hull Tanker Phase-out Schedule**.

Ballast Water Management

International guidelines have been adopted by the IMO to prevent the introduction of unwanted aquatic organisms and pathogens from ships' ballast water and sediment discharge into marine ecosystems. The guidelines include the retention of ballast water onboard, ballast exchange at sea, ballast management aimed at preventing or minimizing the uptake of contaminated water or sediment, and the discharge of ballast ashore. Particular attention is drawn to the hazards associated with ballast exchange at sea. For further information, see **North Atlantic Ocean—Pollution—Ballast Water Managemen**t.

MARPOL Special Area

The North Sea Area and the Northwest European Waters Area have been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Sulphur Emission Control Areas

Sulphur Emission Control Areas (SECA) are areas where special controls are in effect to reduce sulphur oxide (SO_X) emissions from ships. SECAs are located, as follows:

1. The Baltic Sea.
2. The North Sea, including the English Channel.
3. The North American SECA, as follows:
   a. East area—The Gulf of Mexico and Atlantic Ocean coasts of the United States and the Atlantic Ocean coast of Canada S of latitude 60°00'N.
   b. West area—The Pacific Ocean coast of the United States, the Pacific Ocean coast of Canada, the coast of Alaska E of longtude 153°15'03"W, and the Hawaiian Islands.

Currently SO_X emissions from ships transiting a SECA are limited to 1.5 per cent. This will decrease to 1.0 per cent on 1 March 2010, with a further reduction to 0.10 per cent on 1 January 2015.

Regulations

Schengen Agreement

The aim of the Schengen Agreement is to create free movement for persons within the European Union (EU) and to intensify the fight against cross-border crime. In practice, the Schengen Agreement means that personal checks on journeys between the member states will cease, while the external frontier controls will be intensified, i.e. towards countries that are not signatories to the Schengen Agreement. For further information, see **North Atlantic Ocean—Regulations—Schengen Agreement**.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The participating EU countries in the North Sea are, as follows:

1. Belgium.
2. Denmark.
3. France.
4. Germany.
5. Netherlands.
6. Norway.
7. United Kingdom.

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification.**

Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR)

The NIR of the PMoU has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the Paris MoU region.

For further information, see **North Atlantic Ocean—Regulations—Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR).**

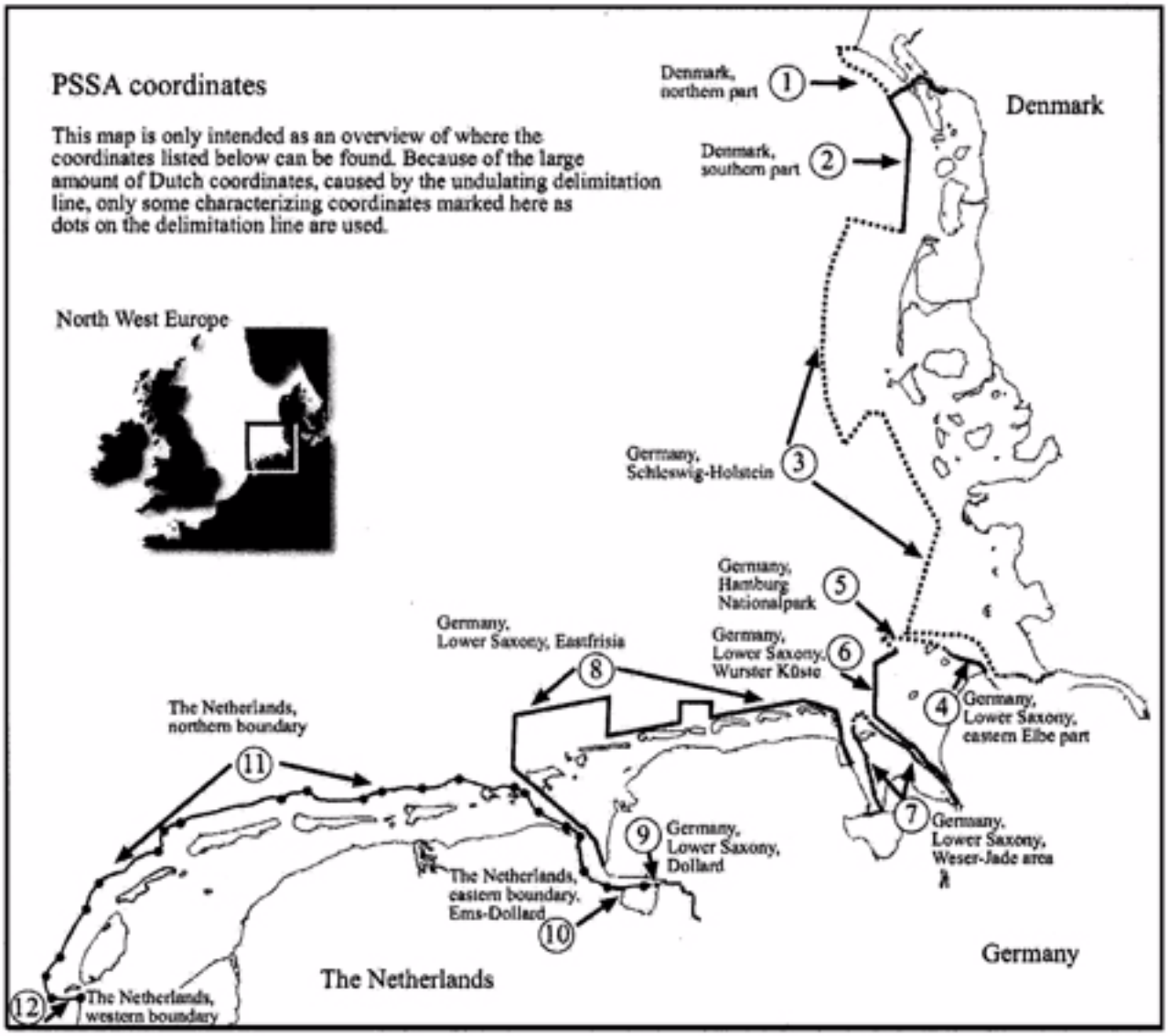
European Union (EU) Advanced Manifest Rule

All cargo vessels sailing from a non-EU port to an EU port must submit an Entry Summary Declaration (ENS) to the first port of call in the EU 24 hours prior to the cargo being loaded. For further information, see **North Atlantic Ocean—European Union (EU) Advanced Manifest Rule.**

Particularly Sensitive Sea Areas (PSSA)

The Wadden Sea and adjacent parts of the North Sea in the common Wadden Sea area of Denmark, Germany, and the Netherlands were granted (2002) the status of PSSA by the International Maritime Organization.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels



Wadden Sea—Particularly Sensitive Sea Areas (PSSA)

operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

Routes

The route information in this section considers routes to and from selected ports in and around the United Kingdom and Ireland.

In general, these routes are as direct as safe navigation permits. However, in some instances, a divergence is made to avoid dangers to navigation, to take advantage of favorable currents, or to minimize the effects of adverse currents. It should not be inferred that recommendations in this chapter necessarily represent adopted or established sea lanes. Routes between ports consist of a series of rhumb lines unless stated otherwise. When a route may be followed in either direction the reverse route is not described.

Detailed information can be found in the Appendix.

Ship Reporting System

United Kingdom Ship Movement Report System (MAREP)

The United Kingdom Ship Movement Report System (MAREP) is a voluntary reporting system which applies to the following vessels:

1. All merchant vessels over 300 grt. Vessels of 300 grt and under are strongly encouraged to participate.
2. Any vessels "not under command" or at anchor in a Traffic Separation Scheme (TSS) or an Inshore Traffic Zone (ITZ).
3. Any vessel "restricted in its ability to maneuver."
4. Any vessel with defective navigational aids.

There are two areas off the coast of the United Kingdom in

the English Channel where MAREP regulations apply, as follows:

1. English Channel and Dover Strait—For further information, see **United Kingdom—Ship Reporting System—MAREP**.
2. Land's End/Isles of Scilly—For further information, see Pub. 191, Sailing Directions (Enroute) English Channel.

Dover Strait Reporting System (CALDOVREP)

CALDOVREP, a mandatory reporting system under SOLAS regulations, has been established in a 65-mile stretch of the Dover Traffic Separation Scheme (TSS). All vessels over 300 gross tons are required to participate in this system; specified vessels under 300 gross tons are also required to participate in the system.Vessels participating in this system are tracked by radar. Vessels which appear to be navigating within a TSS contrary to the requirements of Rule 10 of the International Collision Regulations (72 COLREGS) will be reported to their flag state.

Further information can be found in Pub. 191, Sailing Directions (Enroute) English Channel.

CORSEN-OUESSANT (OUESSREP)

CORSEN-OUESSANT (OUESSREP), a Vessel Traffic Service (VTS) system, has been established in the W approaches to the English Channel. It is a mandatory reporting system under SOLAS regulations and operates within an area with a radius of 40 miles centered on Ile d'Ouessant. All vessels over 300 gross tons are required to participate in this system. Special IMO provisions have also been established for vessels using the Traffic Separation Scheme (TSS) situated off Ouessant (Ushant).

Further information can be found in Pub. 191, Sailing Directions (Enroute) English Channel.

Jobourg Vessel Traffic Service (MANCHEREP)

MANCHEREP is a mandatory reporting system operating under SOLAS regulations which has been established in an area covering the Traffic Separation Scheme off Les Casquets. All vessels over 300 gross tons are required to participate in this system; specified vessels under 300 gross tons are also required to participate in the system.

Further information can be found in Pub. 191, Sailing Directions (Enroute) English Channel.

Western Europe Tanker Reporting System (WETREP)

The Western Europe Tanker Reporting System (WETREP), a mandatory reporting system, is in effect. The following vessels are required to participate in WETREP. For further information, see **North Atlantic Ocean—Ship Reporting System**.

Tides

NORTH SEA

Tides are predominantly semidiurnal. Principal tide waves enter the North Sea through the N passage. A small part of the wave train enters the Kattegat and passes into the Baltic Sea. Most of the wave train moves S until it is reflected by the S coast, where it meets a minor tidal component entering the North Sea through the Straits of Dover. There is an amphidromic region in the North Sea near the Straits of Dover, the English Channel, and SW of Norway, where North Sea wave trains met Skagerrak outflow.

The average spring tide ranges are 3.0 to 4.5m along the coast of Scotland, 4.0 to 7.0m along the German Bight, and 0 to 1.5m in the open sea, in the Skagerrak and along the Norwegian coast.

ENGLISH CHANNEL

Tides in the English Channel are semi-diurnal; that is, two high waters and two low waters per day with little or no inequality between successive high and low waters. Along the shores of Southampton, Yarmouth, the Poole entrance, and the River Seine below Rouen, either double high waters (high waters consisting of two maximums of nearly the same height separated by a relatively small depression) occur, or a high water stand (the interval when there is no appreciable change in the height of the tide) of about 2 hours occurs, especially near spring tides.

Appendix—Routes in and around the United Kingdom and Ireland

Routes in and around the United Kingdom and Ireland are, as follows:

1. Routes around the United Kingdom and Ireland.
2. General directions for approaching the W coast of Scotland.
3. Coast of England to Atlantic Ocean junction points.

1. Routes around the United Kingdom and Ireland.

Glasgow to Dublin.—Proceed S through the Firth of Clyde and N Channel to a position E of South Rock and then as direct as safe navigation permits to destination.

Glasgow to Liverpool.—Proceed S through the Firth of Clyde and then round the Rinns of Galloway, maintaining a safe distance off. Then proceed S, keeping clear of the shoals NE of the Isle of Man, and then pass between Ballacash Bank and Bahama Bank as directly as possible to Liverpool.

Belfast to Cobb and Cork.—Proceed from Belfast Lough to a position E of South Rock Light Ship and from there to a position E of Codling Lighthouse Buoy. Round Tuskar Rock Light and proceed S of Coningbeg Light Ship to a position NE of Daunt Light Ship and then into Cork Harbor.

Belfast to Liverpool.—From Belfast Lough round Mew Island Light and from there steer for a position N of Ayr Point, the N extremity of the Isle of Man. From there steer between Bahama Bank and Ballacash Bank and, when clear of these banks, proceed to the entrance of Queens Channel to Liverpool.

Belfast to Cardiff and Avonmouth, Wales.—Proceed from Belfast Lough to a position E of South Rock Light Ship and then to a position W of South Bishop Light. Round Skokholm Light and St. Gowen Light Ship, proceed to Cardiff Roads or Avonmouth via Bristol Channel.

Glasgow to lIe d'Ouessant.—Proceed S from Glasgow as directly as safe navigation permits through the Firth of Clyde, North Channel, the Irish Sea, and St. George's Channel to a position W of The Smalls. From there steer for a position W of Longships Light, being careful to give Cape Cornwall Bank a wide berth, especially in heavy weather. Then proceed by the most direct and safest route to the approaches to Ile d'Ouessant.

Aberdeen to Invemess.—When clear of Aberdeen proceed NNE, then N, and then NW along the coast to a position about 5 miles N of Kinnairds Head, passing about the same distance off Peterhead and Rattray Head enroute. Then steer a W course through Moray Firth, keeping about 5 miles off the S shore to a position abreast Stotfield Head. From there proceed through South Channel and Inverness Firth to the port by the safest and most direct route.

Aberdeen to Torshavn, Foroyar (Faeroe Islands}.—Proceed as directed above for Inverness as for the position about 5 miles E of Rattray Head, and then shape a NW course across the entrance to Moray Firth to a position abreast Duncansby Head at the E entrance to Pentland Firth. Then proceed through Scappa Flow and Hoy Sound, in accordance with local directions, and then steer a NW course for Torshavn.

Aberdeen to Lerwick, Shetland Islands.—After clearing Aberdeen proceed NNE to a position about 5 miles E of Peterhead and then shape a N course to a position E of Mousa Island in the Shetland Islands. From Mousa Island continue N as directly as safe navigation permits to Lerwick.

Pentland Firth to Aberdeen.—As directly as safe navigation permits proceed to a position abreast Duncansby Head, and then follow a SE course across the entrance to Moray Firth to a position about 5 miles E of Rattray Head. From Rattray Head follow the general trend of the coast, maintaining a distance of about 5 miles offshore to the approaches to Aberdeen.

Pentland Firth to Glasgow.—Proceed around Cape Wrath and through The Minch and Sea of the Hebrides, passing W of Skerryvore Light and Mackenzie's Rock to a position about 4 miles SW of Orsay Light. From there proceed to a position S of the Mull of Kintyre, and then pass S of the Peninsula of Kintyre, well clear of all dangers to a position off the SE extremity of Arran Island. Then proceed as directly as safe navigation will allow via the Firth of Clyde and the River Clyde to Glasgow.

Pentland Firth to Londonderry.—Follow the **Pentland Firth to Glasgow** route as far as the position close W of Skerryvore Light and Mackenzie's Rock and then proceed as directly as possible within the limits of safe navigation to a position off Inishowen Head.

Pentland Firth to Belfast.—Follow the **Pentland Firth to Glasgow** route as far as the position close W of Skerryvore Light and Mackenzie's Rock and then pass SW of Oversay Island Light, E of Altacarry Head, E of the Maidens, and round Black Head Light into Belfast Lough.

Pentland Firth to Dublin.—Follow the **Pentland Firth to Belfast** route as the position E of The Maidens, and then pass E of Mew Island Light and South Rock Light Ship to a position off Bailey Light.

Pentland Firth to Cobh and Cork.—Follow the **Pentland Firth to Dublin** route as far as the position E of South Rock Light Ship, and then pass E of Codling Lighthouse Buoy, E of Tuskar Rock Light, and SE of Coningbeg Light Ship to destination.

Pentland Firth to Limerick.—Follow the **Pentland Firth to Glasgow** route as far as the position close W of Skerryvore Light and Mackenzie's Rock and then to a position W of Tory Island. From there pass W of Eagle Island Light, Black Rock Light, and Slyne Head to a position off Loop Head and on to Limerick.

Inistrahull to Glasgow.—Proceed via Inishtrahull Sound to a position N of the NE extremity of Rathlin Island, passing N of Shamrock Pinnacle enroute. From there proceed to a position S of the Mull of Kintyre and then round the Peninsula of Kintyre, staying well clear of all dangers to a position off the SE extremity of Arran Island. Then proceed up the Firth of Clyde and the River Clyde to Glasgow.

Fastnet to Limerick.—Proceed so as to pass W of The Bull Light, The SkeIligs, Tearaght Island, and Kerry Head and then via the River Shannon to Limerick.

Fastnet to Liverpool.—Proceed to a position off Coningbeg Light Ship and then to positions E of Tuskar Rock Light and NW of Skerries Light. From there proceed as directly as safe navigation will permit to the pilot station at Lynus Point and on to Queens Channel entrance.

Fastnet to Belfast.—Proceed as directly as safe navigation will permit to a position off Coningbeg Light Ship. Then pass E of Tuskar Rock Lightship, Codling Lighthouse Buoy, South Rock Lightship, and NE of Mew Island Light and into Belfast Lough.

Fastnet to Glasgow.—Follow the route to Belfast, above, as far as the position E of South Rock Light Ship, and then pass W of Laggan Head to a position E of Ailsa Craig. From there steer for a position E of Holy Island Light and then between Garroch Head and the Cumbrae Islands to the Firth of Clyde.

Fastnet to Londonderry.—Follow the route to Belfast, above, as far as the position off Mew Island Light and then pass NE of The Maidens, through Rathlin Sound and Lough Foyle to Londonderry.

2. General Directions for Approaching the W Coast of Scotland.

Vessels, coming from the Wand bound for the Clyde or ports in the Irish Sea, generally make landfall at Tory island, off the NW coast of Ireland, as it is steep-to and has a good light and fog signal.The channel N of Ireland should present no difficulties in clear weather for vessels certain of their position. The channel is well lighted, and the dangers, most of which lie near the coast, are marked. This channel offers a shorter route to the United States and Canada, during the summer months, than the route around the S of Ireland.

It should be noted that the NW coast of Ireland from Donegal Bay to Lough Swilly, a distance of about 60 miles, is very irregular and has off-lying reefs and islands, making it dangerous to approach in thick weather. Depths of 92m exist in only 6 miles NW of Tory Island, and no vessel should approach in shallower water until such time as it is certain of its position.

In clear weather the pyramidal peak of Errigal and the barn-shaped mass of Muckish will enable a vessel to fix her position at a considerable distance from the coast. When a vessel comes nearer the coast Bloody Foreland, Horn Head, and Tory Island will be identified without difficulty, and the course can then be accurately plotted. In thick weather the clouds hang heavily over the mountain tops and obscure a great part of the coast, so that it is difficult to distinguish landmarks. Malin Head, however, is usually fairly clear, and can often be made as it is steep-to.

Inishtrahull is frequently obscured and often difficult to identify as the white lighthouse affords little contrast to the prevailing grey of the atmosphere in thick weather.

It must always be borne in mind that W gales are usually accompanied by thick rainy weather, that the flood current into Boylagh Bay is considerably increased by these gales, and that there are no harbors on this coast which can be prudently entered under these circumstances. The utmost caution is, therefore, necessary.

3. Coast of England to Atlantic Ocean Junction Points.

Edinburgh (Leith Roads) (56°00'N., 3°12'W.) to Pentland Firth (58°42'N.,3°20'W.).—Proceed from Leith Roads in accordance with local directions, passing outside the Isle of May and Bell Rock to a position about 3 miles off Buchan Ness; then pass Rattray Head and Kinnaird's Head about 5 miles off, proceed across Moray Firth to a position about 2 miles off Duncansby Head at the E entrance to Pentland Firth, then continuing through the Outer Sound to position 58°42'N, 3°20'W.

Total distance.—204 miles.

Newcastle (54°58'N., 1°35'W.) to Pentland Firth.—Proceed out of the River Tyne in accordance with local directions, then to a position about 5 miles E of Longstone Island, then to a position about 3 miles off Buchan Ness, then proceed as directed above in the **Edinburgh to Pentland Firth** route.

Total distance.—204 miles.

Hull (53°44'30''N., 0°18'00''W.) to Pentland Firth.—Proceed out of the River Humber in accordance with local directions. From a position E of the Humber Lightship, proceed to a position 5 miles off Flamborough Head, then to a point 5 miles E of Longstone Island (Farne Island), and then as directed above in the **Newcastle to Pentland Firth** route.

Total distance.—382 miles.

London (Greenwich) to Pentland Firth.—Proceed out of the River Thames in accordance with local directions through Barrow Deep, East Swain, and The Shipway to a position about 2 miles E of Orfordness; then to a position E of Cross Sand Lightship; then through Haisborough Gat, The Would, and Outer Dowsing Channel to a position about 2 miles E of Dowsing Lightship: then to a position 5 miles E of Flamborough Head; and then proceed as directed above in the **Hull to Pentland Firth** route.

Total distance.—558 miles.

NORWAY

General	463
Buoyage System	464
Cautions	464
Currency	464
Firing Areas	465
Fishing Areas	465
Government	465
Holidays	465
Ice	466
Industries	466
Languages	466
Meteorology	466
Navigational Information	466
Pilotage	467
Pollution	468
Regulations	470
Search and Rescue	471
Ship Reporting System	472
Signals	473
Submarine Operating Areas	473
Time Zone	473
Traffic Separation Schemes	473
U.S. Embassy	474
Vessel Traffic Service	474
Appendix I—Laws and Regulations Pertaining to Navigation	477
Appendix II—Prescribed Channels for Foreign Non-military Vessels	481
Appendix III—Economic Exploitation Zone	483

General

Norway, located in Northern Europe, occupies the W and N part of the Scandinavian Peninsula. The Arctic Ocean lies to its N, the Norwegian Sea to its W and the North Sea to its SW.

Most of its E border joins Sweden, except in the far N, where

Finland and Russia form the border.

The climate along the S coast of Norway, because of the influence of the North Atlantic Current, has very mild weather for such high latitudes and the harbors are ice free.

The terrain is glaciated in character, being of mostly high plateaus and rugged mountains over fertile valleys. The coastline is deeply indented by fjords.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Mariners are cautioned that few buoys will carry the topmark as prescribed for IALA buoyage. Fixed marks placed on the coast close to the fairway consist of beacons, perches, iron pillars, and wood or stone structures.

They are usually fitted with arms indicating the fairway, or when a vessel may pass on either side, with two arms, one on each side.

Iron perches and posts may, for the sake of increased visibility, be furnished with topmarks. Marks exposed to the sea carry neither arms nor topmarks.

Due to the large number of fixed marks, mariners are warned that at any one time some of them will be damaged. In particular, iron beacons may become twisted and their arms point in the wrong direction. Defects, or any need for inspection which may be observed when passing, should be reported.

In channels where ice is expected, topmarks are removed in autumn and replaced in the spring. Buoyage is removed for the winter in channels prone to freezing.

Oceanographic instruments may be moored off the coast of Norway and are usually marked, although they may not be charted. Mariners are requested to give floating aids as wide a berth as possible.

Floating marks are removed for the winter in channels where seasonal freeze always takes place. Mariners are advised to give a wide berth to these floating aids (buoys and spars) due to continued damage caused by vessels and ice conditions, and any irregularity discovered relating to the lights and buoyage system should be reported to the National Coordinator of Navigational Aids, as follows:

Telephone: 22-422331
Facsimile: 22-410491 (24 hours)
E-mail: navco@kystverket.no

In many places along the coast, fixed yellow or white lights have been established on pillars to mark protruding points and sounds along channels. Such lights are referred to as “indirect lighting.”

Bridge markings.—Many bridges may be lighted in accordance with the IALA markings for fixed bridges over navigational waters. The prescribed navigational markings are, as follows:

1. Red and green lights mark the lateral limits of the bridge.
2. White lights indicate the center of the bridge span.
3. Floodlights illuminate the bridge pillars in or adjacent to the channel.
4. A racon indicates the best transit under the bridge.

Cautions

In conjunction with the establishment of GMDSS (Global Maritime Distress and Safety System), numerous medium frequency radiobeacons situated around the coast of Norway have been discontinued

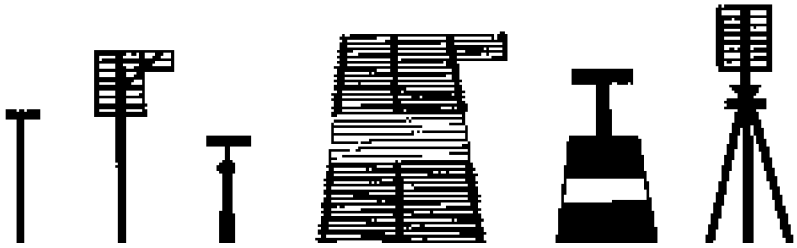
Scientific research cruises are conducted within Norwegian jurisdiction of the Greenland Sea and the Norwegian Sea. Recording equipment, consisting of an anchor and a submerged float at a depth of about 50m, may be deployed. These devices are not marked on the surface and vessels are advised to consult Norwegian Notices to Mariners for details on the mooring positions.

Dangerous Waves

Along the S coast of Norway, there are several sections within which unusually rough seas often prevail. Extreme sea conditions and breaking surf have been observed, often in connection with the currents, in the vicinity of these areas. Information on these sections, known as Dangerous Wave Areas, can be found in paragraph 1.2 of Pub. 193, Sailing Directions (Enroute) Skaggerak and Kattegat.

Currency

The official unit of currency is the Norwegian krone, consisting of 100 ore.



Examples of Norwegian Fixed Marks

Firing Areas

Naval Artillery Ranges

E11.—An area bounded by lines joining the following positions:

a. 59°04'N, 10°34'E.
b. 59°04'N, 10°43'E.
c. 59°17'N, 10°43'E.
d. 59°17'N, 10°34'E.

S2.—An area bounded by lines joining the following positions:

a. 58°00'N, 7°51'E.
b. 57°51'N, 7°30'E.
c. 57°37'N, 7°38'E.
d. 57°47'N, 8°00'E.

S12.—An area bounded by lines joining the following positions:

a. 58°05.7'N, 8°02.4'E.
b. 58°05.7'N, 8°36.0'E.
c. 57°52.0'N, 8°36.0'E.
d. 57°52.0'N, 8°02.0'E.

S13.—An area bounded by lines joining the following positions:

a. 57°58.4'N, 7°41.3'E.
b. 58°04.6'N, 7°57.5'E.
c. 58°04.6'N, 8°13.5'E.
d. 57°55.0'N, 8°13.5'E.
e. 57°55.0'N, 7°41.3'E.

Air Force Bombing and Artillery Ranges

D160.—An area with a radius of 11m, centered on position 58°58'34.8"N, 10°01'33.0"E, between the bearings of 100° and 230° from that position.

END153.—An area bounded by lines joining the following positions:

a. 58°29.9'N, 9°31.9'E.
b. 58°18.9'N, 9°52.9'E.
c. 57°49.9'N, 9°57.9'E.
d. 58°01.9'N, 9°39.9'E.

END261.—An area bounded by lines joining the following positions:

a. 58°00.0'N, 6°03.0'E.
b. 58°04.2'N, 6°38.4'E.
c. 57°55.0'N, 7°15.0'E.
d. 57°48.0'N, 7°15.0'E.
e. 57°28.5'N, 6°39.5'E.

END262.—An area bounded by lines joining the following positions:

a. 58°00.0'N, 6°03.0'E.
b. 57°28.5'N, 6°39.5'E.
c. 57°15.0'N, 6°15.0'E.
d. 57°24.0'N, 6°00.0'E.

Fishing Areas

Drift net fishing for mackeral takes place from May to September. The fish are concentrated in the area from NW of Egersund (58°27'N., 6°00'E.) to Oslo Fjord. The fishing usually takes place from 7 to 30 miles offshore. The nets usually run parallel to the coast and stretch from 1 to 3 miles; they are set in the evening and are usually taken in between 0200 and 0400.

Salmon fishing area extends from the baseline out to 4 to 5 miles offshore; the nets are usually placed at right angles to the coast stretching from 0.5 to 1 mile long. The nets are marked by lighted buoys with flag and radar reflector at each end. Mariners can normally make radio contact with fishing fleets.

Purse seining takes place, as follows:

1. Bristling—from the beginning of June until fall along the coast and in the fjords. Land nets may also be used.
2. Sprat—throughout the summer until fall in the fjords. Oslofjord is a prime area. Land nets may also be used.
3. Coal fish and tunny—from May until fall along the coast. Nets make extend almost 150m from the fishing vessel.

Trawling is prohibited within 12 miles of Norwegian coastal baselines, except when trawling for shrimp or crayfish. When working in pairs at night, each trawler uses a searchlight trained in the direction of the other vessel.

Marine Farms

Marine farms are common along the coasts of Norway. They change positions frequently and are usually not charted. Marine farms may be marked by lighted or unlighted buoys and/or beacons. Mariners are advised to exercise caution in the vicinity of these structures as their moorings can extend more than 1 mile from the structure itself. Fishing with 100m or navigating within 20m of marine farms is prohibited.

Government

Flag of Norway

Norway is a constitutional monarchy. The country is divided into 19 counties.

Norway is governed by a King, in conjunction with a Prime Minister and the cabinet, who are appointed by the King with the approval of the Storting. The unicameral Storting consists of 169 members, directly elected according to a system of proportional representation, for 4-year terms.

The legal system is based on a mixture of customary law, civil law, and common law traditions.

The capital is Oslo.

Holidays

The following holidays are observed:

January 1	New Year's Day
Palm Sunday	Variable

Holy Thursday	Variable
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Norwegian Labor Day
May 17	Norwegian Constitution Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
December 24	Christmas Eve (half day)
December 25	Christmas Day
December 26	Second Christmas Day
December 31	New Year's Eve (half day)

Ice

General

Along the S and SE coasts of Norway, sea ice occurs earlier and with greater severity at the E end of this area, although in normal winters navigation is seldom hindered by ice. Most outer harbors are generally open and provide shelter even when ice is present in the inner harbors.

For information on obtaining general ice information for the Baltic Sea, see **Baltic Sea—Ice**.

Norwegian Ice Service

The Norwegian Ice Service is administered by the Norwegian Coastal Administration, whose main task is to inform vessels about the prevailing ice situation. This service covers the fairways, harbors, and coastal routes along the coast from the Swedish border to Kristiansand, including Oslofjord.

Ice reports are available on the Internet between December 1 and March 31, as follows:

Norwegian Ice Service Ice Reports
http://www.kystverket.no

The Norwegian Ice Service can also be contacted, as follows:

1. Telephone: 47-07847
   47-37019759
   47-37019725
   47-91741522 (mobile)
   47-90077605 (mobile)
2. Facsimile: 47-37019701
3. E-mail: ismelding@kystverket.no
4. Website: http://www.kystverket.no

The Norwegian Ice Service does not provide icebreaker assistance to and from Norwegian ports. Certain harbors provide their own ice-breaking service; the harbor authorities should be contacted for details of relevant information.

Industries

The main industries are petroleum and gas production, food processing, shipbuilding, pulp and paper products, metals, chemicals, timber, mining, textiles, and fishing.

The main exports are petroleum and petroleum products, machinery and equipment, metals, chemicals, ships, and fish. The main export-trading partners are the United Kingdom, Germany, the Netherlands, France, Sweden, and the United States.

The main imports are machinery and equipment, chemicals, metals, and foodstuffs. The main import-trading partners are Sweden, Germany, China, Denmark, the United States, and the United Kingdom.

Languages

Norwegian is the official language. There are small areas of Lapp and Finnish-speaking minorities.

Meteorology

The Norwegian Meteorological Institute (DNMI) prepares weather warnings for the coast and harbor areas and warnings on tides along the coast. Maritime forecasts available in English on the Internet are listed below:

Shipping Forecasts for the North Sea and the Norwegian Sea
http://met.no/english/maritime/index.html

Forecasts for Norwegian Coastal Waters
http://met.no/english/maritime/coast.html

Marine weather forecasts for the North Atlantic Ocean are available in Norwegian and English from the Norwegian Meteorological Institute and the Norwegian Broadcasting Corporation (http://www.yr.no).

Navigational Information

Enroute Volumes

Pub. 182, Sailing Directions (Enroute) North and West Coasts of Norway.

Pub. 192, Sailing Directions (Enroute) North Sea.

Maritime Claims

The maritime territorial claims of Norway are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone **	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Claims straight baselines.

** Does not apply to Jan Mayen and Svalbard.

Maritime Boundary Disputes

Dispute with Russia over maritime limits in the Barents Sea and Russia's fishing rights beyond the territorial limits of Svalbard within the Svalbard Treaty zone. An agreement was reached in September 2010 concerning the alignment of the EEZ boundaries in this area; the agreement is pending ratification by the national assemblies of both nations.

It has been reported (2008) that Canada, Denmark, Greenland, Norway, Russia, and the United States have agreed to let the United Nations rule on their overlapping territorial claims in the coastal waters of the Arctic Ocean. Coastal states may claim the sea bed beyond the normal 200-mile limit if the sea bed is part of a continental shelf of shallower waters. For further information, see Pub. 180, Sailing Directions (Planning Guide) Arctic Ocean (Arctic Ocean—Navigational Information—Maritime Boundary Disputes.)

It has been reported (2009) that the United Nations has concurred with Norway's Arctic claim, which will eventually lead to an expansion of Norwegian territory in the Arctic region.

Pilotage

Pilotage regulations apply, with minor exemptions, to all coastal waters within the baseline The baseline consists of a straight line drawn from one outermost point to the next along the entire Norwegian coast.

State Pilotage is controlled by the Ministry of Fisheries. Although pilotage is a function of State Pilots (Statslos), certain vessels are allowed to use company employed "line" pilots (rutelos).

Pilot vessels have the word LOS on the bow; the letters are black and are on a white background.

Pilotage procedures are, as follows:

1. Pilotage is compulsory for the following vessels when en route in sea routes inside the baseline:
   a. Vessels over 500 gross tons, as stated in the vessel's international certificate of registered tonnage pursuant to the 1969 International Convention on Tonnage Measurement.
   b. Vessels pushing or towing one or more objects exceeding a total length of 50m.
   c. Vessels, irrespective of size, carrying particularly hazardous and/or polluting bulk cargo.
   d. Vessels over 100 gross tons, with a single hull, and vessels exceeding 300 gross tons, with a double hull, that are carrying hazardous and/or polluting cargo.
   e. Nuclear-powered vessels.
   f. Vessels with a maximum length of 24m or more, not holding a valid international certificate of registered tonnage pursuant to the 1969 Convention on Tonnage Measurement.
   g. Vessels should send requests for pilots 24 hours prior to arrival, and confirming at least 5 hours in advance, preferably using the Safe Sea Net (described in Ship Reporting System), or to the appropriate Pilot Booking Center, all of which operate 24 hours, as described in the accompanying table titled **Norway—Pilot Booking Centers**. Requests should include:
   a. Vessel name.
   b. Call sign.
   c. Nationality.
   d. LOA, beam, and gross tonnage.
   e. Draft.
   f. Nature of cargo.
   g. Destination.
   h. Purpose of call.
   i. ETA at pilot boarding area, or ETD from harbor.
   j. Whether one or two pilots are required.
   k. Vessel's IMO number (if any).
   l. Crew and passengers (Master's name and nationality, size of crew, etc.).
   m. Cargo and bunker fuel (UN number and quantity of hazardous or polluting cargo, type and quantity of bunker fuel, etc.).
   n. Details of passage (last port of call, next port of call, etc.).
   o. Details related to pilotage requests and pilotage exemption certificates (PECs).
   p. Agent or operator (the Norwegian contact).
   q. Shipping company (name and address).

Norway—Pilot Booking Centers

Center	Area	Telephone	Facsimile	E-mail	VHF channel
Lodingen	West coast of Norway N of 65°08'N to the Russian border	47-76-986810	47-76-986820	pilot.lodingen@kystverket.no	13 and 16
Kvitsoy	West coast of Norway S of 65°08'N to W of Egersund	47-51-735397 47-51-735398	47-51-735391	pilot.kvitsoy@kystverket.no	13 and 16
Horten	South coast of Norway from W of Egersund to the Swedish border	47-33-034970	47-33-034999	pilot.horten@kystverket.no	13 and 16

2. Each pilot station should be notified on VHF 2 hours before ETA or ETD.
3. Duty pilots are located at all pilot offices and undertake outward pilotage, through (transit) pilotage, and coastal pilotage.
4. Inquiries about compulsory pilotage, pilotage exemption certificates (PECs), pilotage service dues, and transitional arrangements should be sent to the appropriate Pilot Booking Center.
5. Indreleia (Coastal Fairways).—Pilotage is compulsory. Vessels should send requests for pilots 24 hours in advance using the Safe Sea Net (described in Ship Reporting System) or to the appropriate Pilot Booking Center stating the following:
   a. ETA.
   b. Draft.
   c. Gross tonnage.
   d. Destination.
   e. How far pilotage is required.
6. Pilot vessels may be contacted on VHF channel 13.
7. Between June 15 and August 20, a pleasure craft escort service is available and can be arranged through the Lifeboat Service by telephone or VHF. Emergency situations and assistance to distressed vessels can affect the lifeboats ability to meet its escort service commitments. Thick fog and bad weather can also be a hindrance. For information on the escort service, weather conditions, requests for assistance, contact the Lifeboat Service on VHF channel 16 or, as follows:

Telephone:	47-67-577777
Facsimile:	47-67-577750
Web site:	http://www.nssr.no

Vessels are required to contact the pilot station 2 hours prior to arrival at the pilot boarding position on VHF channel 16.

Pollution

Pollution Reporting Procedures

Vessels navigating in Norwegian coastal waters are requested to report pollution incidents and oil slicks whenever sighted. The reports are to be sent to any Norwegian coast radio station.

Reports on pollution or the risk of pollution can be forwarded directly to the Norwegian Coastal Administration's department for emergency response at any time by telephone: 47-33-03-4800.

The reports can be given according to the Shipboard Oil Emergency Plan or any oil pollution report form.

Whenever possible, the following information should be included:

1. Time and date of observation.
2. Vessel name, nationality, position, call sign, and MMSI number.
3. Type of vessel, size (in tons), and P and I assurance.
4. Type and amount of cargo and fuel on board.
5. Port of dwparture and port of destination.
6. Location of pollution (latitude and longitude).
7. Estimated amount of product which has or may leak (length and width of oil slick).
8. Oil type and description (rainbow colors/silver sheen or brown colors).
9. Weather conditions (wave height, wind speed, and wind direction).
10. Pollution source (name and type of vessel, course, and speed).
11. Vessel in distress and risk of pollution (is your vessel or are other vessels in a distress situation, such as engine failure, grounding, fire, etc? Give details.).
12. Contact information (INMARSAT and/or Iridiun numbers).

Norwegian Ballast Water Management Regulations

All ships, regardless of flag, are be required to exchange, treat, or deliver to a shore reception facility all ballast water taken up outside the following areas:

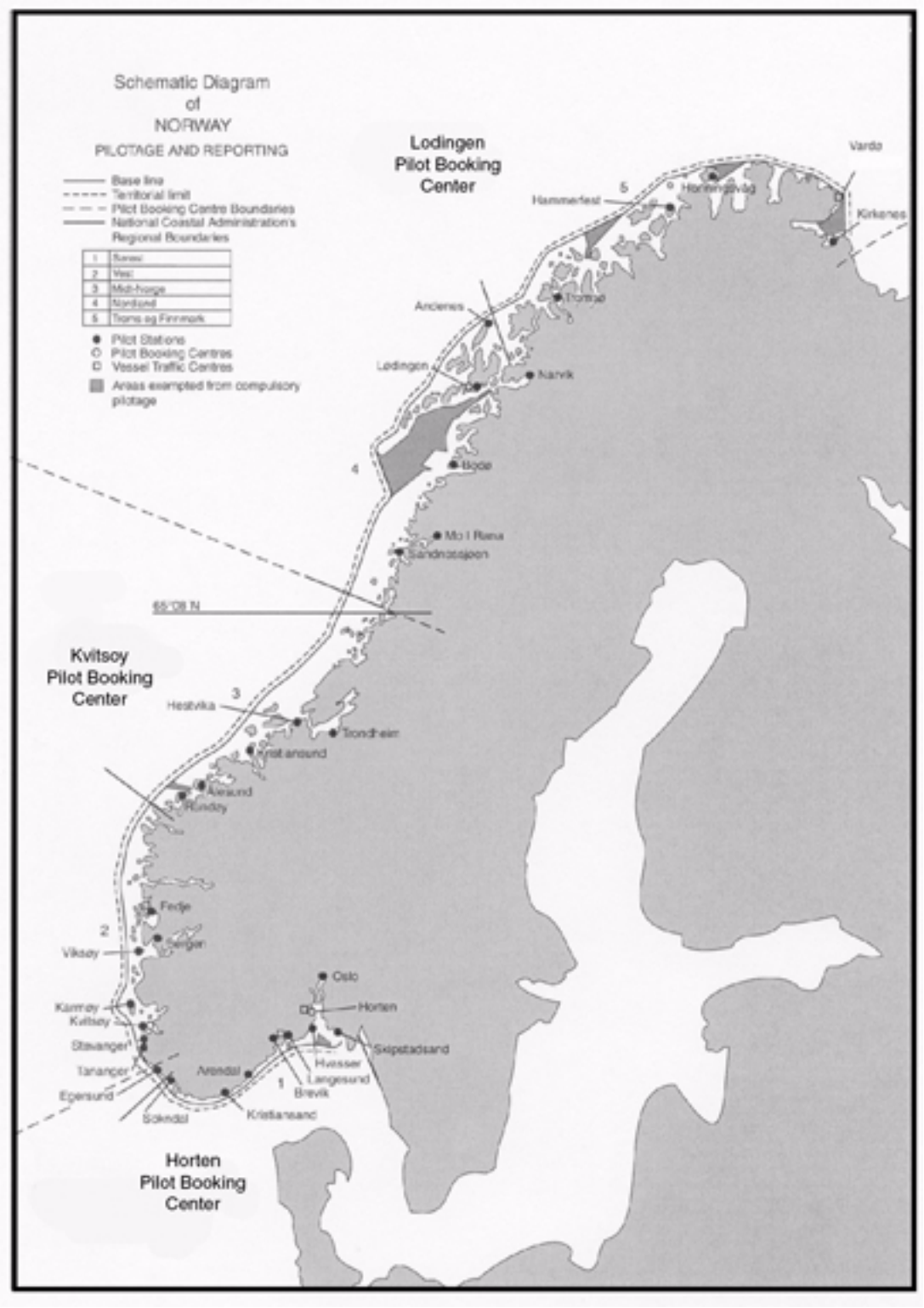
1. The Barents Sea.
2. The Norwegian Sea.
3. The North Sea.
4. The Irish Sea.
5. The Bay of Biscay and the surrounding Iberian Peninsula.
6. The N part of the Atlantic Ocean.

This also applies to ballast water taken up in one of the above-mentioned areas and to be discharged in another. The requirements apply when calling at Norwegian ports and when operating in Norwegian territorial waters.

Ballast is to be exchanged in waters at least 200m deep and 200 miles from the nearest land. If this is not possible, ballast is to be exchanged in waters 200m deep and not less than 50 miles from land. Ships are not required to deviate from their intended voyage to meet this requirement.

If a ship cannot exchange ballast in the required depths or at the required distance from land, it must be exchanged in one of the three designated exchange zones off the Norwegian coast, as follows:

1. Ballast Exchange Area No. 1—An area bounded by lines joining the following positions:
   a. 67°02'N, 9°52'E.
   b. 67°25'N, 9°40'E.
   c. 67°51'N, 9°52'E.
   d. 68°13'N, 10°43'E.
   e. 68°45'N, 11°22'E.
   f. 68°54'N, 11°58'E.
   g. 69°16'N, 12°32'E.
   h. 69°38'N, 13°24'E.
   i. 69°59'N, 14°29'E.
   j. 70°12'N, 15°36'E.
   k. 70°54'N, 17°11'E.
   l. 70°12'N, 17°24'E.
   m. 69°52'N, 16°47'E.
   n. 69°41'N, 16°44'E.
   o. 69°31'N, 15°43'E.
   p. 69°14'N, 14°46'E.
   q. 68°51'N, 13°53'E.
   r. 68°28'N, 13°51'E.
   s. 68°18'N, 12°41'E.
   t. 68°01'N, 12°71'E.
   u. 67°49'N, 12°09'E.
   v. 67°35'N, 11°25'E.
   w. 67°24'N, 11°18'E.



Norway—Pilotage and Booking

x. 66°52'N, 11°23'E.

2. Ballast Exchange Area No. 2—An area bounded by lines joining the following positions:

a. 62°35'N, 4°13'E.
b. 62°41'N, 3°34'E.
c. 63°16'N, 4°40'E.
d. 63°43'N, 5°55'E.
e. 64°28'N, 6°59'E.
f. 64°43'N, 7°43'E.
g. 65°12'N, 8°41'E.
h. 67°02'N, 9°52'E.
i. 66°52'N, 11°23'E.
j. 66°26'N, 10°56'E.
k. 65°43'N, 10°28'E.
l. 64°59'N, 9°43'E.
m. 64°28'N, 8°45'E.
n. 64°10'N, 7°49'E.
o. 63°29'N, 6°48'E.
p. 63°18'N, 6°26'E.
q. 63°17'N, 5°26'E.

3. Ballast Exchange Area No. 3—An area bounded by lines joining the following positions:

a. 57°44'N, 2°53'E.
b. 60°27'N, 3°06'E.
c. 60°59'N, 2°46'E.
d. 61°47'N, 2°51'E.
e. 62°41'N, 3°35'E.
f. 62°26'N, 4°53'E.
g. 61°40'N, 4°07'E.
h. 61°01'N, 4°06'E.
i. 59°39'N, 4°41'E.
j. 59°16'N, 4°27'E.
k. 58°58'N, 4°58'E.
l. 58°14'N, 5°40'E.
m. 57°49'N, 4°49'E.

Ballast need not be exchanged if the master reasonably decides that doing so would threaten the safety or stability of the ship, its crew, or its passengers because of adverse weather, ship design, equipment failure, or any other extraordinary condition.

Ballast which has been treated with a ballast water treatment system approved in accordance with IMO standards need not be exchanged.

Ships are required to have on board an approved ballast water management plan in accordance with the IMO standards. Ships should also have and maintain a ballast water record book.

Monitoring Single Hull Tankers

The transport of heavy grade oils is not allowed on single hull tankers of certain sizes and ages. Denmark, Estonia, Finland, Latvia, Norway, and Sweden have adopted measures to monitor the observance of theses regulations. For further information, see Denmark—Pollution.

Low-sulpher Fuel

Vessels alongside any quay in Norwegian ports must not use fuel oil with a sulpher content greater than 0.1% by volume. All changes of fuel must be logged.

Regulations

Entry Regulations

See Appendix I for details of regulations concerning the entry into and passage through Norwegian Territorial Waters in peacetime of foreign non-military vessels

See Appendix II for details of regulations concerning prescribed channels for foreign non-military vessels in Norwegian Territorial Waters.

Regulations for Norwegian Internal Waters

The following regulations apply to internal Norwegian waters and differ from the rules in the International Regulations for Preventing Collisions at Sea (1972):

1. A vessel towing floating timber, oil containers, plastic hoses, etc. carries a white lantern with an additional white lantern for every 100m of tow, or, by day, a black flag or rectangular black shape.

2. **Marking of Objects Other Than Vessels.**—Dracons, herring and fish locknets, etc., lying wholly or partly submerged and under tow shall have a raft or float in tow. To mark the after end of the tow, the raft or the float shall exhibit an all around white light or a diamond shape.

Power cables and similar constructions being kept afloat by means of floats, etc., and which while being extended across waters, may result in blocking or restrictions of the general traffic, shall be marked by lights prescribed in Rule 24(g). The floats shall be light reflective.

3. Dredges show the lights and shapes prescribed by the International Regulations except that only one shape is displayed by day. In fog the sound signal for a vessel at anchor is followed by:

a. At least six single strokes of the bell if the dredger is to be passed as if it were a red spar buoy.

b. At least six double strokes of the bell if the dredger is to be passed as if it were a green spar buoy.

4. **Patrol Vessels—Channel Closure.**—A vessel patrolling for the purpose of warning approaching shipping of the temporary closure or restriction of a channel will show:

a. By day—International flag U.

b. By night—One green light above two red lights disposed vertically.

c. The vessel may transmit the letter U (..-) in the Morse code by light or signal.

5. **Bend in Channel.**—A power-driven vessel approaching a bend in the channel must sound a 10 second blast when 0.5 mile short of the bend. On hearing this signal a vessels must wait.

6. **Narrow Passage.**—A power-driven vessel approaching a passage so narrow that meeting vessels cannot pass must sound at least 5 short blasts. On hearing this signal a meeting vessel must wait.

7. **Speed Limits.**—Speed is limited to 5 knots when less than 100m from the shore, boat harbors, anchored boats, etc. and within 50m of bathing places. Public bathing places are marked by buoys (orange with orange spherical topmark) and passing inside these is prohibited.

8. **Cable ferries or chain ferries**.—These vessels carry a ball and three red lights, disposed in a triangle apex up.

Tanker Routing

Norwegian authorities recommend that laden tankers of 40,000 dwt and over, when navigating off the coast of Norway, keep seaward of a line joining the following positions:

a. 57°46.2'N, 7°00.0'E. (S of Lindesnes)
b. 57°54.3'N, 6°21.5'E.
c. 58°16.1'N, 5°35.7'E.
d. 58°30.8'N, 5°12.2'E. (SE end of the TSS off Larens Rev)
e. 58°32.9'N, 4°57.1'E. (SW end of the TSS off Larens Rev)
f. 59°10.7'N, 4°27.5'E.
g. 60°49.2'N, 4°08.1'E. (W of Holmengra)

By keeping seaward of this line, tankers will maintain a distance of 12 to 20 miles from the shore.

Lights for Large Vessels at Anchor

Vessels 92m in length and above when at anchor in Norwegian inland waters shall, in addition to the anchor lights, show one white light screened to show from right ahead to right astern, on each side of the vessel midway between the forward and after anchor lights, at such a height that all three lights are in a straight line, decreasing in height toward the stern.

Lifeboat Drills

Lifeboat drills involving the lowering of boats is not permitted when vessels are underway in Norwegian territorial waters. Harbor drills are allowed with local police permission.

Seaplane Harbors

The following information has been extracted from the regulations:

1. The alighting and taking-off of aircraft must in no way be impeded or endangered.
2. No vessel shall pass within 50m of any moored or stationary aircraft, and must pass at such reduced speed that no damage may be caused by wash.
3. All vessels in the vicinity of alighting or taking-off areas shall keep a sharp lookout for a patrol boat and promptly obey any order received from such boat.
4. When seaplanes are operating, a black and yellow checkered flag or ball will be displayed ashore at the administrative buildings, and a patrol boat will be on duty; this signal indicates that the flying area is closed to shipping. During this period, vessels and small craft should not approach the patrol boat within a distance of 200m, even if they are outside the operating area.

The patrol boat is easily recognizable by its black and yellow checkered hull; it displays a flag or ball with similar colors and may call the attention of a vessel by siren or green and red visual signals and, at night, by flares. Light signals shown by the patrol boat are given in the accompanying table titled **Light Signals—Patrol Boat**.

During the part of the year when flying operations take place, a number of notice boards are established within the seaplane harbors, in such a position as to be easily visible to all craft underway within the limits of the operating area.

The notice boards warn vessels to reduce speed and to follow the instructions of the patrol boat and are inscribed.

Local Speed Restrictions

When a vessel carrying a red ball in the rigging is lying moored at any of the lighted structures, or is loading or discharging gas containers at any piers or jetties, powered vessels passing must not proceed at a greater speed than 5 knots for a distance of 100m on either side of the moored vessel.

Light Signals—Patrol Boat

Signal	Meaning
Fixed red	Stop immediately and wait.
Flashing red	You are in a prohibited area; proceed clear on reverse course, or in the direction indicated by visual signals.
Fixed green	All clear, continue on your course.
Flashing green	The area is clear and open to shipping.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The reports shall be submitted electronically through the following web site:

SafeSeaNet Home Page
http://www.shiprep.no

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

Search and Rescue

The Norwegian Rescue Services for sea, air, and land are regarded as one organization under the common heading of life-saving service. The sea rescue service combines a number of public and private institutions, coordinated through the police, who have general responsibility and authority for the saving of lives. Among these institutions are the pilotage, light, and harbor authorities; civil defense and fishery organizations; and the Norwegian Lifeboat Society (Norwegian Society for Rescue of Shipwrecked Mariners). The Norwegian Naval Defense Force has vessels in readiness for distress calls at all times.

The Norwegian Sea Rescue Society operates a fleet of over 30 rescue vesssels of various sizes and a chain of rescue stations along the coast. The vessels have an operational radius of 400 to 5,000 miles and are fitted with VHF, SSB, and mobile telephone communications. The vessels have white hulls, with a wide red band along the deck, and a red Maltese cross in a blue ring on the bow. About 20 of the rescue stations are operated year round, with the remaining stations operating during the fishing and pleasure-boating season.

Norwegian Chart Q6356 shows the location of coastguard stations, lifeboat stations, coast radio stations, and other details of the search and rescue organization in British and North European waters.

A fleet of about 50 vessels is run by the pilotage authority; many of these vessels operate within a radius of 175 to 360 miles. Vessels are equipped for rescue missions. Many shore pilot stations maintain a listening watch on VHF channel 16.

Other vessels, such as those used for harbor works and buoy maintenance, as well as fishing vessels and merchant vessels, can be called upon for rescue service.

The Norwegian Air Force has ten Sea King helicopters, with an operating radius of 220 miles, available for search and rescue duty. The helicopters are based at Stavanger (Sola), Olandet, Bodo, and Banak. Long-range transport and maritime aircraft can be called on for more extensive searches and for the dropping of rescue equipment.

A civilian helicopter, with a range of 150 miles, is based at Svalbard.

The Joint Rescue Coordination Centers (JRCC) are located, as follows:

1. SRR South Norway (JRCC Stavanger)—South of 65°N.
2. SRR North Norway (JRCC Bodo)—North of 65°N.

These centers receive all distress calls and assign the appropriate local rescue center to each incident. The JRCCs can be contacted, as follows:

1. JRCC Stavanger
   a. Telephone: 47-515-17000
   b. Facsimile: 47-516-52334
   c. E-mail: operations@jrcc-stavanger.no
2. JRCC Bodo
   a. Telephone: 47-755-59000
      47-755-59300
   b. Facsimile: 47-755-24200
   c. E-mail: operations@jrcc-bodoe.no

A network of coast radio stations maintains a continuous listening watch for distress traffic on 2182 kHz, 2187.5 kHz, VHF channel 16, and VHF channel 70.

Ship Reporting System

Ship Reporting—SafeSeaNet (SSN)

SeaSafeNet (SSN) is the mandatory reporting system of the Norwegian Coastal Administration (NCA). The system is based on the requirement contained in EU Directive 2002/59/EC and implemented by Norwegian legislation.

Participation.—The regulations apply to the following vessels arriving in and departing from Norwegian ports:

1. All vessels 300 gross tons and over.
2. All vessels carrying dangerous or polluting cargo, regardless of vessel size.
3. Fishing vessels, traditional ships, and recreational craft with a length overall of 45m and over.

The SSN requires notification of fuel amounts in excess of 300 tons.

Exemptions.—The following vessels are exempt from the regulations:

1. Warships.
2. Vessels owned or operated by an EC member state and used for non-commercial public service.

Access.—To access the SSN, vessels must contact Brevik Control to obtain registration. Contact can be made, as follows:

1. Telephone: 47-35-572625
2. E-mail: vts.grenland@kystverket.no
3. Web site: http://www.kystverket.no

If internet access is not available, vessels should contact SSN via its agent, a vessel operator, or via the Telenor Networks Maritime Radio. The Telenor Networks Maritime Radio can be contacted, as follows:

1. Telephone: 47-120
2. Web site: http://www.maritimradio.no/kontakt.htm

Arrival notification.—Prior to arrival at a Norwegian port, vessels should send notification to the NCA via their web site, which are listed below, as follows:

1. At least 24 hours prior to arrival.
2. At the departure port if the voyage time is less than 24 hours.
3. If the port of call is unknown or is changed during the voyage, as soon as the information is available.

http://www.shiprep.no
http://www.kystverket.no/?aid=9030959

Departure notification.—The operator, agent, or master of a vessel, regardless of size, carrying dangerous or polluting cargo and leaving a port in Norway, shall, at the latest, at the moment of departure, notify the NCA through SSN.

Pilotage request.—When a request for pilotage is sent, the vessel's arrival notification will automatically be generated.

Traffic Reporting—Entry into or passage through Norwegian Territorial Waters (NTW)

The following definitions apply to this section:

1. Baseline—Straight lines joining the outermost points of the entire coast of Norway.
2. Norwegian Internal Waters (NIW)—All waters inside the baseline.
3. Norwegian Territorial Waters (NTW)—All waters within the territorial limits of Norway extending 12 miles seaward from the baseline.

All foreign non-military vessels are to keep Norwegian Authorities informed when sailing in Norwegian Territorial Waters (NTW). This is to be done by sending an Arrival Notification and a Reporting Point Notification through SafeSeaNet (SSN), the nearest Norwegian Coast Radio Station (CRS), or directly to the Coastal Surveillance Center (CSC) Bodo, as follows:

1. Operations (all notifications and reporting):
   a. Telephone: 47-75-536299
   b. Facsimile: 47-75-536354
   c. E-mail: csc@reitan.mil.no
2. Shift Leader (all enquiries, applications, requests for dispensations orshelter, and information about stopping/anchoring in Norwegian Territorial Waters):
   a. Telephone: 47-51-536298
   b. Facsimile: 47-51-536354
   c. E-mail: csc@reitan.mil.no

Arrival Notification.—The Arrival Notification should be

sent at least 24 hours in advance of entering Norwegian Internal Waters (NIW). In need for dispensation to enter NIW earlier than 24 hours, vessels should contact the Norwegian Authorities through SafeSeaNet (SSN), a CRS, or by telephone at the above numbers. Vessels from the EU and EEA shall forward the Arrival Notification as early as possible and not later than when crossing into NTW; such notifications may be made in written or oral form. Messages without a valid AAIC will not be accepted by a CRS.

The Arrival Notification shall contain the following:

1. Vessel name.
2. Call sign.
3. AAIC (Accounting Authority Identification Code).
4. IMO identity.
5. MMSI number.
6. Flag (nationality).
7. Type of vessel.
8. Type, quantity, and UN number of cargo.
9. LOA (feet or meters), beam (feet or meters), draft (feet or meters), and tonnage (gross tons).
10. Last non-Norwegian port/place and country.
11. Next non-Norwegian port/place and country.
12. Date, time (UTC), and position on entering Norwegian baseline.
13. Date, time (UTC), and position on leaving Norwegian baseline.
14. Port (name, ETA, ETD, and purpose).
15. Norwegian agent's name, address, and telephone number.
16. Vessel's communication numbers (INMARSAT or telephone number).
17. Master's name and nationality.

Vessels calling at more than one port of call within Norwegian Territorial Waters should repeat the above details of 14 and 15 for the additional ports.

If changes of more than 4 hours to the ETA/ETD given in the original Advance Notification occur, an updated Arrival Notification shall be sent to the Norwegian authorities as soon as possible.

Reporting Point Notification.—This should be sent when crossing the Norwegian baseline upon entering and leaving NIW, and when passing the Reporting Points, listed below. Reporting Point Notifications without a valid AAIC will not be accepted by a CRS.

The Reporting Point Notification shall contain the following:

1. Vessel name.
2. Call sign.
3. AAIC (Accounting Authority Identification Code).
4. IMO identity.
5. MMSI number.
6. Flag (nationality).
7. Current position (latitude/longitude).
8. Destination.
9. Master's name and nationality.

Reporting Points		
No.	**Name**	**Reporting Line**
1	Kvitsoy	Latitude 59°05'N
2	Stadt	Latitude 62°10'N
3	Rorvik	Latitude 64°52'N
4	Landegode	Latitude 67°27'N
5	Tromso	Latitude 69°41'N
6	Honningsvag	Longitude 26°00'E
	Passing the baseline	When entering or leaving NTW

Stopping or anchoring.—Stopping or anchoring by vessels passing through NTW is only permitted, as follows:

1. Actions incidental to ordinary navigation.
2. Force majeure.
3. Distress.
4. Assisting persons, ships, or aircraft in danger or distress.

If a vessel makes a temporary stop or remains stationary, the Norwegian Authorities must be notified.

Signals

Special signals for navigating in Norwegian internal waters, large vessels at anchor, and seaplane harbors can be found under Regualations,

Submarine Operating Areas

Norwegian submarines may be met underway on the surface, at night, in channels within the skerries. At night, they show an amber quick flashing light showing about 90 flashes every minute.

Submarines which are entirely submerged or showing only their periscopes are required to keep clear of all surface vessels. Surface vessels must keep a sharp lookout, and exercise caution.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is observed from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Norway are, as follows:

1. **North and West Coasts**
   a. Off Vardo (IMO).
   a. Off Makkaur (Government of Norway).
   b. Off Nordkinn (Government of Norway).
   c. Off Slettnes (IMO).
   d. Off Nordkapp (Government of Norway).
   e. Off Soroya (IMO).
   f. Off Torsvag (IMO).
   g. Off Afdenes (IMO).
   h. Off Rost(1) (IMO).
   i. Off Rost(2) (IMO).
   j. Off Runde (IMO). *

k. Off Stad (IMO). *
l. Off Sotra (IMO). *
m. Off Utsira (IMO). *

* It should be noted that these schemes are joined by Recommended Routes.

2. **South Coast**

a. Oslo Fjord—East of Fuglehuk (Government of Norway).
b. Oslo Fjord—East of Bastoy (Government of Norway).
c. Oslo Fjord—West of Jeloya (Government of Norway).
d. Oslo Fjord—West of Nesoddtangen (Government of Norway).
e. Off Egersund (IMO). *
f. Off Farsund (IMO). *
g. Off Ryvingen (IMO). *
h. Off Lillesand (IMO). *
i. Off Risor (IMO). *

* It should be noted that these schemes are joined by Recommended Routes.

U.S. Embassy

The U.S. Embassy is situated at Henrik Ibsens gate 48, Oslo. It has been reported (2007) that the embassy will be moved to Huseby in the near future.

The mailing addresses are, as follows:

1. Norway address—
   Henrik Ibsens gate 48
   0244 Oslo
2. U. S. address—
   PSC 69, Box 1000
   APO AE (09707)

U. S. Embassy Norway Home Page
http://norway.usembassy.gov

Vessel Traffic Service

Vessel Traffic Services are in operation, as follows:

1. NOR VTS (Vardo)[1] (68°23'N., 18°39'E.).
2. Fedje (60°46'N., 4°45'E.). [1]
3. Kvitsoy (59°10'N., 5°11'E.). [1]
4. Grenland (Brevik) (59°04'N., 9°36'E.). [2]
5. Oslofjorden (Horten) (59°27'N., 10°46'E.). [2]

[1] For further information, see Pub. 182, Sailing Directions (Enroute) North Coast of Norway.

[2] For further information, see Pub. 193, Sailing Directions (Enroute) Skaggerak and Kattegat.

Vessel Traffic Centers—General Requirements

Communication, Language Requirements, and Duty to Listen In.—Within an area that is covered by a traffic center, all communication between the center and vessels must take place by VHF radiotelephone using the channels decreed by the Coastal Directorate. Military vessels on official service can communicate with the center by mobile phone if this is necessary in order for the vessel to be able to carry out the task.

Vessels required to obtain permission to use the coastal waters and which are en route or at anchor must listen in continuously on the traffic center's working channel.

The crew on the bridge of a vessel that is underway in an area that is covered by a traffic center must be able to communicate effectively in a Scandinavian language or in English if the vessel is not using a pilot.

Requirement for Permission from the Traffic Center.— Permission is required from the traffic center before:

1. Sailing into an area that is covered by the traffic center.
2. Starting to move in an area that is covered by the traffic center.
3. Wanting to make changes to their voyage in relation to what was decided by or agreed with the center. This also applies to stops en route.
4. Anchoring.

The permission mentioned in No. 1 and No. 2 above must be obtained in good time, and at least 1 hour before the vessel arrives in waters covered by the center, or leaves a quay, anchorage, etc. in the same waters. For vessels in Category 1 or Category 2 (vessels with liquid hazardous and/or polluting cargo in bulk) the deadline is at least 6 hours. Should there be a need to put extraordinary safety measures into effect or extraordinary planning linked to the vessel's using the waters, the deadline is at least 24 hours in both waters, whatever the type of vessel.

The permissions described No. 3 and No. 4 above are not required if it is necessary for reasons of safety to stop or alter the voyage and there is no time to obtain permission. In such cases the traffic center must be told as soon as possible.

Vessels that sail to a fixed timetable where the crossing is less than 1 hour do not need to obtain permission if the traffic center has received the timetable and the vessel is delayed by not more than 5 minutes in relation to the timetable. However the vessel must report in just before it sails into the area that is covered by the traffic center and just before it leaves the quay in the same area. The traffic center can decide that vessels may not leave the quay without permission from the traffic center.

Tugs that are assisting another vessel do not need to obtain permission for the part of the voyage where assistance is used unless the traffic center decides otherwise.

How to Apply for Permission.—If possible applications should be made via VHF radiotelephone. If the vessel cannot reach the center via the VHF radiotelephone, application can be made by telephone or facsimile. In special cases the traffic center may decide that an application must be submitted in writing and in some cases what the applications must contain.

The following information must always be given in the application:

1. Vessel's international call sign and name.
2. Vessel's position when the application is sent.
3. Planned voyage and ports of call.
4. If the vessel is outside the area covered by the center—the ETA to the outer boundary for the area and the ETA to the harbor, mooring, or anchorage.
5. If the vessel is inside the area covered by the center—the ETD.

In addition to the above, the traffic center may require information about the following:

1. Type of vessel, including whether it has a single or double hull.

2. Vessel's nationality and port of registration.
3. Name and address of the ship's owner and any shipping company.
4. Name and address of the ship's captain.
5. Name, address, and telephone number of the vessel's shipbroker/agent in Norway, if applicable.
6. Vessel's IMO number.
7. Vessel's telephone and facsimile number.
8. Vessel's maximum length, beam, draft, and height above water.
9. Vessel's actual draught and height above water.
10. Vessel's gross tonnage.
11. Vessel's maximum speed in knots.
12. Type of maneuvering equipment the ship has (e.g. side propellers and rudders).
13. Vessel's total engine power for propulsion.
14. Number of passengers on board.
15. Vessel's cargo, type, and quantity.
16. Expected time within the area covered by the traffic center.
17. Other conditions that the traffic center may require and which are significant for safety in harbors, waters and/or for traffic organization.

Information described above and which applies to conditions that are not variable (e.g. the type and size of the vessel) should be sent unsolicited in writing or be given when ordering a pilot if there is reason to believe that the center does not already have such information.

Permission.—Permission from the traffic center is only valid in relation to this directive and does not replace permits that are required by other laws or directives.

A permit is contingent upon the vessel satisfying the requirements that are laid down in this directive in order to be able to use the waters in question. The traffic center is not responsible for checking that these requirements have been met.

Where reasons for safety or effective traffic flow make it necessary, the traffic center can:

1. Refuse to grant permission as described in **Requirement for Permission from the Traffic Center**. This refusal can only be given with effect for the next 48 hours.
2. Set conditions for the permit, including requiring the vessel to use a tug.
3. Withdrawing the permit or setting new conditions for a given permit.

Additional Reporting Requirements.—The traffic center must be informed as soon as possible when any of the following occurs:

1. The vessel sails into the area covered by the center.
2. The vessel starts to move within the area covered by the center.
3. The vessel has moored or anchored.
4. The vessel suffers an accident.
5. The vessel has made changes to its voyage in relation to what was decided by or agreed with the center and it has not been possible to obtain permission (See **Requirement for Permission from the Traffic Center***)*. This also applies to anchoring and other stops en route.

Tugs are not required to report according to No. 1, No. 2, No. 3, and No. 5 above as long as they are assisting another vessel, unless the traffic center decides otherwise.

Duty to Provide Information.—Vessels that find themselves within an area that is covered by a traffic center must, upon demand from the traffic center, provide the information listed in **How to Apply for Permission**.

Appendix I—Laws and Regulations Pertaining to Navigation

Regulations concerning foreign non-military vessels entering and making passage through Norwegian territorial waters in peacetime.—Laid down by Royal Decree and put forward by Ministry of Defense.

Introductory Provisions

Section 1.—These regulations only apply when Norway and the State whose flag the vessel is entitled to fly are at peace, or until contingency measures have been implemented.

Section 2.—The regulations do not apply to Norwegian territorial waters off Svalbard, Jan Mayen or dependencies unless otherwise prescribed by statute.

Section 3.—For the purpose of these regulations, foreign, non-military vessel means any foreign vessel, or Norwegian vessel the master of which is a foreign national, to which current Norwegian regulations concerning the admission of foreign warships and military aircraft to Norwegian territorial waters in peacetime do not apply.

In these regulations, foreign, non-military vessel also means equipment belonging to the vessel (lifeboats, landing craft, aircraft, etc.).

Section 4.—Nuclear-powered vessels are subject to special licensing pursuant to section 4 of Act No. 28 of 12 May 1972. Vessels carrying nuclear substances are required to hold a permit pursuant to section 5 of the said Act.

Section 5.—Sections 13, 15, and 16 of these regulations apply subject to any restrictions established by agreements with foreign States.

Section 6.—Pleasure craft carrying foreign nationals who are required to hold a visa shall be subject to the regulations concerning the admission of foreigners to the Kingdom and their stay there pursuant to sections 83 and 111 of the Crown Prince Regent's Decree of 21 December 1990 Number 1028.

Pleasure craft over 24m in length or 50 grt shall use prescribed sea lanes and are required to give notification pursuant to section 17 and may be ordered to report pursuant to section 19.

Pleasure craft are otherwise exempted from the restrictions set out in Sections 16, 17, 18, and 19.

Section 7.—Norwegian territorial waters and sea limits:

(a) For the purpose of these regulations, baselines means straight lines drawn between the base points.

(b) For the purpose of these regulations, Norwegian territorial waters means all waters within the territorial limit.

(c) For the purpose of these regulations, internal waters means all waters that lie within the baselines.

(d) For the purpose of these regulations, the territorial sea means the waters between the baselines and the territorial limit.

Section 8.—Responsibility of the shipmaster.—Masters of all foreign, non-military vessels are required to familiarize themselves with the substance of these regulations before entering Norwegian territorial waters.

Section 9.—Norwegian authorities.—For the purpose of these regulations, the Norwegian authorities means the Ministry of Defense or whosoever the Ministry so authorizes. All inquiries, notifications, reports, applications for clearance etc, to the Norwegian authorities shall be directed to Headquarters Defense Command North Norway (Hq DEFCOMNON) for vessels in positions north of 65°N and to Headquarters Defense Command South Norway (Hq DEFCOMSONOR) for vessels in positions south of 65°N and shall be submitted in Norwegian, Danish, Swedish, or English.

Section 10.—Innocent passage through the territorial sea.—Innocent passage through the territorial sea is permitted for foreign non-military vessels. Innocent passage means navigation through the territorial sea, either in transit or for the purpose of proceeding to or from Norwegian internal waters or ports.

Stopping or anchoring while passing through the territorial sea is only permitted when such action is incidental to ordinary navigation or is rendered necessary by force majeure or distress or for the purpose of rendering assistance to persons, ships or aircraft which are in danger of distress.

Section 11.—Any vessel in innocent passage through the territorial sea which for reasons set forth in Section 10, second paragraph, must make a temporary stop or remain stationary or enter Norwegian internal waters or call at a Norwegian port facility, shall notify the Norwegian authorities without undue delay.

Section 12.—Admission of foreign non-military vessels to Norwegian internal waters.—Foreign non-military vessels to which the list in section 13 does not apply may, subject to the restrictions set out in section 16, enter Norwegian internal waters without obtaining written permission in advance.

Foreign non-military vessels maybe refused admission to Norwegian internal waters when special grounds make this necessary. Such special grounds exist when inter alia fishing vessels plan to enter these waters in connection with fishing or bringing ashore a catch as set out in Section 8, first paragraph, of Act No. 19 of 17 June 1966.

Section 13.—Admission to Norwegian internal waters is permitted for the following foreign non-military vessels only when written permission has been granted in advance by the Norwegian authorities:

a. Research vessels.

b. Seismic vessels and other vessels carrying equipment used for surveying and charting the sea bed.

c. Factory ships, repair ships and expedition vessels.

d. Vessels for special purposes, including floating and mobile oil platforms, tugboats, dredges, icebreakers and floating cranes, unless entry into Norwegian internal waters is necessary due to a binding agreement with a Norwegian company which requires the vessel to call at a Norwegian port facility.

e. Non-military government ships and stand-by and support vessels for naval units.

f. Vessels specified in Section 4 of these regulations.

g. Vessels carrying aircraft.

In cases of doubt, the Norwegian authorities will decide whether a foreign, non-military vessel is subject to this provision.

Section 14.—The vessels specified in Section 13 b, c, d, and g may be granted admission into Norwegian internal waters without a prior written application in order to be repaired or laid up in a Norwegian port provided a binding agreement with

a Norwegian company exists. In such cases, deviations may be made from the deadlines referred to in Section 15. The Norwegian authorities shall be notified of such admission as soon as possible.

Foreign non-military vessels which are obliged to seek a port of refuge for the reasons specified in Section 10, second paragraph, may enter Norwegian internal waters without a prior written application.

Section 15.—A written application for permission to enter Norwegian internal waters under Section 13a, b, c, d, e, and g shall have reached the Norwegian authorities at the latest 7 days before entry is expected to take place. Applications under section 13f shall have reached the Norwegian authorities at the latest 14 days before entry is expected to take place. All applications shall contain the information specified in section 17 and any other information deemed to be of importance in connection with the planned entry.

Not withstanding these regulations, the Norwegian authorities may require information from foreign non-military vessels which is considered to be of relevance to the planned entry, including information about catches carried on board and, if the catch is to be delivered in Norway, fishing activities within Norwegian fishery jurisdiction in which the vessel has been engaged.

Section 16.—Entry, passage, and notification requirement when navigating through Norwegian internal waters.—For foreign, non-military vessels, entry into and passage through Norwegian internal waters is restricted to the following activities:

a. Navigation to and from Norwegian ports in connection with loading, unloading, restocking, bunkering, carrying out necessary repairs or carrying out binding agreements with Norwegian interests. Laytime in a Norwegian port shall be limited to the necessary length of time as dictated by the purpose of the call at the port.

b. Navigation in transit via specified sea lanes when the vessel's mission makes this necessary.

c. Navigation in order to seek a port of refuge.

Stopping or anchoring while passing through internal waters is only permitted when such action is incidental to ordinary navigation or is rendered necessary by force majeure or distress or for the purpose of rendering assistance to persons, ships or aircraft which are in danger or distress. If the vessel makes a temporary stop or remains stationary, the Norwegian authorities shall be notified without undue delay.

Section 17.—Masters of all foreign non-military vessels over 24m in length or 50 gross tons who intend to navigate their vessel into Norwegian internal waters are required to give notification of such entry and shall notify the Norwegian authorities at the latest 24 hours in advance. Such notification may be made in written or oral form and shall contain:

a. Vessel's IMO identification number, if any.

b. Vessel's nationality, name, international radio call sign (distinctive letters), and any mobile or satellite telephone numbers.

c. Type of vessel, cargo, draft, and size in gross tons.

d. Purpose of the entry including any information about the entry as specified in Section 14 of these regulations.

e. Specification in latitude and longitude of the point where the vessel intends to cross the Norwegian baseline when entering and leaving.

f. Intended ports of-call with specification of times of arrival and departure.

g. Norwegian contact (agent, operator, ship owner, etc).

The Norwegian authorities shall be informed without delay of any changes in the submitted plan of navigation.

Passenger and car ferries in regular service to and from Norwegian ports are excepted from the notification requirement provided an approved navigation plan has been forwarded to the Norwegian authorities at the latest 14 days before the service is put into operation. The Norwegian authorities are to be informed if the navigation plan is withdrawn or if major changes are introduced.

The vessels specified in Section 13 are required to give notification as described above irrespective of their length or size.

Section 18.—Sea Lanes and Reporting Points in Norwegian internal waters.—When navigating through Norwegian internal waters, foreign non-military vessels shall only use those sea lanes prescribed by the Ministry of Defense.

Section 19.—Foreign non-military vessels shall report to the Norwegian authorities when entering and leaving Norwegian internal waters and when passing specified geographical positions in the sea lane. Such reports shall include the vessel's name, call sign, destination, and estimated time of passing the next reporting point or of arrival at the vessel's next port of call. The reporting points are determined by the Ministry of Defense.

Section 20.—Foreign non-military vessels which are obliged to enter Norwegian internal waters due to force majeure or distress or to provide assistance to persons, ships, or aircraft that are in danger are excempted from the above provisions concerning the requirement to report and the use of sea lanes. Such vessels shall nevertheless and by the fastest possible means contact the Norwegian authorities for specific instructions regarding anchoring or continued navigation.

Section 21.—Vessels stopping in Norwegian territorial waters.—No registrations or measurements other than those necessary for safe navigation are permitted without special permission from the Norwegian authorities.

Section 22.—It is prohibited for all persons on board foreign non-military vessels to make maps or sketched maps of ports, waters, airfields, or seaplane ports of the Kingdom. It is also prohibited to make maps, sketches of maps, take photographs, or record descriptions of Norwegian military facilities or equipment.

Section 23.—Foreign non-military vessels shall fly their national flag at all times while navigating through Norwegian territorial waters. When the vessel is at anchor or moored, the flag shall be hoisted during the day.

Section 24.—Officers on Norwegian warships or guard ships and other officers in the Norwegian Armed Forces may inspect any foreign non-military vessel, including its documents, cargo, equipment, and any persons on board. The master of the vessel under inspection shall provide any assistance necessary to facilitate the inspection, including placing the vessel's communications equipment at the disposal of the inspecting officers free of charge. The master shall provide on request any information which is of interest to the Norwegian authorities and is under obligation to comply with instructions regarding the remainder of the voyage.

Section 25.—The master and crew of a foreign non-military vessel shall comply with current Norwegian legislation including regulations concerning the environment, health, customs,

use of pilot, traffic, ports, foreign nationals, and rules of conduct. Norwegian regulations governing the use of communications equipment shall be complied with.

Section 26.—Should the master or crew of a foreign nonmilitary vessel fail to comply with the laws and regulations laid down for the presence and navigation of vessels in Norwegian territorial waters, the Norwegian authorities may order the vessel to leave Norwegian territorial waters immediately or within a specified reasonable period of time. The vessel may also be brought to the nearest police authority to be charged and prosecuted.

Section 27.—Unless otherwise prescribed by statute, infringement of these regulations is punishable by fines or by imprisonment for a term not exceeding 3 months pursuant to Section 418, Subsection 2, of Act No. 10 of 22 May 1902.

Section 28.—Concluding provisions.—The Ministry of Defense or whosoever the Ministry so authorizes may grant exemption from these regulations and may issue further provisions for the supplementation and implementation of these regulations.

Section 29.—These regulations enter into force on 1 May 1995.

Appendix II—Prescribed Channels for Foreign Non-military Vessels

REGULATIONS ON PRESCRIBED CHANNELS FOR FOREIGN NON-MILITARY VESSELS IN NORWEGIAN TERRITORIAL WATERS

Decreed by the Ministry of Defense 4 May 1995 in accordance with Royal Resolution of 23 December 1994 No. 1130 on foreign non-military vessels calling at and traveling in Norwegian territorial waters during peacetime

Prescribed Channels

1. Foreign non-military vessels shall follow prescribed channels which are summarized in the Coast Directorate's fairway system..

2. Foreign non-military vessels wishing to call at places which are not directly connected to the prescribed channels shall follow prescribed channels as far as possible and then take the shortest safe channel in or out. Where a prescribed channel cannot be followed as in the previous sentence, a vessel shall cross the baseline at a point which allows the shortest safe channel in or out between the baseline and the port of call, and the vessel shall follow that channel.

3. Foreign non-military vessels which, after entering Norwegian internal waters, have a need to follow channels other than those described in Paragraphs 1 and 2 above, can obtain special permission from the Norwegian authorities (i.e. Headquarters Defense Command North Norway/South Norway) to follow these channels as long as there is a state pilot on board. In areas regulated by traffic centers, the appropriate pilot master at the traffic center can give dispensation as necessary.

Reporting Points

4. When passing in or out of the Norwegian internal waters and when passing defined geographical points in channels, foreign non-military vessels shall report to the Norwegian authorities. The report shall contain the vessel's name, call sign, and port of call, along with the time for passing the next reporting point in a channel or the next harbor.

5. The reporting points are defined, as follows:

Headquarters Defense Command	
South Norway	Kvitsoy (Rogaland)
	Statt (More and Romsdal)
	Rorvik (Nord Trondelag)
North Norway	Landego (Nordland)
	Tromso (Troms)
	Honningsvag (Finnmark)

Appendix III—Economic Exploitation Zone

By act No. 91 of 17 December 1976 and Royal Decree of 17 December 1976, of which the following are extracts, the Norwegian authorities established, from 1 January 1977, an Economic Exploitation Zone, the outer limits of which are set at a distance of 200 nautical miles from the appropriate baselines but not so as to extend beyond the Continental Shelf Boundaries of other States.

The establishment of the Zone does not affect the rights of navigation through or flight over the waters in question.

Except as provided in agreements with other States and in regulations concerning fisheries, aliens may not engage in fishing or hunting within the Zone.

Regulations concerning the protection of the environment, scientific research, artificial installations and port facilities, cables and pipelines, and the exploitation of the Zone for any economic purpose, may be issued.

PANAMA

General	**485**
Buoyage System	**485**
Cautions	**485**
Currency	**485**
Government	**485**
Holidays	**486**
Industries	**486**
Languages	**486**
Navigational Information	**486**
Pollution	**486**
Regulations	**487**
Search and Rescue	**487**
Time Zone	**487**
U.S. Embassy	**488**

General

Panama, located in Central America, is bordered on the E by Colombia and on the W by Costa Rica. The Caribbean Sea lies to its N and the North Pacific Ocean lies to its S.

Heavily-wooded hills and mountain ranges generally span the length of the country, with the exception of the low gap at its narrowest part, through which the Panama Canal crosses. The coastal areas are largely plains and rolling hills.

Elevations E of the canal rise to a height of about 1,615m near the Colombian border and to a height of 3,475m in the mountains to the W of the canal.

The climate is tropical. It is hot, humid, and cloudy with the rainy season from May to January and the dry season from January to May.

Most of the numerous rivers of the country flow into the Pacific Ocean and are of little or no importance to navigation.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Many navigational lights along the coast have been reported to be unreliable, irregular, or operating at a reduced range.

Cautions

Turtle nets and buoys may be encountered near the coast in the NE approach to the Panama Canal.

The nets are usually moored over rocks; vessels navigating near them may be in danger. The buoys attached to the nets are made of wood or bamboo and float horizontally. They may be distinguished from driftwood by being grouped in one area.

Currency

The official unit of currency is the balboa, consisting of 100 centesimos.

Government

Panama is a constitutional republic. The country is divided into 11 provinces and one territory.

Panama is governed by a directly-elected President who serves a non-renewable 5-year term. The unicameral National Assembly consists of 71 directly-elected members serving 5-year terms.

The legal system is based on civil law.

The capital is Panama City.

Flag of Panama

Holidays

The following holidays are observed:

January 1	New Year's Day
January 9	National Mourning Day
Carnival	Variable
Ash Wednesday	Variable
Holy Thursday	Variable
Good Friday	Variable
Holy Saturday	Variable
Easter Sunday	Variable
May 1	Labor Day
June 16	Dia del Padre
November 3	Independence Day from Colombia
November 4	Flag Day
November 5	Colon Day (Colon only)
November 10	Uprising of Los Santos
November 28	Independence Day from Spain
December 8	Mother's Day
December 25	Christmas Day
December 31	New Year's Eve

Industries

The main industries are agriculture, construction, brewing, cement and other construction materials, and sugar milling.

The main exports are bananas, shrimp, sugar, coffee, and clothing. The main export-trading partners are Greece, the United States, and Japan.

The main imports are capital goods, foodstuffs, consumer goods, and chemicals. The main import-trading partners are Japan, Singapore, the United States, and China.

Languages

Spanish is the official language, although a segment of the population speaks English as a native tongue. Many Panamanians are bilingual.

Navigational Information

Enroute Volumes

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2.

Pub. 153, Sailing Directions (Enroute) West Coasts of Mexico and Central America.

Maritime Claims

The maritime territorial claims of Panama are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Claims the Gulf of Panama as a historic bay.

Pollution

Oil Pollution Emergency Plan

All vessels using the Panama Canal having a carrying capacity of 400 metric tons or more of oil as cargo or fuel must have a Panama Canal Ship Oil Pollution Emergency Plan (PCSOPEP) in place. Vessels without a PCSOPEP could face transit delays and financial penalties.

Each PCSOPEP must be submitted at least 96 hours prior to arrival in canal waters and should include the following information at a minimum:

1. Oil pollution prevention measures for Panama Canal waters.
2. Spill notification procedures in a prioritized sequence.
3. Spill response procedures.
4. Crew training program for reaction to shipboard and shoreside spill incidents.
5. Record of PCSOPEP notification exercises.
6. Identification of the authorized person, as well as the telephone number and facsimile number where they can be reached on a 24-hour basis.

If the Panama Canal authority determines the PCSOPEP meets all requirement as stated in the Regulations on Navigation in Panama Canal Waters (Chapter IX, Section 4), the Panama Canal Authority will issue a Notification of Acknowledgement to the vessel; the notice will be valid for 4 years.

Questions regarding PCSOPEPs can be sent, as follows:

1. Telephone: 507-272-4635
2. E-mail: pcsopep@pancanal.com

Further details, including full instructions on PCSOPEPs (OP Notice to Shipping No. N-12.2008) are available from the Panama Canal Authority website:

Panama Canal Ship Oil Pollution Emergency Plan (PCSOPEP)
http://www.pancanal.com/eng/maritime/notices/index.html

Vessels must perform PCSOPEP notification exercises for the Authorized Person at least twice a year and must document them for verification by the Panama Canal Authority. These tests may be conducted outside the waters of the Panama Canal.

The Panama Canal Authority may also require vessels to perform a PCSOPEP notification exercise and/or participate in response drills and exercises with the Panama Canal Authority. The vessel must properly document such drills and exercises. Joint exercises, with the participation of vessels and the Panama Canal Authority, will be previously coordinated and will not delay transits.

Vessel exercise records must be kept for at least 3 years.

Pollution Reporting

In the event of an emergency in Panama Canal waters, the vessel should notify the Panama Canal authority through the Panama Canal plot on board. In the event no Panama Canal pilot is on board, the Panama Canal Authority shall be notified using VHF channel 12 or 16.

Upon activation of the vessel's PCSOPEP, the vessel's Authorized Person will establish contact with the Maritime Traffic Control Center (telephone: 507-272-4201 or 507-272-4202).

Notification begins as soon as an actual or probable oil leak is detected and shall not be delayed during the process of gathering information. The notification shall include the following information:

1. Vessel name.
2. Country of registry.
3. IMO Number and Panama Canal Ship Identification Number (SIN).
4. Location of incident.
5. Date and time of incident.
6. Planned route.
7. Nature of incident.
8. Identification of spilled product and any toxic or explosive hazard.
9. Estimated volume of the spilled product.
10. Size and appearance of the slick.
11. Weather conditions.
12. Actions taken or planned by on scene personnel and vessel conditions.
13. Injuries or deaths.
14. Any other information as deemed appropriate.

Regulations

International Ship and Port Facility Security (ISPS) Code

The Panama Canal Authority has adopted regulations similar to those established by the ISPS Code, even though the Panama Canal does not fall within the ISPS Code definition of a port facility.

All vessels to which SOLAS 74 regulations apply and which plan to arrive in Panama canal waters are expected to comply with the ISPS Code and related Panama Canal Regulations. Additionally, those vessels not required to comply with the ISPS Code will be expected to provide evidence they have implemented onboard security measures comparable to those contained in the ISPS Code.

Vessels not fully able to comply with these requirements may be subject to control and compliance measures, which may include a more detailed inspection and assignment of additional resources at their own cost. These measures could also result in transit delays or the denial of transit.

Electronic Data Collection System (EDCS) Code

The following documents are required to be submitted through ECDS at least 96 hours prior to arriving in Panama Canal waters:

1. ETA/Ship Due (Form 4376).
2. Cargo Declaration (Form 4363).
3. Passenger List (Form 20).
4. Crew List (Form 1509).

Updates to this information may be submitted up to 12 hours prior to arrival but these changes will be subjected to security verification.

Vessels with a voyage time of less than 96 hours from their last port of call prior to entering the canal must still provide preliminary information 96 hours in advance. Vessels will be required to provide their final information to the Panama Canal Authority immediately upon departure from their last port of call.

With the implementation of EDCS, vessels no longer need to provide the canal Boarding Officer with hard copies of the Cargo Declaration, Passenger List, and Crew List. However, vessels are still required to provide Boarding Officers with a hard copy of the Ship's Information and Quarantine Declaration (SIQD) (Form 4398), which should be completely filled out, with the exception of information on any dangerous cargo, which is required to be forwarded in advance through EDCS. The SIDQ from is available at the following web site:

Ship's Information and Quarantine Declaration (SIQD)
http://www.pancanal.com/eng/maritime/forms.html

Quarantine

Radio pratique should be requested as part of the 96-hour advance notification to the Traffic Management Division of the Panama Canal Authority, as follows:

1. Telephone: 507-272-4210
   507-272-3782
2. Facsimile: 507-272-3976
   507-272-2748
3. E-mail: mrtd-rcp@pancanal.com (Balboa)
   mrtd-rca@pancanal.com (Cristobal)

Search and Rescue

The National Maritime Service (Servicio Maritimo National) is the national search and rescue agency for Panama and can be contacted, as follows:

1. Telephone: 507-211-6004
2. Facsimile: 507-211-1943
3. E-mail: comandoarmada@smn.gob.pa
4. Internet: http://www.smn.gob.pa

Time Zone

The Time Zone description is ROMEO (+5). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at Building 783, Demetrio Basilo Lakas Avenue, Clayton, Panama.

The mailing addresses are, as follows:

1. Panama address—
   Apartado Postal 0816-02561
   Zona 5
   Panama City
2. U. S. address—
   9100 Panama City Place
   Washington, DC (20521-9100)

U. S. Embassy Panama Home Page
http://panama.usembassy.gov

POLAND

General	**489**
Buoyage System	**489**
Currency	**490**
Firing Areas	**490**
Government	**492**
Holidays	**492**
Ice	**492**
Industries	**493**
Languages	**493**
Mined Areas	**493**
Navigational Information	**493**
Pollution	**494**
Pilotage	**494**
Regulations	**494**
Search and Rescue	**495**
Ship Reporting System	**495**
Signals	**495**
Submarine Operating Areas	**496**
Time Zone	**496**
Traffic Separation Schemes	**496**
U.S. Embassy	**496**
Vessel Traffic Service	**496**

General

Poland is bounded by Germany on the W; Russia, Lithuania, Belarus, and Ukraine on the E; Slovakia and the Czech Republic on the S; and the Baltic Sea on the N.

The climate is temperate, with cold cloudy moderately-severe winters with frequent precipitation and mild summers with frequent showers and thunderstorms.

The terrain is mostly a low-lying plain, becoming more hilly in the S inland third of the country and mountainous along the border with Slovakia and the Czech Republic.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Buoys marking areas closed to navigation are painted yellow with two red stripes forming a cross when viewed from above and may exhibit white or red flashing lights.

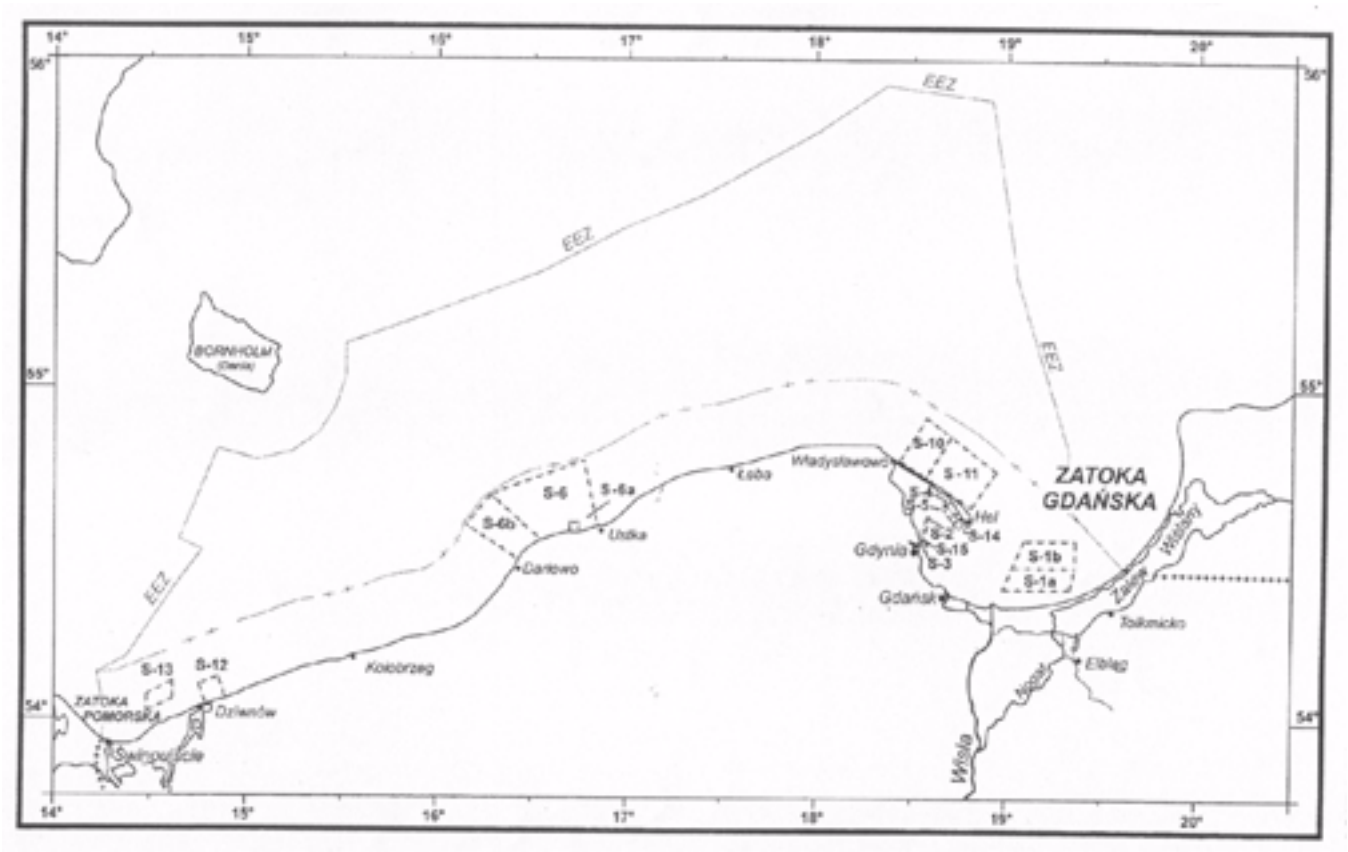
Military zones may be marked by buoys stamped with the letters “SN.” Areas in which explosives have been dumped, and mined areas, are marked by white conical buoys with a large letter “A” in red. Buoys serving as survey marks are conical and painted in blue and red bands.

The limits of fishing areas or fish conservation areas may be marked by either spar or conical buoys painted in yellow and black bands with the letters “RYB” which may carry a yellow spherical topmark.

Cables are marked by black conical buoys with a white letter “K.” The limits of an anchorage are usually marked by red or black conical buoys with a white anchor symbol.

Buoys marking a canal entrance are conical and painted yellow above black. Measured distance buoys are usually oval in shape, painted yellow and red, divided vertically, and may carry topmarks consisting of one, two, or three red spheres.

Many buoys and lighted buoys are withdrawn or replaced for the winter, usually beginning in early November or when ice threatens. Information on intended changes is promulgated in Polish Notices to Mariners and by radio navigational warnings, if necessary.



Poland—Firing Zones—Chartlet No. 1

Currency

The official unit of currency is the zloty, consisting of 100 groszy.

Firing Areas

Vessels of naval units, anchored and unable to show prescribed anchor lights, shall show two white lights visible for 2 miles around the horizon. One light is placed close above the hull at the stern; the other on the bow at a greater height.

One of a group of naval vessels at anchor can show one blue light independently of other prescribed lights. Vessels in single column formation, except for the last vessel, can show two white lights in addition to the prescribed stern light. One of these lights, shown from the mainmast, is beamed toward the stern; the other light is carried above the stern light.

Ships engaged in practice firing exercises display a red flag at the masthead. At night, a red light visible all around the horizon, is shown above the prescribed white light on the foremast.

The following areas, used for military and gunnery exercises, will be temporarily closed to fishing and navigation, except as noted, at times promulgated by the Polish authorities:

Area No. 1a (Chartlet No. 1 and No. 2).—An area bounded by lines joining the following positions:

a. 54°23'54.6"N, 18°59'50.4"E.
b. 54°27'54.6"N, 19°02'50.4"E.
c. 54°27'54.6"N, 19°22'56.4"E.
d. 54°23'54.6"N, 19°21'26.4"E.

Area No. 1b (Chartlet No. 1 and No. 2)**.—**An area bounded by lines joining the following positions:

a. 54°27'54.6"N, 19°02'50.4"E.
b. 54°32'54.6"N, 19°06'38.4"E.
c. 54°32'54.6"N, 19°23'08.4"E.
d. 54°27'54.6"N, 19°22'56.4"E.

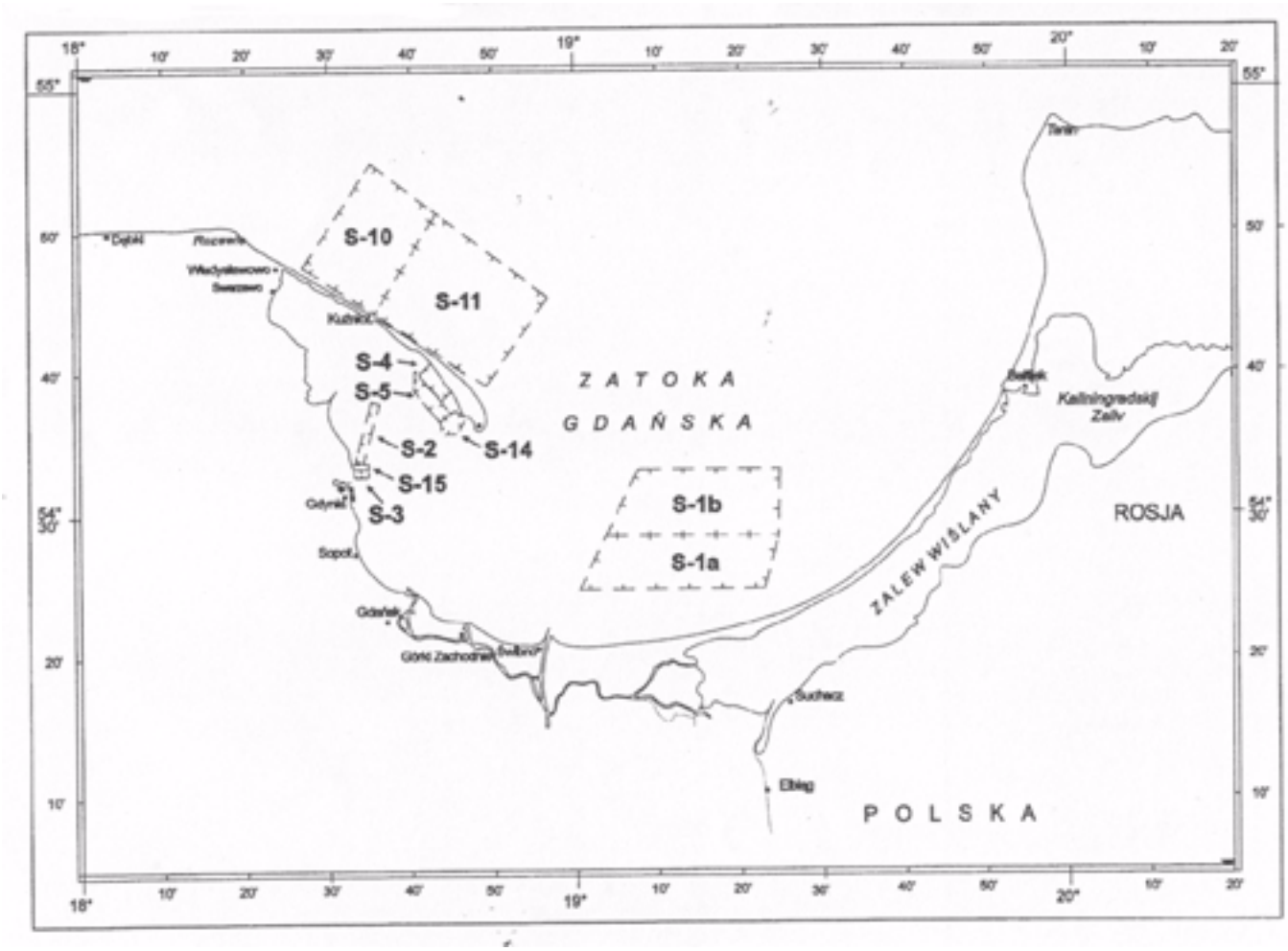
Area No. 2 (Chartlet No. 1 and No. 2)**.—**An area bounded by lines joining the following positions:

a. 54°32'54.6"N, 18°34'02.4"E.
b. 54°33'12.6"N, 18°33'44.4"E.
c. 54°37'18.6"N, 18°35'38.4"E.
d. 54°37'12.6"N, 18°36'38.4"E.
e. 54°33'06.6"N, 18°34'38.4"E.

Area No. 3 (Chartlet No. 1 and No. 2)**.—**An area bounded by lines joining the following positions:

a. 54°32'15.0"N, 18°33'46.8"E.
b. 54°32'15.0"N, 18°35'19.8"E.
c. 54°32'48.0"N, 18°35'19.8"E.
d. 54°32'48.0"N, 18°33'48.0"E.

Note.—This area is closed to navigation year round.



Poland—Firing Zones—Chartlet No. 2

Area No. 4 (Chartlet No. 1 and No. 2)**.—**An area bounded by lines joining the following positions:

a. 54°40'18.0"N, 18°43'18.0"E.
b. 54°39'36.0"N, 18°41'36.0"E.
c. 54°37'42.0"N, 18°44'18.0"E.
d. 54°38'24.0"N, 18°45'42.0"E.

Area No. 5 (Chartlet No. 1 and No. 2)**.—**An area bounded by lines joining the following positions:

a. 54°36'06.6"N, 18°44'20.4"E.
b. 54°38'24.6"N, 18°40'56.4"E.
c. 54°40'00.6"N, 18°41'02.4"E.
d. 54°36'48.6"N, 18°45'44.4"E.

Area No. 6 (Chartlet No. 1)**.—**An area bounded by lines joining the following positions:

a. 54°32'37.2"N, 16°32'43.2"E.
b. 54°40'45.0"N, 16°16'57.0"E.
c. 54°47'01.8"N, 16°46'21.6"E.
d. 54°35'16.2"N, 16°50'42.0"E.

Area No. 6a (Chartlet No. 1)**.—**An area bounded by lines joining the following positions:

a. 54°34'06.0"N, 16°41'51.6"E.
b. 54°35'54.0"N, 16°41'51.6"E.
c. 54°35'54.0"N, 16°44'51.6"E.
d. 54°34'06.0"N, 16°44'51.6"E.

Area No. 6b (Chartlet No. 1)**.—**An area bounded by lines joining the following positions:

a. 54°29'03.0"N, 16°25'28.8"E.
b. 54°35'24.0"N, 16°08'46.2"E.
c. 54°40'45.0"N, 16°16'57.0"E.
d. 54°32'37.2"N, 16°32'43.2"E.

Area No. 10 (Chartlet No. 1 and No. 2)**.—**An area bounded by lines joining the following positions:

a. 54°47'24.0"N, 18°27'12.0"E.
b. 54°55'12.6"N, 18°36'36.0"E.
c. 54°51'55.2"N, 18°43'22.2"E.
d. 54°44'21.6"N, 18°35'17.4"E.

Area No. 11 (Chartlet No. 1 and No. 2)**.—**An area bounded by lines joining the following positions:

a. 54°44'21.6"N, 18°35'16.8"E.
b. 54°51'55.2"N, 18°43'22.2"E.
c. 54°45'30.6"N, 18°57'50.4"E.
d. 54°38'54.6"N, 18°49'50.4"E.

Area No. 12 (Chartlet No. 1)**.—**An area bounded by lines joining the following positions:
a. 54°01'54.6"N, 14°46'40.8"E.
b. 54°05'42.6"N, 14°44'22.8"E.
c. 54°07'06.6"N, 14°50'40.8"E.
d. 54°03'06.6"N, 14°52'58.8"E.

Area No. 13 (Chartlet No. 1)**.—**An area bounded by lines joining the following positions:
a. 54°00'30.6"N, 14°27'52.8"E.
b. 54°03'43.8"N, 14°27'52.8"E.
c. 54°06'24.6"N, 14°36'22.8"E.
d. 54°02'48.6"N, 14°36'22.8"E.

Area No. 14 (Chartlet No. 1 and No. 2)**.—**An area bounded by lines joining the following positions:
a. 54°36'47.4"N, 18°46'47.4"E.
b. 54°36'24.0"N, 18°47'37.8"E.
c. 54°35'12.6"N, 18°46'32.4"E.
d. 54°35'12.6"N, 18°44'32.4"E.
e. 54°36'06.6"N, 18°44'20.4"E.
Note.—This area is closed to navigation year round.

Area No. 15 (Chartlet No. 1 and No. 2)**.—**An area bounded by lines joining the following positions:
a. 54°32'48.6"N, 18°33'44.4"E.
b. 54°33'06.6"N, 18°33'44.4"E.
c. 54°33'06.6"N, 18°35'20.4"E.
d. 54°32'48.6"N, 18°35'20.4"E.
Note.—This area is closed to navigation and fishing year round.

Government

Flag of Poland

Poland is a democratic republic. The country is divided into 16 provinces.

Poland is governed by a directly-elected President who serves a renewable 5-year term. The bicameral National Assembly is composed of the Sejm (lower chamber), consisting of 460 members serving 4-year terms elected by a system of proportional representation, and the Senate (upper chamber), consisting of 100 directly-elected members serving 4-year terms.

The legal system is based on a mixture of French civil law and holdover Communist legal theory; changes are gradually being introduced as part of the broader democratization process.

The capital is Warsaw.

Holidays

The following holidays are observed:

January 1	New Year's Day
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
May 3	Constitution Day
Corpus Christi	Variable
August 15	Assumption Day
November 1	All Saints' Day
November 11	Independence Day
December 25	Christmas Day
December 26	Second Christmas Day

Ice

For information on obtaining general ice information for the Baltic Sea, see **Baltic Sea—Ice**.

Icebreakers

Icebreakers use signals of the International Code. Poland has a small number of icebreakers to aid ships in coastal shipping lanes during the ice season.

The responsibility for the control and operation of the ice services and icebreakers is divided as follows:

1. Eastern coastal region (includes Kolobrzeg and the ports in the Gulf of Gdansk)—under the control of the harbormaster at Gdynia.
2. Central region (the ports of Ustka, Darlowo, and Leba)—under the control of the Maritime Board of Slupia.
3. Western coastal region (including Zatoka Pomorska and Swinoujscie)—under the control of the harbormaster at Szczecin.

Any vessel requiring future icebreaker assistance must register at the harbormaster's office at least 24 hours in advance of arriving or departing port. Ships not reinforced for ice, or having no valid ice certificate, will not be led to Szczecin harbor, but can dock at Swinoujscie.

Requests for icebreaking assistance should be made through the vessel's agent, VTS Swinoujsce, VTS Szczecin, or directly through the tug.

When ice cover exists in Polish waters, icebreaking operations take place, as follows:

1. Passage clearing and icebreaking by icebreakers in ports, roads, anchorages, and navigable channels leading to the facilities.

2. Emergency assistance to vessels unable to continue with their voyages due to ice or to vessels in distress in ports, roads, anchorages, and navigable channels.

3. Formation of convoys to lead vessels through the ice in areas covered by icebreaking operations.

When assisted by an icebreaker, vessels will maintain a continuous listerning watch and communicate with the icebreaker on the designated VHF channel.

Industries

The main industriesare machine building, iron and steel, coal mining, chemicals, shipbuilding, food processing, glass, beverages, and textiles.

The main exports are machinery and transport equipment, manufactured goods, food, and livestock. The main exporttrading partners are Germany, France, Italy, the United Kingdom, and the Czech Republic.

The main imports are machinery and transport equipment, manufactured goods, chemicals, minerals, fuels, and lubricants. The main import-trading partners are Germany, Russia, Italy, the Netherlands, and France.

Languages

Polish is the official language.

Mined Areas

Former Mine Danger Area No. 10

This former NEMEDRI Danger Area is enclosed by all waters S and W of lines joining the following positions:

a. 54°52'N, 13°25'E.
b. 54°52'N, 13°48'E.
c. 54°07'N, 14°25'E.
d. 54°15'N, 14°45'E.
e. The coast in longitude 14°45'E.

Within Area No. 10, the following areas have been swept in addition to the established routes:

1. **Sassnitz Approaches E of Rugen.—**An area bounded by lines joining the following positions:
   a. 54°31'N, 13°42'E.
   b. 54°36'N, 13°42'E.
   c. 54°32'N, 13°46'E.
2. **Swinoujscie Approaches E of Sassnitz**.—An area bounded by lines joining the following positions:
   a. 54°15'N, 14°12'E.
   b. 54°16'N, 14°10'E.
   c. 54°31'N, 14°06'E.
   d. 54°28'N, 14°08'E.
   e. 54°15'N, 14°12'E.
   f. 54°20'N, 13°59'E.
   g. 54°24'N, 13°56'E.

Former Mine Danger Area No. 16

This former NEMEDRI Danger Area is bounded by lines joining the following approximate positions:

a. 54°13'N, 14°54'E.
b. 54°17'N, 14°47'E.
c. 54°26'N, 15°02'E.
d. 54°22'N, 15°09'E.

Former Mine Danger Area No. 19

This former NEMEDRI Danger Area is bounded by lines joining the following approximate positions:

a. 54°28'N, 19°39'E.
b. 54°30'N, 19°34'E.
c. 54°26'N, 19°14'E.
d. 54°31'N, 18°57'E.
e. 54°29'N, 18°56'E.
f. 54°29'N, 18°57'E.
g. 54°27'N, 18°54'E.
h. 54°24'N, 18°54'E.
i. 54°24'N, 18°59'E.
j. 54°21'N, 19°00'E.

Within Area No. 19 is a swept route with its centerline joining the following approximate positions:

a. 54°26'N, 19°13'E.
b. 54°23'N, 19°08'E.
c. 54°23'N, 19°00'E.

The route is 0.5 mile wide between positions a and b, and 0.3 mile wide between positions b and c.

a. 54°21'N, 18°55'E.
b. 54°23'N, 18°54'E.
c. 54°24'N, 18°48'E.
d. 54°22'N, 18°48'E.
e. 54°25'N, 18°40'E.
f. 54°25'N, 18°40'E.
g. 54°25'N, 18°39'E.
h. 54°26'N, 18°39'E.
i. 54°26'N, 18°39'E.
j. 54°26'N, 18°39'E.
k. 54°26'N, 18°39'E.
l. 54°27'N, 18°39'E.
m. 54°27'N, 18°39'E.
n. 54°27'N, 18°36'E.
o. 54°29'N, 18°36'E.
p. 54°31'N, 18°35'E.
q. 54°31'N, 18°34'E.
r. 54°31'N, 18°33'E. then along the coast to
s. 54°32'N, 18°34'E.
t. 54°35'N, 18°44'E.
u. 54°36'N, 18°50'E.
v. 54°38'N, 18°51'E.
w. 54°50'N, 18°38'E.
x. 54°48'N, 18°27'E.

Navigational Information

Enroute Volume

Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

Maritime Claims

The maritime territorial claims of Poland are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone **	200 miles.

* Requires advance permission or notification for innocent passage of warships in the territorial sea. Claims a closing line across the Gulf of Gdansk.

** Claims a fishing zone to the median line in the Baltic Sea. The Exclusive Economic Zone is determined by lines connecting extreme points of specified lateral limits.

Pilotage

Pilotage is compulsory for all ships, including harbor movements, with some exceptions, as follows:

1. All vessels 40m long and over.
2. All vessels carrying dangerous cargo regardless of size.
3. Any damaged vessel and any vessel which through exceptional circumstances may create a danger to navigation or a threat to the environment.

If, because of severe weather conditions, the pilot cannot come aboard the ship, then the pilot vessel may make the appropriate signal from the International Code and lead the vessel to a position where the pilot can safely board.

Incoming ships can communicate directly with the pilot stations at Swinoujscie, Szczecin, Gdynia, and Gdansk.

Deep-sea pilotage services for the Baltic Sea may be ordered at least 24 hours in advance through the vessel's agent or from the pilot station at Szczecin.

Pollution

MARPOL Special Area

The Baltic Sea, including the Gulf of Bothnia and the Gulf of Finland, has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

This Special Area is under intensive surveillance for pollution and violations of traffic rules. Further information on pollution reporting can be found in **Baltic Sea—Pollution—Pollution Reporting**.

Regulations

Advance Notice of Arrival

Vessels en route to a Polish post must send the following information to the port's harbormaster:

1. Vessel name, call sign, and IMO number.
2. Port of destination.
3. ETA at port of destination.
4. ETD from port of destination.
5. Type and amount of cargo and information about any hazardous or pollutant cargo. Tankers shall also supply the following additional information:
   - The correct technical name of all hazardous cargo on the vessel or to be loaded in port.
   - The hazardous cargo's UN Number (if any).
   - Ignition temperature of the hazardous cargo.
   - The amount and location on the vessel of the hazardous cargo (in the case of non-gas-free tankers, the amount does not have to be indicated once the hazardous cargo has been transported).
   - The full name and telephone number(s) of the vessel's agent.
6. Dates of validity of the financial insurance certificate (for tankers transporting more than 2,000 tons of oil as cargo).
7. Number of persons on board.

The information described above should be sent 24 hours in advance except, as follows:

1. Tankers carrying a hazardous or not gas-free—72 hours.
2. Gas-free tankers—48 hours.
3. If the previous port is less than 24 hours sailing time, the notification should be send no later than when the vessel departs the previous port.
4. If the port of destination is not known or if it changes during the voyage, the notification should be sent immediately.

After the vessel arrives in the roadstead, the vessel should contact the harbormaster on the appropriate VHF channel to request permission to enter the port. The following information shall be sent with the request:

1. Vessel name, call sign, and IMO number.
2. Total length, width, draft, and tonnage of the vessel in accordance with the International Tonnage Certificate.
3. Type and amount of cargo and information about any hazardous or pollutant cargo.
4. Vessel's agent.
5. Last port-of-call.
6. Other information required by the harbormaster.

Outbound vessels may not cast off or depart any Polish port without prior permission from the harbormaster. The following information must be sent to the harbormaster on VHF immediately before departure to obtain the required permission:

1. Vessel name, call sign, and IMO number.
2. Current draft.
3. Next port-of-call.
4. Number of persons on board.
5. Information about hazardous or polluting cargo.

Quarantine

Quarantine messages should be addressed to "Lekport (name of port)." The message should be send 12 hours to 4 hours prior to the vessel's ETA.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The reports should be sent to the local competent authority in accordance with Polish law.

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or

polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Recommendation on Baltic Sea Navigation

The IMO has issued recommendations regarding vessel transits of the entrances to the Baltic Sea. For further information, see **Baltic Sea—Regulations**.

Particularly Sensitive Sea Areas (PSSA)

The Baltic Sea area of Sweden, Denmark, Finland, Estonia, Lithuania, Latvia, Poland, and Germany (except for waters under Russian jurisdiction) has been declared by the IMO to be a PSSA.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

Search and Rescue

The Polish Maritime Search and Rescue Service consists of a Maritime Rescue Coordination Center (MRCC) in Gdynia and a Maritime Rescue Coordination Subcenter (MRSC) at Swinoujscie. They can be contacted, as follows:

1. MRCC Gdynia
   a. Telephone: 48-58-6205551
      48-58-6216811
   b. Facsimile: 48-58-6607640
   c. E-mail: polratok.1@sar.gov.pl
2. MRSC Swinoujscie
   a. Telephone: 48-91-3215929
      48-91-3214917
   b. Facsimile: 48-91-3215929
   c. E-mail: polratok.2@sar.gov.pl

Witowo Coast Radio Station (SPS) maintains a continuous listening watch on international distress frequencies and can be contacted, as follows:

1. Telephone: 48-59-8109425
2. Facsimile: 48-59-8109451
3. E-mail: Radio.Witowo@emitel.pl

The Polish Maritime Search and Rescue Service can be contacted, as follows:

1. Telephone: 48-58-6615222
2. Facsimile: 48-58-6205338
3. E-mail: office@sar.gov.pl
4. Web site: http://wwwsar.gov.pl

Fully-equipped rescue craft are located, as follows:

1. Swinoujscie (53°55'N., 14°16'E.).
2. Trzebiez (53°40'N., 14°31'E.).
3. Dziwnow (54°01'N., 14°46'E.).
4. Kolobrzeg(54°11'N., 15°33'E.).
5. Darlowo (54°26'N., 16°23'E.).
6. Ustka (54°35'N., 16°52'E.).
7. Leba (54°46'N., 17°33'E.).
8. Wladyslawowo (54°25'N., 18°25'E.).
9. Hele (54°36'N., 18°48'E.).
10. Gdynia (54°32'N., 18°33'E.).
11. Gorki Wschodnie (54°21'N., 18°48'E.).
12. Swibno (54°20'N., 18°56'E.).
13. Tolmicko (54°0'N., 19°32'E.).
14. Sztutowo (54°0'N., 19°11'E.).

Further information on the Polish Maritime Search and Rescue Service can be found on the following web site:

Polish Maritime Search and Rescue Service Home Page
http://www.sar.gov.pl

Ship Reporting System

GDANREP

GDANREP is a mandatory reporting system co-located with the Gulf of Gdansk Vessel Traffic Service. The system covers the territorial and internal waters of Poland in the Gulf of Gdansk S of 54°45'N, between the Reporting Lion and the Polish coast.

Further information can be found in Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

Signals

Vessels may determine whether a port is open for entry or departure by contacting the Captain of the Port by VHF radiotelephone.

Port Closed

In case of an emergency, the following signal indicates that entrance into the port is absolutely prohibited:

1. By day.—Three black balls in a vertical line.
2. By night.—Three red lights in a vertical line.

Traffic Signals

The following signals are normally shown from a mast at the harbormaster's office:

1. Entrance Prohibited:
   a. By day.—Three black balls in a vertical line.
   b. By night.—A white light between two red lights in a vertical line.
2. Departure Prohibited:
   a. By day.—A black cone, point up, between two black cones, points down, in a vertical line.
   b. By night.—A white light between two green lights in a vertical line.
3. Entry and Departure Prohibited and Harbor Movements Prohibited:
   a. By day.—Two black cones, points together, over a black ball in a vertical line
   b. By night.—A white light with a green light above it and a red light below it.

Poland—Storm Signals

Event	Day signal	Night signal
Strong winds, Force 4-5	A yellow cylinder	A green light over a white light

Poland—Storm Signals		
Event	**Day signal**	**Night signal**
Gales—Force 6	A black ball	A white light over a green light.
Northwest storm—Force 8	A black cone, point up	Two red lights
Southwest storm	A black cone, point down	Two white lights
Northeast storm	Two black cones, points up	A red light over a white light
Southeast storm	Two black cones, points down	A white light over a red light
Hurricane—Force 12	A black cross	A green light between two red lights in a vertical line
Note.—A red flag shown with any of the storm signals indicates the wind is veering. Two red flags shown with any of the storm signals indicates the wind is backing.		

Customs vessels display a white pennant with a green border and show two green lights over a white light from the masthead.

Storm Signals

Storm signals are shown in Poland in cases of actual or forecasted winds greater than force 4 as indicated in the accompanying table titled **Poland—Storm Signals**.

Special Services Ships

Ships of Special State Services display their service flags, by day, where best seen. At night, a green light is shown above the light on the foremast.

Citizens' Militia vessels, while on duty, show a blue all around light located above the white light on the foremast.

Border Patrol Ships while on duty, in order to apprehend another vessel, may, by day, fire two green flares;at night, two green lights in a vertical line may be shown. This signal means "Border Patrol, stop your engines."

A special state service ship desiring to stop another vessel will sound two long and two short blasts.

Submarine Operating Areas

Polish submarines on the surface show lights prescribed by international regulations, including an all round orange light showing about 100 flashes per minute and visible for 3 miles.

Ships convoying and exercising with Polish submarines display "NE 2" by day, and at night three blue lights are shown vertically on the yardarm of the mast in addition to all other prescribed lights.

Polish submarines are equipped with salvage and telephone buoys. Salvage buoys are spherical, painted in white and red checks; telephone buoys are can-shaped, painted in red and white checks. Both buoys have green double collars between which a cable is wound.

A salvage buoy, if found, should not be touched. Its position should be reported by radio to the Commander of the Polish Naval Authority, Gdynia.

The name of the submarine is painted on both buoys. The telephone buoy has two position lights and instructions in Polish, English, and German.

The position and any telephone communication received from the submarine should be reported to the Commander of the Polish Naval Authority, Gdynia. Great care must be taken to avoid damaging the cables.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is observed from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes have been established, as follows:

1. Gulf of Gdansk West (IMO).
2. Gulf of Gdansk East (IMO).

The following IMO-adopted Traffic Separation Schemes N of the Polish coast are scheduled to go into effect on 1 December 2010:

1. Adlergrund.
2. Shupska Bank.

U.S. Embassy

The U.S. Embassy is situated at Aleje Ujazdowskie 29/31, 00-540 Warsaw.

The mailing address is American Embassy Warsaw, US Department of State, Washington, DC (20521-5010).

U. S. Embassy Poland Home Page
http://poland.usembassy.gov

Vessel Traffic Service

Vessel Traffic Services are in operation, as follows:

1. Gulf of Gdansk (54°28'N., 19°00'E.).
2. Szczecin/Swinoujscie (53°49'N., 14°29'E.).

For further information, see Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

PORTUGAL

General	497
Areas to be Avoided	498
Buoyage System	498
Cautions	498
Currency	498
Firing Areas	498
Fishing Areas	498
Government	499
Holidays	499
Industries	499
Languages	499
Meteorology	499
Navigational Information	499
Pilotage	499
Regulations	500
Search and Rescue	500
Ship Reporting System	501
Signals	501
Submarine Operating Areas	502
Time Zone	502
Traffic Separation Schemes	502
U.S. Embassy	502
Vessel Traffic Service	502
Appendix I—Submarine Operating Areas	503
Appendix II—Scooping Operations Areas	507

General

Portugal is located in Southwest Europe, bordering the North Atlantic Ocean, W of Spain.

The climate is marine temperate being cool and rainy in the N, and warmer and drier in the S.

The terrain is mountainous N of Tagus, with rolling plains in the S.

The Arquipelago dos Acores (Azores Islands), in the North Atlantic Ocean, constitutes an autonomous region of Portugal.

The principal islands of the group are Flores, Corvo, Terceira, Sao Jorge, Pico, Faial, Graciosa, Sao Miguel, and Santa Maria.

Madeira and Porto Santo, two inhabited islands, form an autonomous region of Portugal. They lie, along with two groups of barren islets, in the North Atlantic Ocean to the SE of the Arquipelago dos Acores.

Areas to be Avoided

An IMO-adopted Area to be Avoided encloses Islas de Berlengas. This area is bounded by the coast and lines joining the following positions:

a. 39°20'00"N, 9°21'30"W. (coast)
b. 39°20'00"N, 9°42'12"W.
c. 39°30'00"N, 9°42'12"W.
d. 39°30'00"N, 9°21'15"W. (coast)

All vessels greater than 300 gross tons shall avoid transiting this area, with the exception of authorized vessels vessels navigating between Portuguese ports and not carrying dangerous cargo or other harmful substances.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Scooping Operations Areas

Scooping Operations Areas are water areas where fire-fighting seaplanes land to fill up with water. These areas may be located at sea, on rivers, or in reservoirs where such operations may be safely conducted.

The National Command for Rescue Operations and the Port Harbormaster of the activated scooping operations area are responsible for the process of activating the scooping operations area. The appropriate harbormaster will:

1. Issue a warning to shipping on VHF channel 16.
2. Institute procedures to exclude shipping from the scooping operations area

Mariners shall not enter the area while scooping operations are in progress. The duration of these restrictions are not usually known initially. The harbormaster will broadcast an end to the restrictions on VHF channel 16 or by other appropriate means.

Futher information on authorized Scooping Operations Areas can be found in the table located in the Appendix.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Firing Areas

Espinho Firing Danger Zone.—An area bounded by lines joining the following positions:

a. 41°00'10.9"N, 8°40'47.8"W.
b. 40°59'11.2"N, 8°38'36.9"W.
c. 40°59'06.0"N, 8°38'37.7"W.
d. 40°58'54.9"N, 8°41'07.3"W.

This area must be considered dangerous on Mondays and Fridays from 0800 until 1800. Exercises may also be conducted on Saturdays and Sundays, but prior warning will be given.

Figuera da Foz Firing Danger Zone.—An area bounded, as follows:

a. On the N—latitude 40°07.0'N.
b. On the W—longitude 8°54.5'W.
c. On the S—latitude 40°05.5'N.
d. On the E—by the coastline.

This area must be considered dangerous during the following times:

1. Monday, Thursday, and Friday—from 0800 until 1800.
2. Tuesday and Wednesday—from 0800 until 1800 and from 2100 until 2300.
3. Sunday—from 0800 until 1300, except for the months of September and November, when it is dangerous from 0800 until 2000.

Fishing Areas

Tunny Fishing

For general information on tunny fishing, see **Spain—Fishing Areas**.

Tunny Net Markings

In Portuguese waters, each tunny net, when submerged, is usually marked, as follows:

1. By day—A boat or buoy surmounted by a white flag with a black “A” in its center marks the outer end of the net; a boat or buoy with a similar flag marks the center of the net.
2. By night—A white light over a red light is shown from the central boat or buoy; the outer boat or buoy shows a red light over a white light.

Areas of Intensive Fishing

The government of Portugal has declared the following to be areas of intensive fishing:

1. An area between the parallels 41°45'N and 40°10'N, the coast, and the 200m curve.
2. An area between the parallels 39°40'N and 38°40'N, the coast, and the meridian 9°45'W.
3. An area between the parallels 40°15'N and 38°40'N, the 250m curve, and the 400m curve.
4. An area between the parallels 38°25'N and 38°00'N, the coast, and the 200m curve.
5. An area between the parallels 37°45'N and 37°55'N and the meridians 9°20'W and 9°05'W.
6. An area between the parallels 37°38'N and 37°32'N and the meridians 9°05'W and 9°00'W.
7. An area between the parallels 37°30'N and 37°25'N and the meridians 9°10'W and 9°00'W.
8. An area between the parallels 37°16'N and 37°10'N and the meridians 9°20'W and 9°10'W.
9. An area between the parallel 37°10'N and the meridian 8°50'W, extending up to 6 miles off the coast.
10. An area in the vicinity of position 36°48'N, 9°05'W.
11. An area between the meridians 9°00'W and 7°25'W, the coast, and the 200m curve.
12. An area between the 200m curve and the 600m curve bounded by the parallel 38°00'N and the meridian 7°25'W.
13. The entire coastal area of the Algarve extending off-

shore as far as the 40m curve.

Anchored nets, lines, and other gear are marked by spar buoys, about 2m high, displaying a flag and radar reflector, with a white light shown at night.

It is recommended that vessels keep a sharp lookout when approaching or crossing these areas in order to avoid damage to vessels or fishing gear.

Government

Flag of Portugal

Portugal is a republic. The country is divided into 18 districts and two autonomous regions.

Portugal is governed by a directly-elected President serving a maximum of two consecutive 5-year terms. The unicameral National Assembly consists of 230 members, serving 5-year terms, who are directly elected under a system of proportional representation.

The legal system is based on civil law.

The capital is Lisbon.

Holidays

The following holidays are observed:

January 1	New Year's Day
Shrove Tuesday/Carnival	Variable
Holy Thursday	Variable
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
April 25	Liberation Day
May 1	Labor Day
Corpus Christi	Variable
June 9	Espirito Santo Day (Azores only)
June 10	Portugal Day
June 13	St. Anthony's Day (Lisbon only)
July 1	Funchal Day (Funchal only)
August 15	Assumption Day
October 5	Republic Day
November 1	All Saints' Day
December 1	Independence of Portugal
December 8	Immaculate Conception
December 24	Christmas Eve
December 25	Christmas Day

Industries

The main industries are textiles and footwear, wood pulp, paper, metal working, oil refining, chemicals, fish canning, wine, and tourism.

The main exports are clothing and footwear, machinery, chemicals, cork, paper products, and hides. The main export-trading partners are Spain, France, Germany, the United Kingdom, and the United States.

The main imports are machinery and transport equipment, chemicals, petroleum, textiles, and agricultural products. The main import-trading partners are Spain, Germany, France, and Italy.

Languages

Portuguese is the official language.

Meteorology

Weather forecasts for Portugal, the Arquipelago dos Acores, and Madeira are available n Portuguese and English from the Instituto de Meteorologia (http://www.meteo.pt).

Navigational Information

Enroute Volume

Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Maritime Claims

The maritime territorial claims of Portugal, including the Arquipelago dos Acores and Madeira, are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Has established straight baselines for various areas along the continental coast of Portugal, as well as Arquipelago dos Acores and Madeira. Claims the Tagus estuary and the Sado estuary, as well as their associated bays, as historic waters.

Pilotage

Pilotage is compulsory at nearly all Portuguese ports. There

is usually a properly organized pilot service at the larger ports and licensed pilots at the smaller ones.

The pilot stations at Lisboa and Setubal are equipped with radio; the pilot vessel at Lisboa is equipped with a telephone.

Pilot vessels do not generally cruise off the entrances to ports. At the larger ports, communication with the pilots is usually established by radio, either through the port authority or direct. At the smaller ports ships, should approach the harbor mouth, making the usual signal for a ship requiring a pilot.

Pollution

Any pollution report should be sent without delay to Servico de Combate a Poluicao do Mar por Hidrocarbonetos (SCPMH) or MRCC Lisboa, as follows:

1. SCPMH
   a. Telephone: 351-213-469221 (0900-1700 UTC)
      351-917-592700 (after office hours)
   b. Facsimile: 351-213-469221
      351-213-3424137
2. MRCC Lisboa
   a. Telephone: 351-214-401919
   b. Facsimile: 351-214-401954

The report should include the following information:

1. Name of reporting vessel.
2. Date and time of observation (UTC).
3. Geographic coordinates and/or the name of the area.
4. Identification of the pollution source (type and name of vessel, flag, IMO number, and/or other identification).
5. Description of incident/accident that caused the pollution.
6. Type of substance.
7. Estimated quantity (liters, cubic meters).
8. Viscosity level (low, medium, high).
9. Type of spill (continuous, partial, or intermittent).
10. Wind direction and strength.
11. Wave direction and height.
12. Rain (yes/no).
13. Name of person making the report.
14. Any further information.

Regulations

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU. For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Quarantine

Vessels en route to ports on the Portugues mainland which have on board a person showing symptoms of fever suspected to be contagious should send a quarantine message either directly to the Port Health Authority (addressed to "Sanidade Maritima [name of port]") or through the agent. If a quarantine message is not justified, free pratique can be requested.

Vessels en route to Madeira (Funchal, Canical, and Porto Santo) should send a standard quarantine message, 24 hours prior to arrival, addressed to their agent. If unavailable, the message is sent to "Port Authority Administration."

Messages for ports on the Portuguese mainland should be sent 15 hours to 4 hours before the vessel's ETA. All messages should be in Portuguese, French, English, or the International Code of Signals.

Quarantine messages should contain the following information:

1. Name of vessel.
2. ETA.
3. Port of departure.
4. Time and date of departure.
5. Last port of call.
6. Number of cases of illness on board during the preceeding two weeks, with details of the illness.
7. Number of deaths on board during the voyage which were not the result of accidents.
8. Number of sick persons to be disembarked.

Particularly Sensitive Sea Areas (PSSA)

The waters off the W coast of the United Kingdom, Ireland, Belgium, France, Spain, and Portugal, from the Sheltand Islands in the N to Cabo San Vicente in the S, including the English Channel, were granted (2004) the status of PSSA by the International Maritime Organization.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

The Western Europe Tanker Reporting System (WETREP) was instituted to help protect the environment of the PSSA.

Search and Rescue

The Portuguese navy is responsible for coordinating search and rescue operations.

Due to the large volume of traffic off the Portuguese coasts, search and rescue operations are divided into the Lisboa Region, for the coast of Portugal, and the Santa Marta Region, for the waters surrounding the Arquipelago dos Acores. Maritime Rescue Coordination Centers (MRCC) are located at MRCC Lisboa (Portugal) and MRCC Ponta Delgada (Arquipelago dos Acores). A Maritime Rescue Coordination Subcenter (MRSC) is located at MRSC Funchal (Madeira).

The MRCCs and the MRSC can be contacted, as follows:

1. MRCC Lisboa
   a. Telephone: 351-214-401919
      351-214-401950
      351-214-411904
   b. Facsimile: 351-214-401954
   c. E-mail: mrcclisboa@marinha.pt
2. MRCC Ponta Delgada
   a. Telephone: 351-296-281777
   b. Facsimile: 351-296-205239

c. E-mail: mrcc.delgada@marinha.pt
3. MRSC Funchal
a. Telephone: 351-919-678140 (emergency)
351-291-213110 (duty officer)
351-291-213112 (operations)
b. Facsimile: 351-291-228232
c. E-mail: mrsc.funchal@marinha.pt

A network of coast radio stations maintains a listening watch on international distress frequencies.

Along the coast of Portugal, lifeboats are stationed at the following locations:

1. Viana do Castelo (41°41'N., 8°50'W.).
2. Espsende (41°32'N., 8°47'W.).
3. Apulia (41°29'N., 8°47'W.).
4. Povoa de Varzim (41°23'N., 8°46'W.).
5. Vila do Conde (41°21'N., 8°44'W.).
6. Vila Cha (41°18'N., 8°44'W.).
7. Angeiras (41°16'N., 8°44'W.).
8. Leixoes (41°11'N., 8°42'W.).
9. Porto do Douro (41°09'N., 8°37'W.).
10. Aguda (41°03'N., 8°39'W.).
11. Aveiro (40°39'N., 8°45'W.).
12. Figueira da Foz (40°09'N., 8°52'W.).
13. Nazare (39°36'N., 9°05'W.).
14. Sao Martinho do Porto (39°30'N., 9°08'W.).
15. Peniche (39°21'N., 9°22'W.).
16. Ericeira (38°58'N., 9°25'W.).
17. Lisboa (38°42'N., 9°11'W.).
18. Sesimbra (38°26'N., 9°07'W.).
19. Sines (37°57'N., 8°52'W.).
20. Vila Nova de Milfontes (37°43'N., 8°47'W.).
21. Baleeira (37°01'N., 8°56'W.).
22. Ferragudo (37°07'N., 8°31'W.).
23. Cabo de Santa Maria (36°58'N., 7°52'W.).
24. Fuzeta (37°03'N., 7°45'W.).
25. Tavira (37°5'08., 7°39'W.).
26. Vila Real de Santo Antonio (37°11'N., 7°25'W.).

In the Arquipelago dos Acores, lifeboats are stationed at the following locations:

1. Ponta Delgada (37°44'N., 25°40'W.).
2. Angra do Heroismo (38°39'N., 27°13'W.)

Ship Reporting System

Off the Coast of Portugal Ship Reporting System (COPREP)

The Off the Coast of Portugal Ship Reporting System (COPREP) is a mandatory ship reporting system. The Reporting Area extends a maximum distance of about 60 miles off the W coast of Portugal S of latitude 39°45'N and a maximum distance of about 45 miles off the S coast of Portugal W of longitude 8°30'W.

Further information on COPREP can be found in Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Coast of Africa.

Western Europe Tanker Reporting System (WETREP)

The Western Europe Tanker Reporting System (WETREP), a mandatory reporting system, is in effect. The Reporting Area covers the waters off Belgium; the W coast and English Channel coasts of France; Ireland; Portugal; the N and W coasts of Spain; and the English Channel and W coasts of the United Kingdom, including the Shetland Isles.

Further information on WETREP can be found in North Atlantic Ocean—Ship Reporting System.

Signals

Several signal stations with which vessels can communicate by International Code stand along the Portuguese coast.

Portugal—Storm Warning Signals

Signal No.	Meaning	Day signal	Night signal	Remarks
1	Wind of force 8 or greater beginning in the NW quadrant	Black triangle, point up	Two red lights, vertically disposed	
2	Wind of force 8 or greater beginning in the SW quadrant	Black triangle, point down	Two white lights, vertically disposed	
3	Wind of force 8 or greater beginning in the NE quadrant	Two black triangles, points up, vertically disposed	One red light over one white light	
4	Wind of force 8 or greater beginning in the SE quadrant	Two black triangles, points down, vertically disposed	One white light over one red light	
5	Wind of force 12 in any direction	Black cross	One green light between two red lights, vertically disposed	
6	Wind of force 7 in any direction	Black ball	One white light over one green light	
7	Wind veering	One black flag	—	See **Note 1**

Portugal—Storm Warning Signals				
Signal No.	**Meaning**	**Day signal**	**Night signal**	**Remarks**
8	Wind backing	Two black flags, vertically disposed	—	See **Note 1**
9	Wave heights of 2m or greater are expected from the SE	Black cylinder	One green light	See **Note 2**

Note 1—Only used by day. The signals are used to supplement Signal Nos. 1 through 6 and are shown on the opposite side.

Note 2—Only used on the S coast of the Algarve.

The International Storm Warning Signals are in use in Portugal, as shown in the accompanying table titled **Portugal—Storm Warning Signals**.

In the Arquipelago dos Acores, the following signals may be shown when a hurricane is imminent:

1. Day signal—Two black triangles, vertically disposed, bases together.
2. Night signal—Two red lights, horizontally disposed.

Submarine Operating Areas

Portuguese submarines may be met on the surface at night between Cabo da Roca and Cabo de Sines; they frequently exercise in the SW approach to Rio Tejo, and S of Ilha da Sao Miguel in the Arquipelago dos Acores.

Portuguese submarines also operate, both on the surface and submerged, in the area extending NE from Madeira to Porto Santo.

Portuguese submarines operating on the surface display an all round flashing amber light showing 94 flashes per minute.

Chartlets depicting Portuguese submarine operating areas are found in Appendix I.

Time Zone

The Time Zone description for mainland Portugal is ZULU. Daylight Savings Time (ALFA (-1)) is observed from the last Sunday in March until the last Sunday in October.

The Time Zone description for the Arquipelago dos Acores is NOVEMBER (+1). Daylight Savings Time (ZULU) is observed from the last Sunday in March until the last Sunday in October.

The Time Zone description for Madeira is ZULU. Daylight Savings Time (ALFA (-1)) is observed from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Portugal are, as follows:

1. Off Cabo da Roca. (IMO adopted)
2. Off Cabo de Sao Vicente. (IMO adopted)

U.S. Embassy

The U.S. Embassy is situated at Avenida das Forcas Armadas, 1600-081 Lisbon.

The mailing addresses are, as follows:

1. Portugal address—
   Apartado 43033
   1601-301 Lisboa
2. U. S. address—
   PSC 83
   APO AE (09762)

U. S. Embassy Portugal Home Page
http://portugal.usembassy.gov

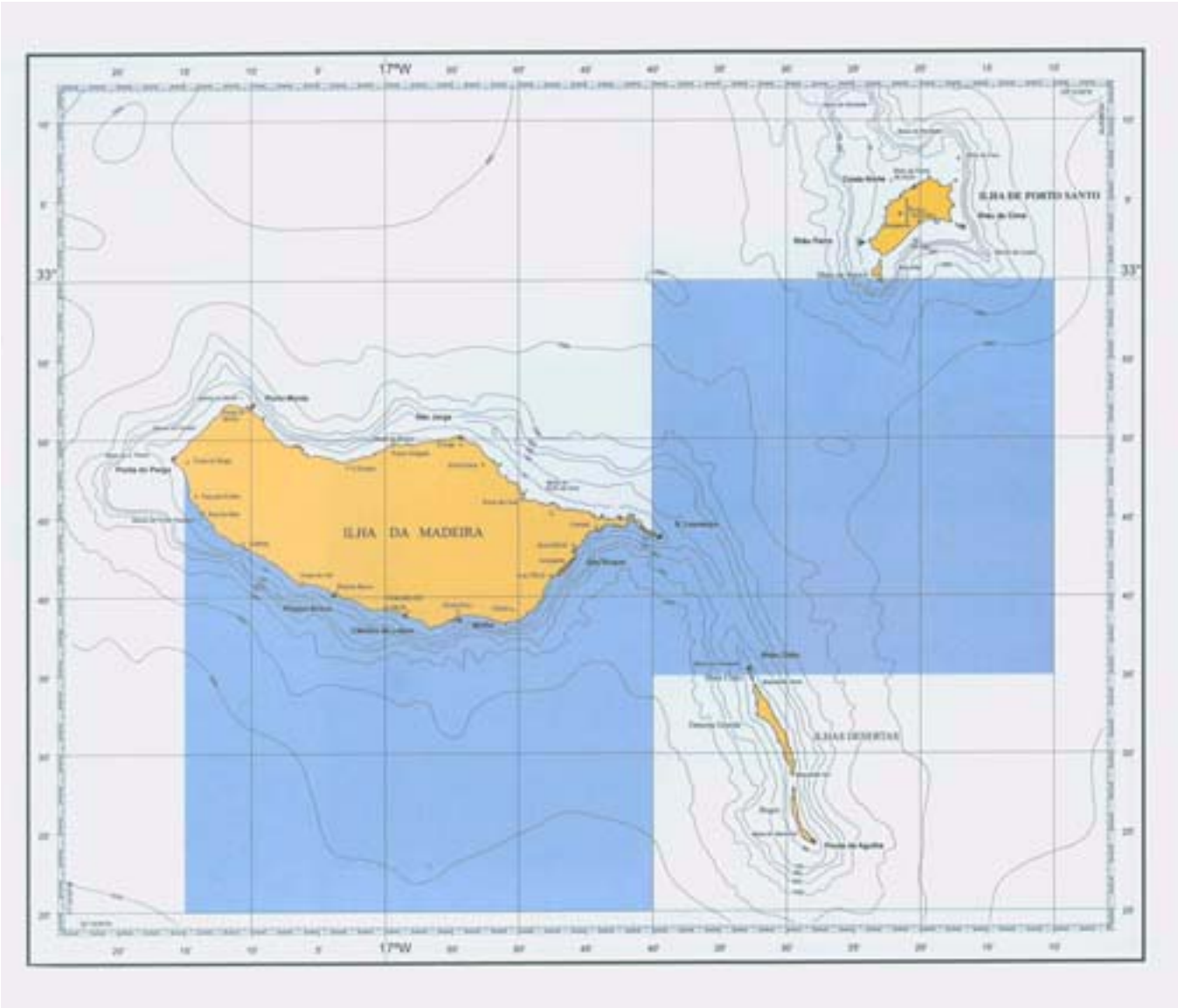
Vessel Traffic Service

Vessel Traffic Services are in operation, as follows:

1. Aveiro (40°39'N., 8°46'W.).
2. Leixoes (41°10'N., 8°42'W.).
3. Lisboa (32°42'N., 9°09'W.).
4. Setubal (38°31'N., 8°53'W.).
5. Sines (37°57'N., 8°52'W.).
6. Portugal Coastal VTS (40°00'N., 10°00'W.).

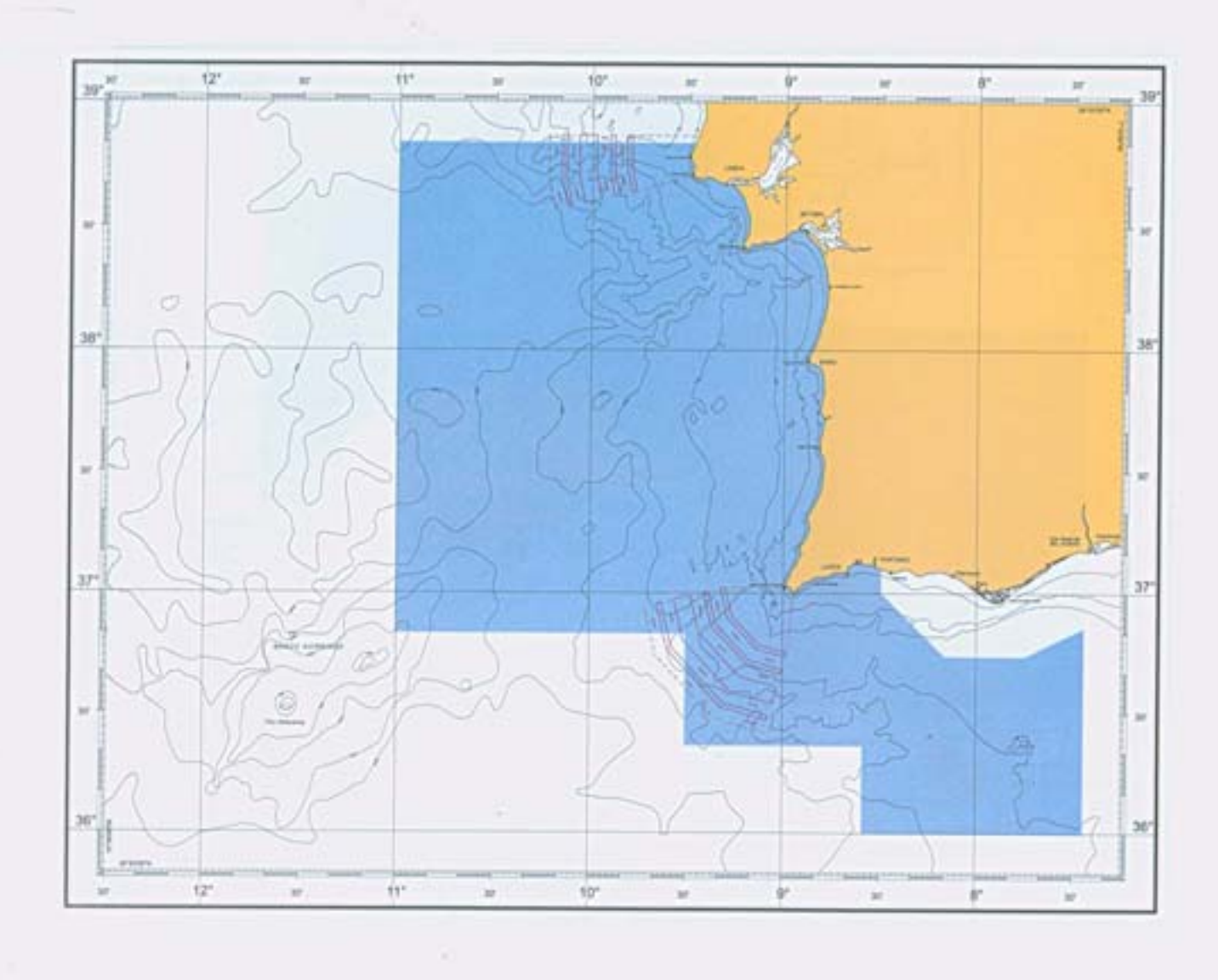
For further information, see Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northewest Africa.

Appendix I—Submarine Operating Areas



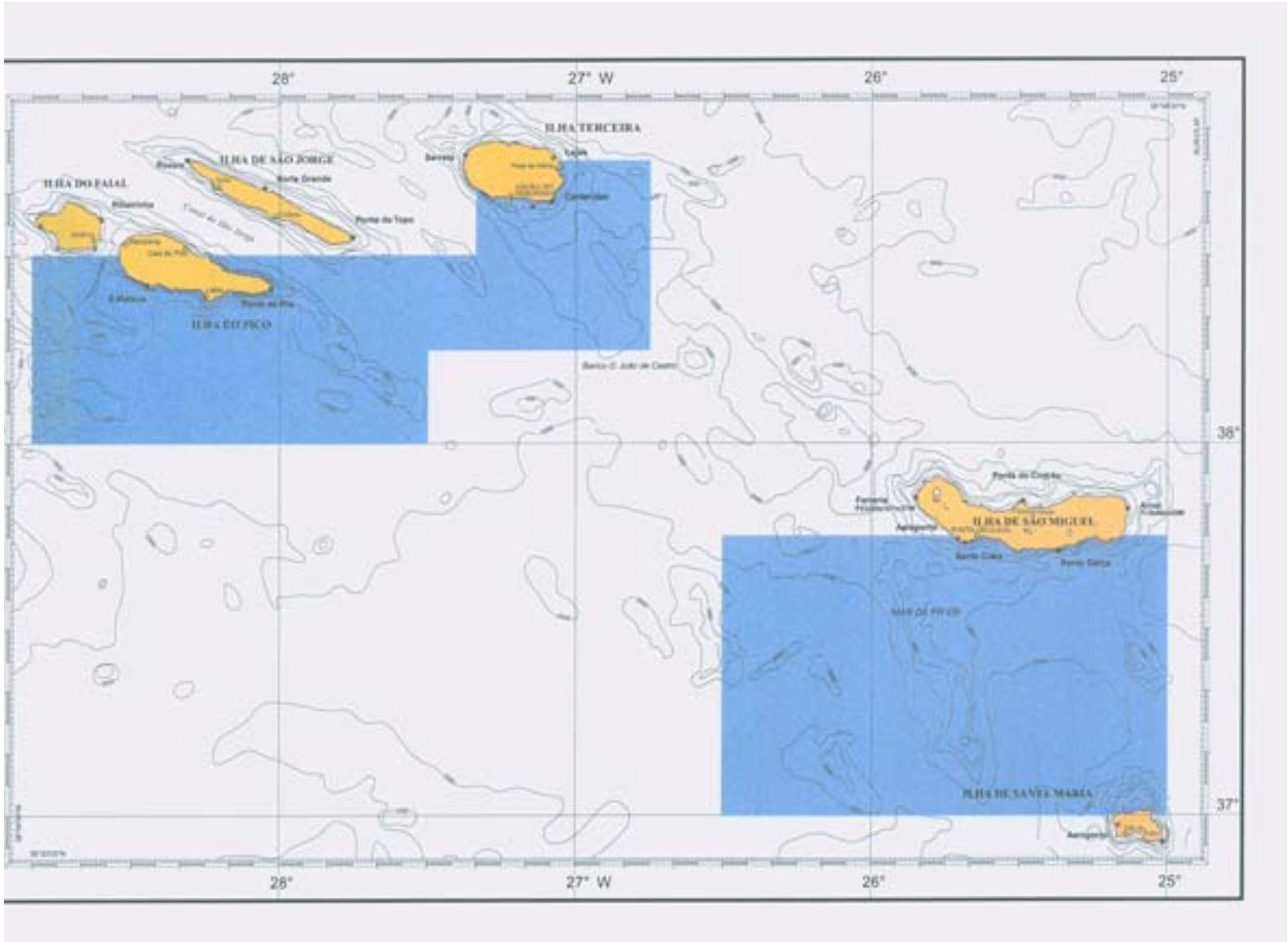
Courtesy Instituto Hidrografico Portugal

Portugal—Submarine Operating Areas off Isla da Madeira



Courtesy Instituto Hidrografico Portugal

Portugal—Submarine Operating Areas off the W and S coasts of Portugal



Courtesy Instituto Hidrografico Portugal

Portugal—Submarine Operating Areas in Arquipelago de Acores

Appendix II—Scooping Operations Areas

Portugal—Scooping Operations Areas		
Maritime Jursidiction (Harbormaster)	**Limits of Scooping Operations Areas**	**Remarks**
Caminha	No areas available for use.	In previous years, branches of the Rio Minho were used in the areas of Camposancos/Seixas, Godarm, Vila Nova de Cerveira, and Valenca/Tuy.
Viano do Castelo	An area bounded by lines joining the following positions: a. 41°40'03.1"N, 8°54'35.2"W. b. 41°40'03.1"N, 8°55'05.2"W. c. 41°38'55.6"N, 8°55'05.2"W. d. 41°38'55.6"N, 8°54'35.2"W.	A N-S orientation in depths of greater than 15m. A pre-warning of 45 minutes is normally given.
	A line joining the following positions: a. 41°41'03.1"N, 8°50'11.3"W. b. 41°41'27.2"N, 8°49'26.7"W. in the navigable channel of the Rio Lima between Buoy No. 6 and Bouy No. 11.	A 055°-235° orientation in depths of greater than 7m. All commercial and lesire navigation is prohibited from this area during scooping operations.
Vila do Conde	No rivers or lakes available for use.	When sea conditions and seaplane charactaristics allow, the entire legally-defined sea area adjacent to the coast can be used.
Povoa de Varzim	No rivers or lakes available for use.	When sea conditions and seaplane charactaristics allow, the entire legally-defined sea area adjacent to the coast can be used.
Leixoes	An area bounded by lines joining the following positions: a. 41°14'55.6"N, 8°45'17.2"W. b. 41°14'55.6"N, 8°45'05.2"W. c. 41°13'37.6"N, 8°45'05.2"W. d. 41°13'37.6"N, 8°45'17.2"W.	A N-S orientation in depths of greater than 20m. A pre-warning of 1 hour is normally given.
Douro	Lomba.—A line joining the following positions: a. 41°02'33"N, 8°25'04"W. b. 41°04'08"N, 8°24'56"W.	A 010°-190° orientation in depths of greater than 3m.
	Entre-os-Rios.—A line joining the following positions: a. 41°03'30"N, 8°20'40"W. b. 41°03'21"N, 8°19'49"W.	A 045°-225° orientation in depths of greater than 3m.
	Carrapatelo.—A line joining the following positions: a. 41°05'14"N, 8°07'38"W. b. 41°05'20"N, 8°07'02"W.	A 080°-260° orientation in depths of greater than 3m.
	Recta de Pala.—A line joining the following positions: a. 41°06'03"N, 8°05'38"W. b. 41°05'42"N, 8°05'05"W.	A 120°-300° orientation in depths of greater than 3m. Used an as alternative to Carrapatelo.
	Caldas de Aregos—A line joining the following positions: a. 41°06'12"N, 8°00'50"W. b. 41°06'53"N, 8°58'25"W.	A 075°-255° orientation in depths of greater than 3m.

Portugal—Scooping Operations Areas		
Maritime Jursidiction (Harbormaster)	**Limits of Scooping Operations Areas**	**Remarks**
Douro	Pinhao—A line joining the following positions: a. 41°09'40"N, 7°36'58"W. b. 41°09'24"N, 7°35'43"W.	A 100°-280° orientation in depths of greater than 3m.
	Quinta da Denora da Ribeira—A line joining the following positions: a. 41°08'27"N, 7°16'22"W. b. 41°08'39"N, 7°15'33"W.	A 075°-255° orientation in depths of greater than 3m.
	Barragem do Pocinho—A line joining the following positions: a. 41°08'09"N, 7°06'27"W. b. 41°07'55"N, 7°05'17"W.	A 100°-280° orientation in depths of greater than 3m.
Aveiro	An area bounded by lines joining the following positions: a. 40°39'22.6"N, 8°43'43.7"W. b. 40°39'27.7"N, 8°43'31.9"W. c. 40°40'05.8"N, 8°43'27.3"W. d. 40°40'05.8"N, 8°43'24.3"W.	A 010°-190° orientation in depths of greater than 5m. A pre-warning of 30 minutes is normally given.
Figueira da Foz	A line joining the following positions: a. 40°08'43.5"N, 8°52'17.7"W. b. 40°08'43.5"N, 8°50'41.1"W.	A W-E orientation in depths of greater than 3m. A pre-warning of 20 minutes is normally given. The preferred area is in the N channel of Rio Morengo from Punta Edgar Cardoso to the river mouth.
Peniche	An area bounded by lines joining the following positions: a. 39°20'17.0"N, 9°22'47.9"W. b. 39°20'18.3"N, 9°22'44.1"W. c. 39°18'56.8"N, 9°21'54.2"W. d. 39°18'55.4"N, 9°21'58.0"W.	A 150°-330° orientation in depths of greater than 30m. A pre-warning of 20 minutes is normally given.
Cascais	An area bounded by lines joining the following positions: a. 38°44'55.4"N, 9°31'07.1"W. b. 38°44'55.5"N, 9°31'02.9"W. c. 38°43'31.4"N, 9°31'01.1"W. d. 38°43'31.6"N, 9°30'56.9"W.	A 170°-350° orientation in depths of greater than 10m. A pre-warning of 20 minutes is normally given.
Lisbon	An area bounded by lines joining the following positions: a. 38°39'21.1"N, 9°24'22.9"W. b. 38°39'17.8"N, 9°24'23.1"W. c. 38°39'11.8"N, 9°22'35.2"W.	A 100°-280° orientation in depths of greater than 3m. A pre-warning of 20 minutes is normally given.
Setubal	An area bounded by lines joining the following positions: a. 38°27'42.0"N, 8°46'58.8"W. b. 38°27'33.6"N, 8°46'22.2"W. c. 38°27'44.4"N, 8°46'02.4"W. d. 38°27'58.8"N, 8°46'02.4'W. e. 38°28'01.8"N, 8°46'24.0"W. f. 38°27'58.8"N, 8°46'58.8"W. g. 38°28'18.0"N, 8°50'52.2"W. h. 38°27'56.4"N, 8°49'42.6"W. i. 38°28'22.2"N, 8°49'30.0"W. j. 38°28'43.8"N, 8°50'39.0"W.	Depths of greater than 3m. A pre-warning of 1 hour is normally given.

Portugal—Scooping Operations Areas		
Maritime Jursidiction (Harbormaster)	**Limits of Scooping Operations Areas**	**Remarks**
Sines	An area bounded by lines joining the following positions: a. 37°53'55.4"N, 8°49'34.9"W. b. 37°53'55.4"N, 8°49'22.9"W. c. 37°52'25.4"N, 8°49'22.9"W. d. 37°52'25.4"N, 8°49'34.9"W.	A N-S orientation in depths of greater than 20m. A pre-warning of 1 hour is normally given.
Lagos	Arrifana—An area bounded by lines joining the following positions: a. 37°15'55.4"N, 8°55'04.9"W. b. 37°17'19.4"N, 8°55'04.9"W. c. 37°17'19.4"N, 8°55'28.9"W. d. 37°15'55.4"N, 8°55'28.9"W.	A N-S orientation in depths of greater than 50m.
	Amado—An area bounded by lines joining the following positions: a. 37°08'54.4"N, 8°58'04.9"W. b. 37°10'19.4"N, 8°58'04.9"W. c. 37°10'18.4"N, 8°58'28.9"W. d. 37°08'54.4"N, 8°58'28.9"W.	A N-S orientation in depths of greater than 40m.
	Lagos 1—An area bounded by lines joining the following positions: a. 37°04'55.4"N, 8°37'04.9"W. b. 37°04'49.4"N, 8°37'22.9"W. c. 37°03'31.4"N, 8°36'52.9"W. d. 37°03'37.4"N, 8°36'34.9"W.	A NNW-SSE orientation in depths of greater than 30m.
	Lagos 2—An area bounded by lines joining the following positions: a. 37°04'55.4"N, 8°36'04.9"W. b. 37°05'01.4"N, 8°35'46.9"W. c. 37°06'19.4"N, 8°36'16.9"W. d. 37°06'13.4"N, 8°36'34.9"W.	A NNW-SSE orientation in depths of greater than 10m.
	Lagos 3—An area bounded by lines joining the following positions: a. 37°04'55.4"N, 8°35'34.9"W. b. 37°04'55.4"N, 8°35'22.9"W. c. 37°03'31.4"N, 8°35'22.9"W. d. 37°03'31.4"N, 8°35'34.9"W.	A N-S orientation in depths of greater than 20m.
	Portimao—An area bounded by lines joining the following positions: a. 37°04'55.4"N, 8°34'04.9"W. b. 37°04'37.4"N, 8°34'04.9"W. c. 37°04'37.4"N, 8°32'10.9"W. d. 37°04'55.4"N, 8°32'10.9"W.	A W-E orientation in depths of greater than 20m.
	Pera 1—An area bounded by lines joining the following positions: a. 37°03'55.4"N, 8°22'04.9"W. b. 37°03'55.4"N, 8°23'52.9"W. c. 37°03'37.4"N, 8°23'52.9"W. d. 37°03'37.4"N, 8°22'04.9"W.	A W-E orientation in depths of greater than 10m.

Portugal—Scooping Operations Areas		
Maritime Jursidiction (Harbormaster)	**Limits of Scooping Operations Areas**	**Remarks**
Lagos	Pera 2—An area bounded by lines joining the following positions: a. 37°03'55.4"N, 8°21'04.9"W. b. 37°02'31.4"N, 8°21'04.9"W. c. 37°02'31.4"N, 8°20'46.9"W. d. 37°03'55.4"N, 8°20'46.9"W.	A N-S orientation in depths of greater than 10m.
	Olhos 1—An area bounded by lines joining the following positions: a. 37°02'55.4"N, 8°11'04.9"W. b. 37°02'55.4"N, 8°12'52.9"W. c. 37°02'37.4"N, 8°12'52.9"W. d. 37°02'37.4"N, 8°11'04.9"W.	A W-E orientation in depths of greater than 20m.
	Olhos 2—An area bounded by lines joining the following positions: a. 37°02'55.4"N, 8°10'04.9"W. b. 37°02'55.4"N, 8°10'22.9"W. c. 37°01'31.4"N, 8°10'22.9"W. d. 37°01'31.4"N, 8°10'04.9"W.	A N-S orientation in depths of greater than 10m.
Faro and Olhao	An area bounded by lines joining the following positions: a. 36°58'13.4"N, 7°51'10.9"W. b. 36°57'49.4"N, 7°50'52.9"W. c. 36°59'01.4"N, 7°49'28.9"W. d. 36°58'37.4"N, 7°49'10.9"W.	A 060°/240° orientation in depths of greater than 5m. A 2,950m corridor with a minimum width of 850m. A pre-warning of 15 minutes is nor-mally given.
Tavira	An area bounded by lines joining the following positions: a. 37°06'43.4"N, 7°33'10.9"W. b. 37°07'37.4"N, 7°30'58.9"W. c. 37°07'37.4"N, 7°33'40.9"W. d. 37°08'31.4"N, 7°31'28.9"W.	A 060°/240° orientation in depths of greater than 10m. A pre-warning of 25 minutes is normally given.
Vila Real de Santo Antonia	Troco 1—A line joining the following positions: a. 37°15'01.0"N, 7°26'03.8"W. b. 37°16'03.9"N, 7°25'30.4"W.	A 030°/210° orientation in depths of greater than 5m. A 2,000m corridor with a minimum width of 250m. A pre-warning of 15 minutes is normally given.
	Troco 2—A line joining the following positions: a. 37°17'05.0"N, 7°25'54.3"W. b. 37°18'11.2"N, 7°26'18.4"W.	A 160°/340° orientation in depths of greater than 5m. A 2,500m corridor with a minimum width of 300m. A pre-warning of 20 minutes is normally given.
	Troco 3—A line joining the following positions: a. 37°21'46.8"N, 7°26'12.5"W. b. 37°22'53.9"N, 7°26'21.8"W.	A 170°/350° orientation in depths of greater than 10m. A 2,700m corridor with a minimum width of 200m. A pre-warning of 25 minutes is normally given.
Provisionally Authorized Scooping Operations Areas—Estuaries of the Rio Lima and the Rio Tejo		
Barra de Viana do Castelo	41°40.0'N, 8°50.2'W.	A 170°/350° orientation in depths of 45m.
Mouchao de Alhabdra	38°56.0'N, 8°59.8'W.	A 1-mile radius in depths of 35m.
Cala de Samora	38°44.0'N, 9°03.0'W.	A 1-mile radius in depths of 30m.
Paco de Arcos	38°41.5'N, 9°17.0'W.	A 0.5-mile radius in depths of 30m.
Cascais-Ponta do Sal	38°41.0'N, 9°22.0'W.	A 1-mile radius in depths of 30m.

ROMANIA

General	**511**
Buoyage System	**511**
Currency	**512**
Firing Areas	**512**
Government	**512**
Holidays	**512**
Industries	**512**
Languages	**512**
Navigational Information	**512**
Pilotage	**513**
Pollution	**513**
Regulations	**513**
Restricted Areas	**513**
Search and Rescue	**514**
Time Zone	**514**
Traffic Separation Schemes	**514**
U.S. Embassy	**514**
Vessel Traffic Service	**514**

General

Romania is located in southeastern Europe on the Black Sea, between Ukraine and Moldova on the N and Bulgaria on the S.

The climate is temperate. Winters are cloudy, with frequent snow and fog. Summers are sunny, with frequent showers and thunderstorms.

The central Transylvanian Basin is separated from the Plain of Moldavia on the E by the Carpathian Mountains and from the Walachian Plain on the S by the Transylvanian Alps.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

The Danube River is marked by buoys and lighted buoys, as follows:

Dangers along the S bank and S side of the fairway	Red cylindrical buoys, spar buoys, or posts.
Dangers along the N bank and N side of the fairway	Green conical buoys, spar buoys, or posts.
Junction or division of the fairway or danger in the fairway	Spherical buoys or spar buoys with red and green horizontal bands.
Lights on the S bank indicating the direction of the channel	White pillars with a red painted square.

Lights on the N bank indicating the direction of the channel	White pillars with a rhombic panel, green over white.
Lights on the extremity of islands where the channel divides	White pillars with two white triangular panels, points together; white isophase light showing main channel to the N of the island.
Range lights on the S bank	White post with a square yellow panel and vertical black band.
Range lights on the N bank	White post with a rhombic yellow panel.

Special beacons, as described in *Rules and Regulations of the Danube*, mark distances; river crossing points; turning areas; anchorage areas; and sections where two-way traffic, overtaking, and anchoring are prohibited.

Currency

The official unit of currency is the new leu, consisting of 100 bani.

Firing Areas

A military exercise area, in which navigating and anchoring are prohibited, is bounded by lines joining the following positions:

a. 44°05.0'N, 28°40.0'E.
b. 44°05.0'N, 28°41.0'E.
c. 44°04.0'N, 28°41.0'E.
d. 44°04.0'N, 28°40.0'E.

Government

Flag of Romania

Romania is a republic. The country is divided into 41 counties and one municipality.

Romania is governed by a directly-elected President serving a 5-year term. The Prime Minister is named by the President. The bicameral Parliament is composed of the directly-elected, using a system of proportional representation, 137-member Senate, serving 4-year terms, and the directly-elected, using a system of proportional representation, 334-member Chamber of Deputies, serving 4-year terms.

The legal system is based on civil law.

The capital is Bucharest.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 2	Second New Year's Day
January 6	Epiphany
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
December 1	National Day
December 25	Christmas Day
December 26	Second Day of Christmas

Industries

The main industries are textiles and footwear, light machinery and auto assembly, mining, timber, construction materials, metallurgy, chemicals, food processing, and petroleum refining.

The main exports are textiles and footwear, metals and metal products, machinery and equipment, minerals and fuels, chemicals, and agricultural products. The main export-trading partners are Italy, Germnay, Turkey, Hungary, and France.

The main imports are machinery and equipment, fuels and minerals, chemicals, textiles, basic metals, and agricultural products. The main import-trading partners are Italy, Germany, China, Russia, Hungary, and France.

Languages

Romanian is the official language.

Navigational Information

Enroute Volume

BA NP 24, Black Sea and Sea of Azov Pilot (British Admiralty publication)

Maritime Claims

The maritime territorial claims of Romania are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation

* Claims straight baselines. Requires advance permission or notification for innocent passage of warships in the territorial sea.

Pilotage

Pilotage is compulsory in all Romanian ports.

Constanta (44°06'N., 28°42'E.)

Pilotage, which is available 24 hours, is compulsory for all vessels. except, as follows:

1. Naval vessels.
2. Public vessels (maintenance, control and surveillance of navigation, training).
3. Salvage vessels.
4. Hospital vessels.
5. Pleasure craft.

The pilot boards in the following positions:

1. Fair weather—Within a circle with a radius of 5 miles, centered on position 44°05'03.6"N, 28°43'03.6"E.
2. Bad weather—In position 44°06'14.4"N, 28°42'18.0"E.

Pollution

MARPOL Special Area

The Black Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Quarantine

All radio quarantine reports from underway vessels should be forwarded to the Romanian Port Health Authority via Constanta Radio at least 12 hours before arrival. Messages must contain information concerning all infectious cases on board other than tuberculosis, as follows:

1. Name of vessel.
2. ETA.
3. Port of departure.
4. Time and date of departure.
5. Last port of call.
6. Number of cases of illness on board during the preceeding two weeks, with details of the illness.
7. Number of deaths on board during the voyage which were not the result of accidents.
8. Number of sick persons to be disembarked.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The reports shall be sent, as follows:

Mail	Romanian Naval Authority
	Constanta Port No. 1
	RNA Building
	900900 Constanta
	Romania
Telephone	44-241-616124
	44-241-616104 (extension 145 or 146)
Facsimile	40-341-730352
	40-341-730349
E-mail	gstroe@ma.ro
	mpopescu@ma.ro
	ma@ma.ro

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Restricted Areas

An area where anchoring, fishing with bottom gear, underwater construction, dredging, and underwater explosions are prohibited is bounded by lines joining the following positions:

a. 44°25'52.8"N, 28°46'29.4"E.
b. 44°25'30.0"N, 27°47'04.2"E.
c. 44°28'23.4"N, 29°01'04.2"E.
d. 44°30'49.8"N, 29°18'44.4"E.
e. 44°31'23.4"N, 29°27'49.2"E.
f. 44°36'04.8"N, 29°20'34.8"E.
g. 44°36'52.2"N, 29°21'36.0"E.
h. 44°32'31.2"N, 29°28'19.2"E.
i. 44°32'13.8"N, 29°32'06.0"E.
j. 44°32'47.4"N, 29°31'57.6"E.
k. 44°32'36.0"N, 29°34'28.8"E.
l. 44°31'38.4"N, 29°34'43.8"E.
m. 44°28'58.2"N, 29°39'48.6"E.
n. 44°28'07.2"N, 29°38'55.2"E.
o. 44°30'19.8"N, 29°34'43.2"E.
p. 44°29'50.4"N, 29°32'19.2"E.
q. 44°30'25.8"N, 29°32'01.8"E.
r. 44°29'30.6"N, 29°27'27.0"E.
s. 44°24'09.6"N, 28°48'10.8"E.
t. 44°24'13.8"N, 28°46'20.4"E.
u. 44°24'59.4"N, 28°45'11.4"E.

Search and Rescue

Constanta Coast Radio Station (YQI) maintains a continuous listening watch for distress traffic on 500 kHz, 2182 kHz, and VHF channel 16 and can be contacted, as follows:

1. Telephone: 40-241-739470
   40-241-739600
   40-241-737102
2. Facsimile: 40-241-739469
   40-241-737103
3. E-mail: isps@constanta-radio.ro
   arrivalro@constanta-radio.ro
   isps@radionav.ro
   arrivalro@radionav.ro

The Maritime Rescue Coordination Center (MRCC) Constanta can be contacted, as follows:

1. Telephone: 40-241-615949
   40-740-173032
   40-723-634122
2. Facsimile: 40-241-606065
3. E-mail: mrcc@ma.ro

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time (CHARLIE (-3)) is observed from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

A Government of Romania-adopted Traffic Separation Scheme is located in the approaches to Constanta and Midia.

U.S. Embassy

The U. S. Embassy is situated at 7-9 Strada Tudor Arghezi, Bucharest.

The mailing address is Department of State, 5260 Bucharest Place, Washington, DC (20521-5260).

U. S. Embassy Romania Home Page
http://bucharest.usembassy.gov

Vessel Traffic Service

A Vessel Traffic Service operates in Constanta (44°06'N., 28°42'E.). This is a mandatory system which applies to all vessels over 300 gross tons and all towing vessels navigating within an area bounded to seaward by a circle, with a radius of 12 miles, centered on the VTS Center (44°10'09.6"N., 28°39'35.4"E.) and to landward by the coast and a line joining the seaward ends of the Constanta breakwaters. The VTS center also provides radar surveillance and traffic control for the VTS area.

The VTS Center can be contacted, as follows:

1. Call sign: Constanta Port Control
2. VHF: VHF channel 67
3. Telephone: 40-372-416809
4. Facsimile: 40-372-416810
5. E-mail: vtscta@rna.ro

Details of the vessel, its route, and its cargo must be supplied to the VTS Center as requested. All vessels must maintain a contimuous listening watch on VHF channel 67 whule within the VTS area.

Vessels must report to the VTS Center on VHF channel 67, as follows:

1. When entering the Traffic Separation Scheme, about 8 miles from the port entrance.
2. When entering the VTS Area, giving the following information:
   a. Vessel name.
   b. Call sign.
   c. IMO number.
   d. Draft.
   e. Vessel particulars.
3. Before departing from an anchorage or from within the VTS Area, giving the following information:
   a. Vessel name.
   b. Draft.
   c. Destination.
   d. Any other information requested by the VTS.
4. When unmooring, stating the vessel's intention to participate in the VTS:
5. When departing the VTS Area:
6. After mooring.

The languages to be used for communication shall be English or Romanian.

RUSSIA

General 515
Buoyage System 515
Cautions 515
Currency 516
Firing Areas 516
Government 516
Holidays 516
Ice 516
Industries 518
Languages 518
Mined Areas 518
Navigational Information 519
Pilotage 519
Pollution 520
Regulations 520
Restricted Areas 521
Search and Rescue 522
Ship Reporting System 522
Signals 523
Submarine Operating Areas 524
Time Zone 526
Traffic Separation Schemes 526
U.S. Embassy 526
Vessel Traffic Service 526
Appendix I—Regulated Navigation Areas (Baltic Sea) 527
Appendix II—Regulated Navigation Areas (Black Sea and the Sea of Azov) 531
Appendix III—Novorossiyak Vessel Traffic Service 533
Appendix IV—Sochi Vessel Traffic Service 535
Appendix V—Tuapse Vessel Traffic Service 537
Appendix VI—Taganrog Vessel Traffic Service 539

General

Russia is located in northern Asia, bordering the Arctic Ocean, between Europe and the North Pacific Ocean.

The climate ranges from subtropical with abundant rainfall along sections of the Black Sea to extreme cold winters with short cool summers in N Siberia. In general, most of the country has a continental type of climate which is characterized by cold winters and warm summers.

The terrain is a broad plain with low hills W of the Urals. There are vast forest and tundra in Siberia with uplands and mountains along the S border regions.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Temporary markings indicating areas prohibited for navigation, anchoring and fishing, and naval exercise areas, will be broadcast by marine radio and published in the weekly notice.

It has been reported (2006) that all navigational aids in the S and E part of the Gulf of Finland may be unreliable. Mariners should exercise caution when using these aids.

Cautions

General

Because of insufficient information, it is not possible to ensure that NGA charts and publications, covering the coasts of Russia and adjacent waters, are up to date concerning new dangers or changes to navigational aids or warnings and mariners are therefore cautioned to exercise additional care when navigating these waters.

High Speed Craft

High speed craft operate off the Black Sea coast of Russia. Vessels are advised to maintain a good lookout.

Pipeline Protection Zones

Protection zones have been established extending 100m on each side of all pipelines in Russian waters. Anchoring, trailing an anchor, trawling, dredging, or any operation which could endanger a pipeline is prohibited within these zones. The same restrictions apply within 0.25 mile on each side of the seabed cables.

Tyagun

The Tyagun, an unpleasant and sometimes dangerous wave condition which may occur inside a harbor, is reported to affect ports on the Caucasian coast between Tuapse and Bat'umi. For further information, see **Baltic Sea—Cautions—Dangerous Waves**.

Currency

The official unit of currency is the ruble, consisting of 100 kopeks.

Firing Areas

Area No. 117—Area bounded by lines joining the following positions:

a. 54°57.8'N, 19°41.0'E.
b. 55°13.4'N, 19°24.5'E.
c. 55°43.8'N, 19°12.1'E.
d. 56°18.5'N, 19°28.2'E.
e. 56°08.1'N, 20°42.0'E.
f. 55°35.0'N, 20°42.0'E.
g. 55°05.0'N, 20°24.0'E.
h. 54°57.8'N, 20°06.0'E.

Area No. 117A—Area bounded by lines joining the following positions:

a. 55°57.8'N, 19°41.0'E.
b. 55°13.4'N, 19°24.5'E.
c. 55°43.8'N, 19°12.1'E.
d. 55°51.0'N, 19°15.5'E.
e. 55°51.0'N, 20°42.0'E.
f. 55°35.0'N, 20°42.0'E.
g. 55°05.0'N, 20°24.0'E.
h. 54°57.8'N, 20°06.0'E.

Kronshtadt Fortified Zone (West)—Area bounded by lines joining the following positions:

a. 60°12.2'N, 29°00.0'E.
b. 60°00.0'N, 29°00.0'E.
c. 59°57.0'N, 28°56.0'E.
d. 59°54.7'N, 29°00.7'E.

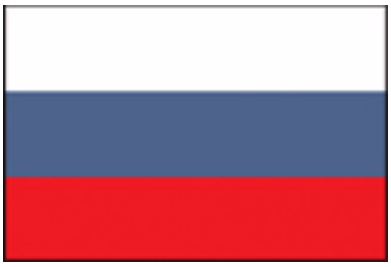
Kronshtadt Fortified Zone (East)—Area bounded by lines joining the following positions:

a. 60°00.8'N, 29°58.0'E.
b. 59°56.5'N, 29°50.0'E.
c. 59°56.5'N, 29°40.0'E.
d. 59°55.9'N, 29°40.0'E.

Government

Russia is a federation. The country is divided into 83 various administrative entities.

Russia is governed by a directly-elected President serving a maximum of two consecutive 4-year terms; the term of office will be increased to 6 years following the 2012 elections. The bicameral Federal Assembly is composed of the 168-member appointed Council of the Federation (upper chamber), serving 4-year terms, and the 450-member State Duma (lower chamber), elected on the basis of proportional representation from party lists winning at least 7 per cent of the vote, serving 4-year terms.



Flag of Russia

The legal system is based on civil law.

The capital is Moscow.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 2	Second New Year's Day
January 7	Russian Orthodox Christmas
February 23	Defenders' Day
March 8	International Women's Day
May 1 and 2	Spring and Labor Holiday
May 9	Victory Day
June 12	Independence Day
November 4	Reconciliation Day
December 12	Constitution Day

Note.—Holidays falling on a Saturday or Sunday are usually celebrated the following Monday.

Ice

The Baltic Sea

Ice breaking in the E part of the Gulf of Finland is regulated by the Sankt Peterburg Harbormaster and covers the ports of Sankt Peterburg, Primorsk, Vyborg, Vysotsk, and Ust-Luga. The Sankt Peterburg Harbormaster can be contacted, as follows:

1. Facsimile: 7-8-812-3274021
2. E-mail: kom@mail.pasp.ru

To be eligible for ice breaking assistance, vessels must request the following information from their agent:

1. Ice information.
2. Convoy Forming Point (CFP) location.
3. Name of the assisting icebreaker.
4. VHF channels required for communication with the icebreaker.

Vessels must advise their agent of the ETA at the CFP in order to be included in the Schedule of Vessel Traffic.

Icebreaker assistance is conducted, as follows:

1. Individual assistance behind an icebreaker.
2. Assistance in the convoy.
3. Independent ice navigation following ice breaker recommendations and strictly under supervision.

The icebreaker fleet, which can be contacted on VHF channel 9, is composed of the following vessels:

Ermak	Kapitan Izmailov
Kapitan Sorokin	Kapitan Zarubin
Mudjug	Tor
Semyon Dezhnev	Karu
Ivan Kruzenstern	Kapitan Plakhin

Information about ice and weather conditions during navigation in the area of the Gulf of Finland and approach fairways to Russian ports is available from Gidrometcenter of Sankt Petersburg, as follows:

1. Telephone: 7-8-812-3213018
   7-8-812-3213019
   7-8-812-3236048
2. E-mail: meteo@meteo.nw.ru

For information on obtaining general ice information for the Baltic Sea, see **Baltic Sea—Ice**.

These rules have been extracted from Russian Notices to Mariners:

1. The request for convoying vessels through the ice shall be made in port to the Captain of the Port, and at sea to the master of the icebreaker.
2. A vessel to be convoyed should carry, within the limits of the requirements of good seamanship, a supply of fuel and provisions, wooden fenders, quick-setting cement, patches, mats, and the like, sufficient for the passage. The vessel's pumps should be in good working condition and vessels should be equipped with a properly functioning radio receiver.

   If these conditions cannot be met, and, in addition, if the vessel has not been certified by governmental agencies, or classification societies, as being fit to put to sea, or if such certification is overdue, the Captain of the Port, or the master of the icebreaker, if the icebreaker is outside the port limits, has the right to refuse the request to take the vessel to sea, or to bring it into port.
3. Any vessel in need of icebreaker convoy shall await the arrival of the icebreaker, and shall not enter the ice without the latter.
4. The time, and the sequence in which vessels will proceed through the ice, as well as the number of vessels to be convoyed simultaneously, shall be determined in port by the Captain of the Port, and at sea by the master of the icebreaker.
5. Masters of vessels following icebreakers through the ice shall be subordinate to orders issued by the master of the icebreaker in so far as they pertain to movement in the ice, and shall act in conformity with such orders. Masters of vessels shall, by their actions, assist the master of the icebreaker so that passage through the ice area may be made together as rapidly and safely as possible.
6. Vessels following icebreakers shall not overtake each other.
7. Vessels following icebreakers shall be prepared for immediate full astern operation. When the vessel begins to back the rudder shall be in the "amidships" position.
8. Vessels proceeding through the ice in tow of an icebreaker shall not operate their engines in the ahead direction without special orders from the master of the icebreaker in each individual case. Vessels shall be constantly alert to drop the tow immediately when ordered to do so by the master of the icebreaker, as well as ready to make full speed astern.
9. The first vessels to be convoyed shall be naval vessels, mail-passenger vessels, and vessels carrying cargo that has been designated as priority. These shall be followed by all remaining vessels in their order of arrival at the edge of the ice, or readiness to leave port.
10. Vessels following an icebreaker and suffering damage shall hoist the distress signal prescribed by the International Rules of the Road.

    A vessel suffering damage of any kind in the ice, or springing a leak, shall take immediate steps to repair the damage, and shall, simultaneously, report such damage to the master of the icebreaker by radio, or other means of communications.
11. Vessels following an icebreaker through the ice shall be guided by the International Code of Signals. Vessels shall comply immediately with these signals when made by the icebreaker.
12. In the event the master of a vessel being convoyed by an icebreaker fails to comply with the orders issued by the master of the icebreaker, the latter has the right to refuse further convoy until his orders are complied with.
13. Neither the icebreaker, the owner of the icebreaker, nor the charterer shall bear any property responsibility for damage, or for other losses that could be sustained by a ship under convoy during, and as a consequence of its being convoyed through the ice, or as a result of maneuvers while under such convoy.
14. Merchant vessels of all flags are free of all charges for using the services of port icebreakers to convoy them from the edge of the ice into port to the berth, and from the port to sea, as well as for towing during convoy if such towing is deemed necessary by the master of the icebreaker.

    The tariffs for the operation of icebreakers in the Arctic, and in the non-Arctic seas that freeze during the winter navigation period, shall be paid at the per ton rate by the shipper, or receiver, for each ton of cargo, depending on the conditions of the sales contract, as shall the rate for convoying vessels other than those belonging to the Ministry of the Merchant Marine in Arctic waters, levied in accordance with established procedure. The shifting of berths required in connection with cargo handling operations, as well as bunkering, docking, and the like, shall be paid for separately.
15. Any vessel using an icebreaker to convoy it through the ice, by such action consents to placing itself under the provisions of these rules.
16. The master of a vessel following an icebreaker shall do his own dead-reckoning and keep a running fix of his vessel's position. Upon completion of the convoy through the ice he shall compare his position coordinates with those of the icebreaker.

The Black Sea and the Sea of Azov

Ice may form during prolonged periods of frost which occur in the winter in the N parts of the Black Sea and the Sea of Azov. The severity of the winter, and therefore the extent and thickness of the ice cover, varies in different years but even in the most severe winter,only a relatively small part of the entire Black Sea is affected by ice.

Navigation is usually only affected in the NW part of the Black Sea, Kerchenskiy Proliv (Kerch Strait), and the Sea of Azov. February is normally the month of greatest ice cover in these areas.

In the Sea of Azov, between mid-December and late February, navigation is oftern hindered by ice and in many cases can only be maintained with the help of icebreakers. Navigation is likely to be the most difficult of the N shore, in the entrance to the Gulf of Taganrog, and with prolonged N or NE winds, in the approaches to Kerchenskiy Proliv (Kerch Strait).

Industries

The main industries include mining (coal, oil, gas, chemicals, and metals), machine building (from rolling mills to high-performance aircraft and space vehicles), defense industries (including radar, missile production, and advanced electronic components), shipbuilding, road and rail transportation equipment, communications equipment, agricultural machinery and tractors, construction equipment, electric power generating and transmitting equipment, medical and scientific instruments, consumer durable goods, textiles, foodstuffs, and handicrafts.

The main exports are petroleum and petroleum products, natural gas, grain, wood and wood products, metals, chemicals, and a wide variety of civiliam and military products. The main export-trading partners are the Netherlands, Italy, Germany, and China.

The main imports are vehicles, machinery and equipment, plasicss, medicines, iron and steel, consumer goods, meats, fruits and nuts, and semi-finished metal products. The main import-trading partners are Germany, China, Ukraine, Italy, and the United States.

Languages

Russian is the official language.

Mined Areas

The Baltic Sea

Area No. 110—Northwest of Tolbukhin Light.**—**Area bounded by lines joining the following positions:

a. 60°02.7'N, 29°23.1'E.
b. 60°05.0'N, 29°23.0'E.
c. 60°05.0'N, 29°29.3'E.
d. 60°04.2'N, 29°29.3'E.
e. 60°02.7'N, 29°25.5'E.

Note.—This is a mine practice area.

Area No. 233—Northeast of Ostrov Rukhnu.**—**Area bounded by lines joining the following positions:

a. 57°53.7'N, 23°17.5'E.
b. 57°56.0'N, 23°25.0'E.
c. 57°54.2'N, 23°27.0'E.
d. 57°51.5'N, 23°19.0'E.

Area No. 234—West of Mys Akmenrags.**—**Area bounded by lines joining the following positions:

a. 56°52'N, 20°25'E.
b. 56°52'N, 20°29'E.
c. 56°49'N, 20°29'E.
d. 56°49'N, 20°25'E.

Area No. 235—Southwest of Mys Taran.**—**Area bounded by lines joining the following positions:

a. 54°39.0'N, 19°33.0'E.
b. 54°42.0'N, 19°33.0'E.
c. 54°42.0'N, 19°36.5'E.
d. 54°39.0'N, 19°36.5'E.

Area No. 236—Approaches to Liepaja.**—**Area bounded by lines joining the following positions:

a. 56°41.7'N, 20°42.0'E.
b. 56°44.1'N, 20°42.0'E.
c. 56°44.1'N, 20°44.7'E.
d. 56°41.7'N, 20°44.7'E.

The Sea of Azov (Taganrogskiy Zaliv)

Former Mined Area No. 64—Area bounded by lines joining the following positions:

a. 46°50.0'N, 38°05.5'E.
b. 46°44.8'N, 38°07.5'E.
c. 46°45.0'N, 38°14.8'E.
d. 46°48.4'N, 38°19.2'E.
e. 46°51.5'N, 38°17.5'E.

Former Mined Area No. 65—Area bounded by lines joining the following positions:

a. 46°45.0'N, 38°18.2'E.
b. 46°44.0'N, 38°18.2'E.
c. 46°44.0'N, 38°20.3'E.
d. 46°45.0'N, 38°20.3'E.

Former Mined Area No. 66—Area bounded by lines joining the following positions:

a. 46°58.0'N, 38°25.0'E.
b. 46°55.0'N, 38°25.0'E.
c. 46°53.5'N, 38°37.0'E.
d. 46°57.5'N, 38°48.7'E.
e. 46°59.0'N, 38°57.2'E.
f. 47°01.5'N, 38°56.0'E.

Former Mined Area No. 67—Area bounded by lines joining the following positions:

a. 47°04.7'N, 38°30.5'E.
b. 47°02.0'N, 38°32.0'E.
c. 47°02.3'N, 38°36.0'E.
d. 47°05.7'N, 38°34.7'E.

Former Mined Area No. 68—Area bounded by the coast and lines joining the following positions:

a. 47°11.7'N, 38°49.7'E. (coast)
b. 47°07.5'N, 38°53.0'E.
c. 47°06.5'N, 38°58.5'E.
d. 47°11.0'N, 39°00.5'E.

e. 47°12.0'N, 38°57.5'E. (coast)

Note.—These former mined areas still may present a danger for vessels anchoring, fishing, or engaged in submarine or sea bed activities.

Navigational Information

Enroute Volumes

Pub. 155, Sailing Directions (Enroute) East Coast of Russia.

Pub. 183, Sailing Directions (Enroute) North Coast of Russia.

Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

BA NP 24, Black Sea and Sea of Azov Pilot (British Admiralty publication)

Maritime Claims

The maritime territorial claims of Russia are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Claims straight baselines. In a joint statement with Ukraine, declared that the Sea of Azov and Kerchenskiy Proliv (Kerch Strait) are historic internal waters of the two states.

Maritime Boundary Disputes

Dispute with Norway over maritime limits in the Barents Sea and Russia's fishing rights beyond the territorial limits of Svalbard within the Svalbard Treaty zone. An agreement was reached in September 2010 concerning the alignment of the EEZ boundaries in this area; the agreement is pending ratification by the national assemblies of both nations

It has been reported (2008) that Canada, Denmark, Greenland, Norway, Russia, and the United States have agreed to let the United Nations rule on their overlapping territorial claims in the coastal waters of the Arctic Ocean. Coastal states may claim the sea bed beyond the normal 200-mile limit if the sea bed is part of a continental shelf of shallower waters. For further information, see **Pub. 180, Sailing Directions (Planning Guide) Arctic Ocean (Arctic Ocean—Navigational Information—Maritime Boundary Disputes.)**

Dispute with China over alluvial islands at the confluence of the Amur River and the Ussuri River, as well as a small island on the Argun River.

Dispute with Japan over the islands of Etorofu, Kunashiri, Shikotan, and the Habomai Group, known in Japan as the "Northern Territories" and in Russia as the "Southern Kurils." These islands were occupied by the Soviet Union in 1945, are now administered by Russia, and are claimed by Japan.

The maritime boundary with Ukraine through the Sea of Azov and Kerchenskiy Proliv (Kerch Strait) remains unresolved despite a 2003 framework agreement and ongoing discussions.

The maritime boundary with Georgia is unresolved.

The maritime boundary between Estonia and Russia is subject to negotiations.

Pilotage

Pilotage is compulsory for entry to and departure from all Russian ports and for mooring and casting off. Pilots should be ordered through the vessel agent 12 hours in advance and confirmed 4 hours prior to arrival, unless otherwise stated by individual ports.

Vessels requiring a Deep Sea Pilot for the Baltic area should send the request to the port of St. Petersburg.

Pilotage requirements are uniform for all foreign flag vessels but come under the purview of local pilotage laws. Pilotage requirements may therefore vary from port to port. See the appropriate volume of Sailing Directions (Enroute) for ports in the Baltic Sea and the Arctic Ocean; information on Black Sea ports can be found below. In the majority of ports, entry and departure of vessels take place around the clock. In some ports, pilotage is carried out with the aid of tugs. In others, shore radar and radio direction-finding stations are used.

BLACK SEA PORTS

Anapa (44°54'N., 37°19'E.)

Pilotage is provided by Novorossiysk. Pilots board in position 44°54'24.6"N, 37°17'53.4"E.

Novorossiysk (44°43'N., 37°48'E.)

Pilotage is compulsory for all vessels. Inbound vessels should request a pilot from the harbormaster, via their agent, 24 hours in advance and confirmed 2 hours prior to arriving at the pilot boarding position on VHF channel 8. Outbound vessels should request pilotage via their agent 2 hours prior to departure.

The pilot boards, as follows:

a. For the port—about 2 miles W of Doobskiy Light.

b. For the CPC-R Terminal—in position 44°34'06.0"N, 37°38'30.0"E.

Radar-assisted pilotage is compulsory, as follows:

1. In bad weather or when the visibility is less than 2 miles.
2. When equipment affecting navigation or pollution is malfunctioning.
3. For vessels carrying dangerous cargo and tankers with non-decontaminated tanks.
4. For towing vessels.
5. When ordered by the harbormaster.

The pilots can be contacted, as follows:

1.	Call sign:	Pilot Station
2.	VHF:	VHF channels 9. 11. 69, and 74
3.	Telephone:	7-8-8617-676445 7-8-8617-676447
4.	Facsimile:	7-8-8617-676448

Port Kavkaz (45°20'N., 36°41'E.)

For information on pilotage in Kerch Strait, see **Ukraine—Pilotage and Ukraine—Appendix VI**.

Pilots board, as follows:

1. From the Sea of Azov—Anchorage Area 455 (45°22.8'N., 31°41.3'E.).
2. From the Black Sea—position 45°17'09.0"N, 36°29'04.8"E

Port Temryuk (45°19'N., 37°23'E.)

Pilotage is compulsory for all vessel 200 gross tons and over. Vessels should send a request for pilotage 72 hours, 48 hours, and 24 hours prior to arrival, either through their agent or directly to Port Control (IGNP). Outbound vessels shouls request pilotage 6 hours and 2 hours prior to departure.

The pilot boards in the vicinity of Temryuskiy Fairway Lighted Buoy.

Port Control (IGNP) can be contacted, as follows:

1. Call sign: Temryuk Radio 17
2. VHF: VHF channels 16 and 69
3. Telephone: 7-8-86148-58656
4. Facsimile: 7-8-86148-52634

Radar pilotage is compulsory for all vessels over 50 gross tons when the visibility is less than 1 mile.

Sochi (43°35'N., 39°43'E.)

Pilotage is compulsory for all foreign vessels. Pilots shall be ordered by facsimile via the agent 2 hours prior to arrival at the pilot boarding position. The pilot boarding time shall be confirmed not less than 1 hour prior to arrival via Sochi Pilots on VHF channel 14.

The pilot for Sochi boards about 1.5 miles SSW of Sochinskiy Light.

The pilot for Adler (43°26'N., 39°55'E.), a subsidiary port of Sochi, boards about 1.5 miles SSW of Adlerskiy Light.

The pilots can be contacted, as follows:

1. Call sign: Lotsman or Sochi Pilot
2. VHF: VHF channel 14
3. Telephone: 7-8-8622-609693
4. Facsimile: 7-8-8622-922714

Taganrog (47°14'N., 38°57'E.)

Pilotage in compulsory in the Taganrog VTS operational area (see Appendix VI) for the following vessels:

1. All foreign-flagged vessels.
2. Vessels in distress.
3. Vessels carrying dangerous cargo (unless exempted).
4. Vessels carrying nuclear cargo.
5. Cargo vessels during the ice navigation period.

Pilotage in the Taganrog approach channel is compulsory for all vessels.

Pilots for Taganrog should be requested 4 hours prior to arrival at Beglitsa Lighted Bouy (47°01.5'N., 38°38.2'E.) on VHF channel 5. Pilots for Mariupol should be requested 4 hours prior to arrival at the Outer Roads on VHF channel 5.

Pilots board, as follows:

1. Taganrog—in position 47°03'45"N, 38°52'48"E.
2. Azov-Don Sea Channel—in position 47°02'24"N, 38°55'36"E.

Tuapse (44°05'N., 39°04'E.)

Pilotage is compulsory and is available 24 hours. The pilot should be requested and the ETA confirmed 2 hours prior to arrival.

The pilot boards in position 44°03.7”N, 39°03.9'E.

The pilots can be contacted, as follows:

1. Call sign: Tuapse Pilot
2. VHF: VHF channel 11
3. Telephone: 7-8-86167-71338
   7-8-86167-21692

Pollution

Russian regulations prohibit, under severe penalties, discharge within the economic zone of Russian of oil, oil products and any other substance or refuse injurious to human health or to the living resources of the sea.

Failure to inform the nearest Russian authority of accidental or emergency discharge of such substances within the territorial and internal waters of Russian and failure to note the occurrence in the ship’s log also carry severe penalties.

Russian merchant vessels and civil aircraft are instructed to inform Russian authorities of witnessed infringements of the Russian regulations and of the international regulations.

Within the territorial and internal waters of Russia vessels suspected of infringing the regulations are liable to be stopped, boarded and inspected. If an infringement has taken place within those waters, the vessel is liable to be detained.

MARPOL Special Area

MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted. Several areas off the coasts of Russia have been designated as MARPOL Special Areas, as follows:

1. The Black Sea.
2. The Baltic Sea (includes the Gulf of Finland).

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

This Special Area is under intensive surveillance for pollution and violations of traffic rules. Further information on pollution reporting can be found in **Baltic Sea—Pollution—Pollution Reporting**.

Regulations

General

Access to Russian ports by any foreign vessel is subject to compliance with applicable laws and regulations of the government of Russia and local municipal and port authorities in the areas wherein they have their jurisdiction.

In addition, masters must indicate that the vessel has certification guaranteeing civil responsibility for damage from oil pollution.

The following information is required by the Port Authority:

1. Name and flag of vessel.
2. Port of departure (last port of call).
3. Vessel’s draft at bow and stern.
4. Maximum length of vessel.
5. Number of passengers.
6. Cargo capacity of vessel, volume of hold, measurements, etc.
7. Name and quantity of cargo and its distribution by hold (for tankers, in addition, indicate type and disposition of ballast).
8. Requirements from port services.

Information concerning a vessel's sanitation state must be reported in accordance with current sanitation, veterinary, and quarantine regulations.

A vessel's arrival in port must be registered directly with the Port Authority or with a representative of the Transport Fleet Maintenance Service, within the first 6 hours in port, completing sanitation, quarantine, customs, and border formalities.

On sailing, the Port Authority must be informed of intended departure at least 6 hours in advance; during a short term anchorage (less than 6 hours) at least 2 hours notice is required.

Entry into Russian Territorial Waters

Vessels must announce their intention to enter Russian territorial waters on VHF channel 16 to the stations of the Northwest Border Control of the Russian Federal Security Service (FSB) on Ostrov Gogland (call sign: Lebed 19) or on Ostrov Kozlinyy (call sign: Lebed 16).

ETA Notification

Vessels should send their ETA via their agent 12 days, 96 hours, and 12 hours in advance. Oil, gas, and chemical tankers should however, confirm their ETA 14 days, 72 hours, and 12 hours before arrival.

Economic Zone

Russia claims an economic zone extending 200 miles seaward from the limits of its territorial sea.

Within the economic zone, the Government of Russia issues regulations in connection with and for the control of:

1. Exploitation and conservation of resources found on or below the sea bed and in the waters above it, including anadromous fish. Fishing of anadromous types of fish is permitted only as a result of inter-governmental agreement.
2. Marine scientific research.
3. Pollution of the marine environment.

Freedom of passage for ships and aircraft through the economic zone is assured.

Regulations exist for the inspection of vessels suspected of causing pollution and penalties for infringement exist.

Foreign Naval Vessels

Foreign naval vessels intending to enter waters of Russian or visit Russian ports should obtain a copy of *Regulations for Foreign Naval Vessels Navigating and Remaining in the Territorial or Internal Waters of Russia or Visiting Russian Ports.* These regulations are published as a Russian Annual Notice to Mariners.

Proposals to visit Russian ports should be forwarded through the Russian Ministry of Foreign Affairs not less than 30 days prior to the suggested visit. This rule does not apply to warships on which heads of governments or heads of state are embarked, nor to ships accompanying them.

Ships whose approach is necessitated by foul weather or engine failure which threatens the safety of the ship must inform the nearest port of the reason for entry, and, if possible, go to a recognized port open to foreign merchant vessels, or to a point indicated by the vessel sent to aid or meet it.

All foreign vessels when within territorial waters or internal waters of Russia, must observe radio communication, navigational, port, customs, sanitary and other regulations.

In the event of an emergency entry into territorial waters, or emergency non-observance of rules for navigation and stay in these waters, foreign vessels must immediately notify the nearest Russian port authority.

Foreign Merchant Vessels

Foreign non-military vessels enjoy the right of innocent passage through Russian territorial waters in accordance with Russian laws and international treaties; innocent passage is effected by crossing them without entering Russian internal waters, or by passing through them enroute to or from Russian ports open to foreign vessels.

While effecting innocent passage, vessels must follow the customary navigational course or course recommended through sea corridors or in accordance with traffic separation schemes.

The master of a foreign non-military vessel which has violated the rules of innocent passage is accountable under Russian legislation.

All foreign vessels when within territorial waters or internal waters of Russia, must observe radio communication, navigational, port, customs, sanitary and other regulations.

In the event of an emergency entry into territorial waters, or emergency non-observance of rules for navigation and stay in these waters, foreign vessels must immediately notify the nearest Russian port authority.

Russian Ports of Entry

Foreign merchant vessels may call only at ports of entry where customs stations are located. In 2010, the following Russian ports were open to foreign vessels:

1. Black Sea—Port Anapa, Gelendzhik, Novorossiysk, Sochi, and Tuapse.
2. Sea of Azov—Port Kavkaz, Port Temryuk, Yeysk, Taganrog, Azov, and Rostov-Na-Donu.
3. Baltic Sea—Sankt Petersburg, Primorsk, Ust Luga, Vysotsk, and Vyborg.

Recommendation on Baltic Sea Navigation

The IMO has issued recommendations regarding vessel transits of the entrances to the Baltic Sea. For further information, see **Baltic Sea—Regulations**.

Single-hull Tankers

It has been reported (2008) that Russia will ban single-hull tankers from calling at Russian ports beginning in 2010.

Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR)

The NIR of the PMoU has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the Paris MoU region.

The report should be sent electronically through the following web site (http://www.portcall.marinet.ru).

For further information, see **North Atlantic Ocean—Regulations—Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR).**

Restricted Areas

Russian Regulated Areas include all areas where navigation,

fishing, or anchoring is prohibited or restricted.

Regulated Areas also include areas designated by the Russian authorities as temporarily dangerous for navigation; as these prohibitions are for an indefinite period they are described below as prohibited areas.

Areas where navigation is periodically prohibited lie within Russian territorial waters; radio warning is given by PRIP of the date on which such an area becomes prohibited for navigation.

Areas periodically declared dangerous for navigation which may also include various firing danger and exercise areas, lie partly or wholly outside Russian territorial waters; radio warning is given by PRIP, of the date on which such an area becomes dangerous for navigation.

Fortified Zones are those areas established by the Russian authorities where special control of navigation exists on a permanent basis. Prior permission must be obtained to enter or leave such areas, and pilotage through them is compulsory.

Special regulations are in force in these zones, and the pilot's instructions concerning them must be strictly complied with. Navigation through these zones in fog is normally prohibited.

Changes to Russian Regulated Areas are announced by PRIP or NAVIP. Similar warnings may occasionally be broadcast concerning other areas not previously designated as areas where navigation is periodically prohibited.

The Russian authorities place responsibility for the violation of the limits of a regulated area on the ship's master.

The geographical positions which follow are those published in Russian Notices to Mariners and/or Russian publications and therefore relate to Russian charts. Mariners should not navigate near the limits of these areas, when activated, due to possible graduation differences between Russian and NGA charts. Unless otherwise stated, the area is bounded by the lines joining the positions.

Russian Regulated Areas for the Baltic Sea are listed in Appendix I.

Russian Regulated Areas for the Black Sea and the Sea of Azov are listed in Appendix II.

Search and Rescue

The Maritime Rescue Coordination Center (MRCC) Moskow is responsible for coordinating search and rescue operations and working with search and rescue services of neighboring countries.

The MRCCs can be contacted, as follows:

1. MRCC Moskow
   a. Telephone: 7-495-626-1052
   b. Facsimile: 7-495-623-7476
   c. E-mail: smrcc@morflot.ru
      od_smrcc@morflot.ru
2. MRCC Kaliningrad
   a. Telephone: 7-4012-579471
      7-4012-579473
      7-4012-538153
      7-4012-632443
      7-4012-538470 (Maritime Assistance Center)
   b. Facsimile: 7-4012-538470
      7-4012-643199 (Maritime Assistance Center)
   c. E-mail: mrcc@mapkld.ru
3. MRCC Saint Peterburg
   a. Telephone: 7-812-7188995
      7-812-4958995
      7-812-3274147 (Maritime Assistance Center)
   b. Facsimile: 7-812-3274146
   c. E-mail: mrcc@mail.pasp.ru
4. MRCC Novorossiysk
   a. Telephone: 7-8617-676417
      7-8617-676418
      7-8617-639037
   b. Facsimile: 7-8617-676420
      7-8617-619424
   c. E-mail: mrcc3@ampnovo.ru
5. MRSC Taman
   a. Telephone: 7-929-8379966
   b. Facsimile: 7-928-2093300
   c. E-mail: mrsc3@tamanports.ru

A network of coast radio stations maintains a continuous listening watch on international distress frequencies for distress traffic.

Rescue craft on the Baltic Sea coast are maintained at the following locations:

1. Sestroetsk (60°06'N., 29°57'E.).
2. Mys Lisiy Nos (60°01'N., 29°58'E.).
3. Lomonosov(59°55'N., 29°46'E.).
4. Petrovorets (59°53'N., 29°54'E.).
5. Strelna (59°52'N., 30°03'E.) (summer only).
6. Baltiysk (54°39'N., 19°54'E.).
7. Mys Taran (54°58'N., 19°59'E.).
8. A rescue station 6 miles NNE of Baltiysk.

Emergency search and rescue operations in territoral waters of Russia are normally carried out by Russian rescue units. However, vessels whose governments have an international agreement with the government of Russia will, in exceptional circumstances, be given permission to participate in rescue operations.

Ship Reporting System

GOFREP.—The Gulf of Finland Reporting System (GOFREP) is a mandatory ship reporting system. It covers the international waters in the Gulf of Finland E of the Western Reporting Line and Russian territorial waters W of longitude 26°30.0'E. In addition, Estonia and Finland have implemented mandatory ship reporting systems to their national water areas outside VTS areas. These reporting systems provide the same services and make the same requirements of shipping as the system operating in international waters; further information on these systems can be found in Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

The mandatory ship reporting system in the international waters of the Gulf of Finland, including the national mandatory ship reporting systems of Estonia and Finland, are collectively referred to as GOFREP; the area of coverage is referred to as the GOFREP area. Further information on GOFREP can be found in Baltic Sea—Appendix II.

Signals

Anchor Signals

Vessels using a kedge anchor show, by day, a red flag, or at night a white light on the anchor cable at half the height of the ship's side. These signals are additional to those prescribed by the International Regulations for Preventing Collisions at Sea.

Dredge Signals

Dredges in Russian waters show the appropriate lights or shapes as prescribed in the *International Regulations for Preventing Collisions at Sea*. These signals should only be interpreted as an indication of the side on which the dredge wishes to allow the approaching vessel to pass.

The approaching vessel should reduce speed to the minimum necessary for steerage way before arriving at a distance of 0.5 mile from the dredge; one prolonged blast should be sounded. The dredge will, in addition to showing the proper signals, confirm the side on which the dredged is to be passed, as follows:

Russia—Dredge Signals	
Signal	**Meaning**
One long blast	Leave me on your port side.
Two long blasts	Leave me on your starboard side.
Three long blasts	No passage. Wait until clear.

If no answering signal is received from the dredge, the vessel must assume that passage on both sides of the dredge is closed.

Survey Vessels

Russian vessels, engaged in survey operations, display a blue pennant having on it a white disc bearing the figure of a lighthouse.

Fishing Vessels

Mariners are cautioned that, in certain waters of the Baltic Sea and Gulf of Finland, Russian fishing vessels may be encountered at night showing lights additional to those described in the International Rules of the Road.

These lights are white, red, green and blue, the brightest being a red light with a visibility of at least 1 mile; the remaining lights have a visibility of not less than 750m.

Mariners are advised on sighting these fishing vessels, to give them a berth of not less than 2 miles.

Lightships Not on Station

A lightship, not on station, that has broken loose from its anchor shall discontinue its charactaristic light and fog signal and, if possible, lower its daymark and hoist the following signals:

1. By day—Two large black balls, one in the bow, the other in the stern.
2. At night—Two red lights, one in the bow, the other in the stern.

Red flags shall be displayed in place of the black balls if circumstances are such that the above daytime signals cannot be used, or if the signals are the distinguishing signals for the particular lightship.

The lightship that has broken loose from its anchor shall, in addition to the above, take the following precautions:

1. By day—Hoist the signal "LO" of the International Code, meaning "I am not in my charted position."
2. At night—Burn red and white pyrotechnic lights simultaneously at least once every 15 minutes.

If circumstances are such that pyrotechnics cannot be used, the red and white pyrotechnics shall be replaced by simultaneously showing a red and a white light.

Special Warning Signals

It may at times be necessary to prohibit entry of shipping into certain Russian territorial waters and under these conditions a special warning service consisting of special warships, guardships, examination vessels, or coast guard stations will be established. Mariners are cautioned on approaching such waters to maintain a good lookout for these vessels which will show the following signals:

1. By day—A blue triangular flag.
2. By night—Three blue lights, vertically disposed.

Should any vessel approach an area where entry to or navigation within is prohibited, the patrol vessel, guardship, or coastguard station shall in addition to the above signals, show the following signals:

1. By day—Three red balls, vertically disposed.
2. By night—Three red lights, vertically disposed.

The above information is not to be construed to mean every restricted area will be guarded, and vessels proceeding into these waters should have on board the latest available information pertaining to navigation off the coastal areas of Russian.

Vessels of the Russian Federal Security Service Border Guard wishing to stop non-naval vessels will signal these vessels, as follows:

1. By day—International Code flag L from the mast.
2. By night—Two green lights, vertically disposed, on the mast above the masthead light.
3. Firing two green flares at a very short distance between them.
4. Transmitting the signals and phrases specified by the International Code of Signals or sending orders to stop the vessel using radiotelephone communications.

Russian Border Guard vessels will use the call sign "Velbot," on VHF channel 16 or 2182 kHz, when establishing contact.

Aircraft wishing to stop non-naval vessels will signal these vessels, as follows:

1. Firing two red flares at a very short interval between them.
2. Circling to the left over the vessel at a safe distance and height while rapidly flashing its navigation or landing lights until the vessel stops or until radio contact is established with it.
3. Transmitting the signals and phrases specified by the International Code of Signals or sending orders to stop the vessel using radiotelephone communications.

Aircraft will use the call sign "Sokol," on 121.5 MHz or 243.0 MHz (4125.0 kHz and 6215.0 kHz as a reserve, if necessary) when establishing contact.

Ships that have been given either of these signals must stop and remain stopped until permission to proceed is received from the guardship.

Should entry or navigation into a given area be unrestricted and no special signal or instruction regarding further movements have been made or given by the guardship or coastguard station, an incoming vessel is free to proceed to its destination, but must observe such regulations as may already have been promulgated.

Should Russian naval vessels be present in any restricted area, and should no special regulations concerning navigation with it have been issued, then approaching vessels must not pass between such naval vessels.

Submarine Warning Signals

The following signal is used to warn foreign submarines which are submerged:

1. A series of three explosions at 1 minute intervals, followed after an interval of 3 minutes by a second series of three explosions: you have entered territorial waters. Come to the surface immediately. If you do not surface you will be fired upon.
2. An acoustic signal by sonar may be given simultaneously, with the same meaning as above. The signal will consist of five dashes, each dash 3 seconds long, with the interval between dashes being 3 seconds.

Tidal Signals

Signals are displayed to indicate the height of the water level above chart datum, in units of 20 cm, as follows:

Day Signal	Night Signal	Meaning
Black cone, point down	White light over green light	Falling water level
Black cone, point up	Green light over white light	Rising water level
White cylinder	Red light	Height of water level—0.5 unit
Black cone, point down	Green light	Height of water level—1 unit
Black cylinder	Red light	Height of water level—5 units
Black ball	White light	Height of water level—25 units

Towing Signals

The following sound signals are used by the vessel being towed:

Signal	Meaning
One long blast	Tow straight ahead or astern (as appropriate)
Two long blasts	Stop engines
One long blast, one short blast	Reduce speed
One short blast, one long blast	Increase speed
One long blast, one short blast, one long blast	Let go or take up tow
One short blast	Tow to starboard
Two short blasts	Tow to port
Three short blasts	Go full speed astern
Three long blasts, one short blast	Tug required
Five or more short blasts	Stop moving immediately

When two tugs are employed, one will be directed by the ship's whistle and the other by oral whistle signals. Signals given by the towed ship must be repeated by the tug.

Traffic Signals

Signals regulating entry to and departure from the Russian Federation ports are, as follows:

Day Signal	Night Signal	Meaning
Three black balls, vertically disposed	Three red lights, vertically disposed	Entry forbidden due to obstruction
Black cone, point up, between two black balls	White light between two red lights, vertically disposed	Entry temporarily prohibited-Normal operations
Black cone, point down, above black cone, point up, over black ball	Green light over white light over red light	Entry and exit temporarily prohibited-Normal operations
Black cone, point down, above black cone, point up, over black cone, point down	White light between two green lights, vertically disposed	Exit temporarily prohibited-Normal operations
Black ball between two black cylinders, vertically disposed	Red light between two white lights, vertically disposed	Movement of small warships, launches, boats prohibited in harbor and roads

Note.—All signals are disposed vertically; all the day signal shapes are black.

Submarine Operating Areas

Warships of the Navy of Russia escorting submarines will, for purposes of warning vessels of the presence of submarines in a particular sea area, hoist the flag signal "NE 2" of the International Code of Signals, meaning "You should proceed with particular caution; submarine exercises are in progress in this area."

Warships of Russia shall, if possible, also transmit the fact by radio in plain language on the established international frequency, 500 kHz.

During darkness, specially assigned warships shall warn approaching vessels of the presence of submarines by using for the purpose all communication means available to them.

Approaching vessels shall set their courses so as not to interfere with the movements of the warships displaying the signals indicated, and shall ensure that these latter have adequate room in which to maneuver. If, for whatever reason, a vessel is unable to meet these requirements, such vessel should reduce speed to as slow as possible until such time as the danger area has been transmitted to it, or until such time as instructions as to a safe course are received.

The vessel shall, at the same time, keep a sharp lookout for submarines, the presence of which can be detected only if they are at a depth when the periscope, snorkel, parabolic radar antenna, or DF loop is visible.

All these devices can be mistaken for the brooms used as topmarks, logs, and other floating objects, because of their external appearance. However, if they are in fact extendible devices of a submarine they usually will leave a wake.

A submarine, moreover, sometimes can be detected because of air bubbles coming to the surface, or because of a red and white float, or buoy, towed astern and visible on the surface.

A surfaced submarine can be detected at night by its running lights, and by the fixed white lights of emergency signal buoys which can be lighted by the submarine in good time while it still is submerged. In some cases the presence of a submarine in the area can be made known by its submerged firing of signal cartridges which form a colored smoke in the daytime, and by a similarly colored flare at night.

A vessel observing the extendible devices of a submarine, a towed float or buoy, the fact of running lights showing as well as the fixed white lights of emergency signal buoys, or the firing of signal cartridges shall sheer off immediately so as to leave them astern, or back down or stop its engine, so as to pass clear of the submarine at a safe distance.

Mariners should, however, be aware of the fact that surface warships do not always escort submarines engaged in exercises, or making passage.

Sunken Submarines

When a Russian submarine is in distress and cannot surface it can indicate its position by releasing to the surface an emergency signal buoy, fuel or lubricating oil, or air bubbles.

Submarines of the Navy of Russia are fitted with two emergency signal buoys, one in the bow, the other in the stern.

The emergency signal buoys are shaped like a truncated cone with a flat bottom and a spherical upper part (the buoy can, in some cases, be shaped like an oblate spheroid). The buoy diameter is about 0.9 to 1.25m; the height is about 0.4 to 0.7m.

The body of the buoy rises about 0.4 to 0.6m above the surface. The buoy is red, with the upper part having three red sectors alternating with three white sectors. One of the white sectors carries a black H, or a black K. The letter H signifies that the buoy is the bow buoy, the letter K that the buoy is the stern buoy. The buoys are visible for about 2 miles.

A quick flashing white light (70 flashes per minute) visible for 5 miles, is shown from the center of the upper part of the buoy.

A mariner sighting evidence on the surface that a submarine is in distress shall, with the maximum accuracy, fix the position of an oil slick, or of the appearance of air bubbles, and report this to the nearest Russian port authorities.

If an emergency signal buoy is spotted, the fact shall be reported immediately to the nearest Russian port, such report to include the exact position of the buoy, and time spotted, and communications shall be established with the submarine over the emergency signal buoy telephone.

To establish communications with the submarine, open the cover on the well in the buoy (by removing the wing nuts, or by backing off the nuts with a wrench), secure it, remove the handset from the rubber case, and call by pressing the button on the end of the rubber bulb.

Upon receiving a response, release the button and begin to talk. Now further action on the part of the mariner will depend entirely on the concrete situation in which the submarine may be in and on the status of its crew.

Vessels, cutters, or boats should not tie up to an emergency signal buoy, nor lift it on board.

Russian Submarine Lights

The design features of submarines prevent them from fully complying with the provisions of Rules of the Road with respect to ships' lights.

The low position of the running lights, the small vertical spacing, and the closeness together of the masthead and side lights all work to give an incorrect idea of the length of the submarine, its exact course, and even more to the point, of changes in course. This is why submarine lights can be mistaken for those of a small vessel, or a cutter, moving at slow speed.

Mariners should always be aware of the special features of the placement of submarine lights, and take all precautionary measures necessary when passing submarines, particularly in fairways, in narrow waters, and in the entrances (exits) of bays and gulfs.

Russian submarines display their navigation lights in special positions, as follows:

1. One steaming light on the upper part of the front edge of the fin.
2. Side lights on the relevant side of the fin in its central part.
3. One or two stern lights. When one light is displayed it will be carried on the stern or on the rear edge of the vertical stabilizer. When two lights are carried they are situated on the rear part of the fin.
4. Anchor lights are placed on the bow section and on the stern or vertical stabilizer. On submarines with a high stabilizer the stern anchor light may be replaced by two lights set on the sides of the stabilizer with a total arc of visibility of greater than 360°.
5. Not under command lights and other all round visibility lights may be raised on a mast, not less than 2.5m in height, on the fin.

Submarines may carry one or two special identification lights for timely recognition when in restricted waters, and in areas in which traffic is heavy. They are quick flashing (100 flashes per minute) orange lights visible all around the horizon, located in the submarines fore and aft plane.

One light is installed on top and in the middle of the conning tower, at least 1.5m above the masthead light. The other is in the stern on the submarine, or on a stabilizer. All ships, upon seeing these lights, shall take immediate, decisive measures to pass the submarine at a safe distance.

Time Zone

The boundaries between the Time Zones covering Russia are irregular; the principal towns in each zone are listed in the accompanying table. Daylight Savings Time is not observed.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) on the Baltic Sea coast of Russia are, as follows:

1. Off Seskar Island (Ostrov Seskar). (Government of Russia)
2. Off Sommers Island (Ostrov Sommers). (IMO adopted)
3. Off Hogland Island (Ostrov Gogland). (IMO adopted)
4. Off Rodsher Island (Ostrov Rodsher). (IMO adopted)

Traffic Separation Schemes (TSS) on the Black Sea coast of Russia are, as follows:

1. In the Southern Approaches to Kerch Strait (Kercehnskiy Proliv). (IMO adopted)
2. In the Northern Approaches to Kerch Strait (Kercehnskiy Proliv). (Governments of Russia and Ukraine)
3. Approaches to Novorossiysk. (Government of Russia)

U.S. Embassy

The U.S. Embassy is situated at Bolshoy Devyatinskiy Pereulok No. 8, 121099 Moscow.

The mailing address is PSC-77, APO AE (09721).

U. S. Embassy Russia Home Page
http://moscow.usembassy.gov

Vessel Traffic Service

Vessel Traffic Services are in operation, as follows:

1. Arkhangelsk [1] (64°32'N., 40°31'E.).
2. Murmansk[1] (69°03'N., 33°03'E.).
3. Saint Petersburg (Sankt Petersburg) Coastal VTS [2] (60°09'N., 28° 24'E.).
4. Saint Petersburg (Sankt Petersburg) [2] (60°09'N., 28° 24'E.).
5. Vyborg (including Vostok) [2] (60°42'N., 28°44'E.).
6. Ust-Luga [2] (59°40'N., 28°19'E.).
7. Kaliningrad [2] (54°42'N., 20°27'E.).
8. Primorsk [2] (60°20'N., 28°43'E.).
9. Zaliv Petra Velikogo (Peter the Great) [3] (42°38'N., 131°55'E.).
10. Nakhodka [3] (42°49'N., 132°54'E.).
11. Vladivostock [3] (43°05'N., 131°52'E.).
12. Zaliv Aniva (Korsakov and the Prigorodnoye Terminal) [3] (46°35'N., 142°50'E.) .
13. Vanino [3] (49°05'N., 140°17'E.).
14. Novorossiysk [4] (44°43'N., 37°48'E.).
15. Sochi [4] (43°35., 39°43.).
16. Tuapse [4] (44°05., 39°04.).
17. Taganrog (Sea of Azov, including Azov Port) [4] (47° 14'N., 38°57'E.).

[1] For further information, see Pub. 183, Sailing Directions (Enroute) North Coast of Russia.

[2] For further information, see Pub. 195 (Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

[3] For further information, see Pub. 155 (Sailing Directions (Enroute) East Coast of Russia.

[4] These Vessel Traffic Services are operated by ports in the Black Sea and the Sea of Azov. Further information on each VTS can be found, as follows:

1. Novorossiysk—See Appendix III.
2. Sochi—See Appendix IV.
3. Tuapse—See Appendix V.
4. Taganrog—See Appendix VI.

West Coast of Russia—Time Zones

Zone	City	Standard Time
1	Kaliningrad	BRAVO (-2)
2	Moscow, St. Petersburg, Arkhangelsk, Astrakhan, Izhevsk, Samara. Includes the Russian coasts of the Black Sea and the Sea of Azov.	CHARLIE (-3)

Appendix I—Regulated Navigation Areas (Baltic Sea)

Areas Prohibited for Navigation

Malyy Kronshtadtskiy

Area 69A—Area bounded by lines joining the following positions:

a. 59°58.13'N, 29°46.16'E.
b. 59°58.56'N, 29°46.16'E.
c. 59°58.25'N, 29°46.77'E.
d. 59°58.13'N, 29°46.77'E.

Area 69B—Area bounded by lines joining the following positions:

a. 59°58.22'N, 29°47.20'E.
b. 59°58.20'N, 29°47.10'E.
c. 59°58.47'N, 29°46.57'E.
d. 59°58.54'N, 29°46.78'E.

Northwest of Ostrov Vikrevoy

Area No. 71—Area bounded by the shoreline and lines joining the following positions:

a. 60°36.25'N, 28°23.29'E.
b. 60°34.39'N, 28°17.40'E.

Approaches to Proliv B'yerkezund

Area No. 73—Area bounded by the shoreline and lines joining the following positions:

a. 60°15.70'N, 28°55.00'E.
b. 60°15.70'N, 28°49.53'E.
c. 60°17.55'N, 28°45.50'E.
d. 60°19.15'N, 28°46.24'E.

Ostrov Seskar

Area No. 75—Area bounded by lines joining the following positions:

a. 59°59.3'N, 28°14.0'E.
b. 60°06.2'N, 28°14.0'E.
c. 60°01.8'N, 28°25.4'E.
d. 59°59.3'N, 28°25.4'E.

Northeast of Ostrov Malyy

Area No. KP3—Area bounded by the shoreline and lines joining the following positions:

a. 60°04.30'N, 28°03.70'E.
b. 60°06.00'N, 28°11.30'E.
c. 60°03.35'N, 28°13.40'E.
d. 60°01.65'N, 28°05.79'E.

Northeast of Mys Kurgal'skiy

Area No. 77—Area bounded by the shoreline and lines joining the following positions:

a. 59°44.5'N, 28°01.0'E.
b. 59°44.5'N, 28°00.0'E.
c. 59°52.5'N, 28°00.0'E.
d. 59°52.5'N, 28°10.0'E.
e. 59°47.5'N, 28°10.0'E.

West of Ostrov Moshchnyy

Area No. 78—Area bounded by lines joining the following positions:

a. 60°05.4'N, 27°34.0'E.
b. 60°00.5'N, 27°16.5'E.
c. 59°51.7'N, 27°26.5'E.
d. 59°56.7'N, 27°44.0'E.

Zaliv Hara Laht to Zaliv Muuga

Area bounded by the shoreline and lines joining the following positions:

a. 59°40.2'N, 25°42.7'E.
b. 59°40.7'N, 25°42.7'E.
c. 59°38.2'N, 25°11.9'E.
d. 59°34.4'N, 25°11.9'E.
e. 59°30.4'N, 25°00.4'E.

Zaliv Muuga to Tallinskiy Zaliv

Area bounded by the shoreline and lines joining the following positions:

a. 59°30.08'N, 24°54.96'E.
b. 59°35.35'N, 25°01.50'E.
c. 59°35.35'N, 25°06.86'E.
d. 59°37.63'N, 25°05.00'E.
e. 59°37.40'N, 25°02.10'E.

and the shoreline along the S and W coasts of Ostrov Pranglin to point f.

f. 59°38.70'N, 24°58.30'E.
g. 59°36.00'N, 24°43.90'E.
h. 59°34.90'N, 24°44.50'E.

and continuing along the shoreline to point i.

i. 59°34.30'N, 24°45.60'E.
j. 59°34.30'N, 24°47.90'E.

Ostrov Naissaar to Ostrov Osmussaar

Area bounded by the shoreline and lines joining the following positions:

a. 59°29.3'N, 24°42.5'E.
b. 59°32.5'N, 24°34.0'E.

then along the W coast of Ostrov Naissaar to point c.

c. 59°36.3'N, 24°30.9'E.
d. 59°37.7'N, 24°30.9'E.
e. 59°18.2'N, 24°21.7'E.

then along the E coast of Ostrov Osmussaar to point f.

f. 59°16.5'N, 23°24.7'E.
g. 59°13.7'N, 23°30.7'E.

Gulf of Gdansk—East Side

Area No. 104—Area bounded by the coastline and lines joining the following positions:

a. 54°43.6'N, 19°56.7'E.
b. 54°43.6'N, 19°53.0'E.
c. 54°44.1'N, 19°53.0'E.
d. 54°44.1'N, 19°57.0'E.

Area No. 107—Area bounded by the coastline and lines joining the following positions:

a. 54°38.05'N, 19°55.66'E.
b. 54°38.01'N, 19°55.38'E.
c. 54°38.04'N, 19°55.34'E.

Area No. 108—Area bounded by the coastline and lines joining the following positions:

a. 54°38.12'N, 19°55.31'E.

b. 54°38.14'N, 19°55.09'E.

Area No. 109—Area bounded by the coastline and lines joining the following positions:

a. 54°38.41'N, 19°54.68'E.
b. 54°38.40'N, 19°54.75'E.
c. 54°38.34'N, 19°54.74'E.
d. 54°38.34'N, 19°54.65'E.

Area No. 111—Area bounded by lines joining the following positions:

a. 54°39.0'N, 19°33.0'E.
b. 54°42.0'N, 19°33.0'E.
c. 54°42.0'N, 19°36.0'5.
d. 54°39.0'N, 19°36.5'E.

Areas Periodically Prohibited for Navigation Due to Firing Practices and Exercises

Gulf of Gdansk—East Coast

Area No. 117—Area bounded by lines joining the following positions:

a. 54°50.0'N, 19°25.0'E.
b. 55°54.0'N, 19°03.0'E.
c. 55°30.0'N, 20°15.0'E.
d. 55°04.0'N, 20°15.0'E.
e. 54°57.5'N, 20°06.0'E.
f. 54°57.5'N, 19°55.0'E.
g. 54°50.0'N, 19°50.0'E.

Area No. 117A—Area bounded by lines joining the following positions:

a. 54°50.0'N, 19°25.0'E.
b. 55°20.0'N, 19°15.0'E.
c. 55°20.0'N, 20°15.0'E.
d. 55°04.0'N, 20°15.0'E.
e. 54°57.5'N, 20°06.0'E.
f. 54°57.5'N, 19°55.0'E.
g. 54°50.0'N, 19°50.0'E.

Area No. 163—Area bounded by lines joining the following positions:

a. 54°46.4'N, 19°39.6'E.
b. 55°00.0'N, 19°39.6'E.
c. 55°00.0'N, 19°50.7'E.
d. 54°46.4'N, 19°50.7'E.

Area No. 161—Area bounded by lines joining the following positions:

a. 55°02.0'N, 19°39.6'E.
b. 55°09.5'N, 19°45.3'E.
c. 55°09.5'N, 20°00.0'E.
d. 55°02.0'N, 20°00.0'E.

Area No. 65—Area bounded by lines joining the following positions:

a. 54°50.3'N, 19°20.3'E.
b. 55°26.0'N, 19°03.0'E.
c. 55°26.0'N, 19°47.0'E.
d. 55°03.0'N, 19°35.0'E.
e. 54°46.4'N, 19°35.0'E.

Area No. 65A—Area bounded by lines joining the following positions:

a. 54°50.3'N, 19°20.3'E.
b. 55°09.0'N, 19°10.3'E.
c. 55°09.0'N, 19°38.1'E.
d. 55°03.0'N, 19°35.0'E.
e. 54°46.4'N, 19°35.0'E.

Area No. 65B—Area bounded by lines joining the following positions:

a. 55°09.0'N, 19°10.3'E.
b. 55°26.0'N, 19°03.0'E.
c. 55°26.0'N, 19°47.0'E.
d. 55°09.0'N, 19°38.1'E.

Area No. 42—Area bounded by lines joining the following positions:

a. 55°07.6'N, 20°08.0'E.
b. 55°20.0'N, 20°08.0'E.
c. 55°20.0'N, 20°30.0'E.
d. 55°07.6'N, 20°30.0'E.

Areas With Above and Underwater Navigational Dangers

Gulf of Gdansk—East Coast

Area No. 326—Area surrounding a wreck bounded by the coastline and the arc of a circle, with a radius of 1 mile, centered on position 54°55.55'N, 19°55.57'E.

Area No. 327—Area surrounding a drilling platform bounded by the arc of a circle, with a radius of 0.3 mile, centered on position 54°45.45'N, 19°46.65'E.

Area No. 328—Area surrounding a drilling platform bounded by the arc of a circle, with a radius of 0.3 mile, centered on position 55°18.40'N, 20°34.85'E.

Area No. 329—Area bounded by lines joining the following positions:

a. 54°46.80'N, 19°54.35'E.
b. 54°47.70'N, 19°54.35'E.
c. 54°47.70'N, 19°56.60'E.
d. 54°47.80'N, 19°56.60'E.

Areas Prohibited for Stopping, Anchoring, Fishing, Underwater and Dredging Operations, Navigating With a Trailing Anchor, and Underwater Explosions

Leningrad Guba

Area E of the meridian 29°E and bounded by the coast.

North of Zaliv Hara Laht

Area No. 160—Area bounded by lines joining the following positions:

a. 59°41.50'N, 25°27.30'E.
b. 59°45.50'N, 25°27.30'E.
c. 59°45.50'N, 25°35.20'E.
d. 59°40.00'N, 25°39.10'E.
e. 59°39.68'N, 25°36.62'E.

Viire Kurk

Area No. 185—Area bounded by the shoreline and lines joining the following positions:

a. 58°34.30'N, 23°23.55'E.
b. 58°34.45'N, 23°24.22'E.
c. 58°34.54'N, 23°30.62'E.
d. 58°33.62'N, 23°30.80'E.
e. 58°33.00'N, 23°24.45'E.

Bukhta Kihelkonna Laht

Area No. 187—Area bounded by the shoreline and lines joining the following positions:

a. 58°23.46'N, 21°54.13'E.
b. 58°24.00'N, 21°53.98'E.
c. 58°24.23'N, 21°54.80'E.
d. 58°24.58'N, 21°57.40'E.
e. 58°24.19'N, 21°58.01'E.
f. 58°23.47'N, 21°54.70'E.

Rizhskiy Zaliv

Area No. 193—Area bounded by 56°59.4'N and 56°59.1'N, the shoreline, and 24°05.9'E.

Approaches to Port Ventspils

Area No. 197—Area bounded by the shoreline and lines joining the following positions:

a. 57°24.33'N, 21°31.60'E.
b. 57°24.33'N, 21°31.45'E.
c. 57°26.20'N, 21°28.90'E.
d. 57°25.95'N, 21°25.80'E.
e. 57°26.65'N, 21°24.85'E.
f. 57°30.50'N, 21°29.20'E.
g. 57°30.50'N, 21°25.10'E.
h. 57°24.30'N, 21°20.00'E.
i. 57°19.50'N, 21°27.73'E.

Southwest of Mys Taran

Area No. 159—Area bounded by the shoreline and lines joining the following positions:

a. 54°27.6'N, 19°38.5'E.
b. 54°36.0'N, 19°25.0'E.
c. 54°45.0'N, 19°37.0'E.
d. 54°57.6'N, 19°37.0'E.
e. 54°57.6'N, 19°58.6'E.

Area No. 161—Area bounded by the shoreline and lines joining the following positions:

a. 54°38.52'N, 19°52.53'E.
b. 54°38.72'N, 19°52.82'E.
c. 54°38.40'N, 19°53.43'E.
d. 54°38.20'N, 19°53.12'E.

Nevskaya Guba

Area No. 241—Area bounded by lines joining the following positions:

a. 59°56.6'N, 29°55.0'E.
b. 59°57.6'N, 29°55.0'E.
c. 59°57.2'N, 29°57.5'E.
d. 59°56.2'N, 29°57.5'E.

Note.—Vessels not engaged in fishing are prohibited from this area.

Explosives Dumping Areas

North of Ostrov Narvi

Area No. 210—A circular area with a radius of 0.5 mile and centered on position 60°17'N, 27°57'E.

North of Naissaar

Area No. 211—Area bounded by lines joining the following positions:

a. 59°42.5'N, 24°23.8'E.
b. 59°43.0'N, 24°26.8'E.
c. 59°40.4'N, 24°30.3'E.
d. 59°40.0'N, 24°27.3'E.

Northeast of Osmussaar

Area No. 179—A circular area with a radius of 3.7 miles and centered on position 59°20.1'N, 23°32.2'E.

East of Abruka Saar

Area No. 212—Area bounded by lines joining the following positions:

a. 58°09.8'N, 22°51'E.
b. 58°09.8'N, 22°53'E.
c. 58°08.3'N, 22°53'E.
d. 58°08.3'N, 22°51'E.

Southwest of Liepaja

Area No. 213 —A circular area with a radius of 0.5 mile and centered on position 56°21.8'N, 19°45.0'E.

Area No. 214—Area bounded by lines joining the following positions:

a. 56°16'N, 18°39'E.
b. 56°16'N, 18°51'E.
c. 56°20'N, 18°55'E.
d. 56°20'N, 19°31'E.
e. 56°07'N, 19°15'E.
f. 55°56'N, 19°15'E.
g. 55°56'N, 18°39'E.

Appendix II—Regulated Navigation Areas (Black Sea and the Sea of Azov)

Caution.—Many Regulated Navigation Areas are not charted. Information on those areas described as having unknown boundaries should be obtained from local authorities.

Areas Prohibited for Navigation

Novorossiyskaya Bukhta

Area 113—Area bounded by the shoreline and lines joining the following positions:

a. 44°42'36"N, 37°47'10"E. (shore)
b. 44°42'36"N, 37°48'08"E.
c. 44°42'13"N, 37°47'21"E.
d. 44°42'13"N, 37°46.77'E. (shore)

Mys Penay

Area No. 146—Area bounded by lines joining the following positions:

a. 44°40'42"N, 37°52'41"E.
b. 44°40'42"N, 37°52'58"E.
c. 44°40'32"N, 37°52'58"E.
d. 44°40'32"N, 37°52'41"E.

Northwest of Mys Vylazki (Sea of Azov)

Area No. 157—A circular area with a radius of 2 miles and centered on position 46°47.0'N, 38°03.9'E.

Southwest of Bukhta Gelendzhikskaya

Area No. 133—A circular area with a radius of 0.4 mile and centered on position 44°30.4'N, 37°58.7'E.

Note.—For **Areas Prohibited for Navigation** off the Black Sea and Sea of Azov coasts of Ukraine, see **Ukraine—Regulated Areas**.

Areas Prohibited for Stopping, Anchoring, Fishing, Underwater and Dredging Operations, Navigating With a Trailing Anchor, and Underwater Explosions

Mouth of the Reka Ozyereyka

Area No. 647—Area bounded by the shoreline and the seaward portion of a circular area with a radius of about 0.2 mile and centered on position 44°40'08"N, 37°37'31"E.

Mys Myskhako to Mys Doob (Approaches to Novorossiyskaya Bukhta)

Area No. 648—Area bounded by lines joining the following positions:

a. 44°38.9'N, 37°44.2'E.
b. 44°37.9'N, 37°43.7'E.
c. 44°35.5'N, 37°45.9'E.
d. 44°35.5'N, 37°52.9'E.
e. 44°36.4'N, 37°54.4'E.
f. 44°37.9'N, 37°54.4'E.

Novorossiyskaya Bukhta

Area No. 649—Area bounded by the shoreline and lines joining the following positions:

a. 44°43'01.0"N, 37°50'11.2"E. (shore)
b. 44°42'17.5"N, 37°48'59.7"E.
c. 44°41'23.2"N, 37°49'36.6"E.
d. 44°41'23.2"N, 37°52'09.3"E. (shore)

Bukhta Imeretinskaya

Area No. 650—Area of unknown boundaries in the vicinity of position 43°23'N, 39°58'E.

Gelendzhikskaya Bukhta

Area No. 651—Area of unknown boundaries in the vicinity of position 44°34'N, 38°04'E.

Approaches to Arkhipo-Osipovka

Area No. 652—Area bounded by lines joining the following positions:

a. 44°19.9'N, 38°36.5'E.
b. 44°18.0'N, 38°34.9'E.
c. 44°16.2'N, 38°31.7'E.
d. 44°19.1'N, 38°24.1'E.
e. 44°21.3'N, 38°27.1'E.

Bukhta Dzhubga

Area No. 653—Area of unknown boundaries in the vicinity of position 44°18'N, 38°43'E.

Golendzhiskaya Bukhta

Area No. 661—Area of unknown boundaries in the vicinity of position 44°32'N, 38°01'E.

South of Novorossiyskaya Bukhta

Area No. 664—Area bounded by lines joining the following positions:

a. 44°32.4'N, 37°52.9'E.
b. 44°27.3'N, 37°42.5'E.
c. 44°21.5'N, 37°57.0'E.
d. 44°21.8'N, 37°57.4'E.

Bukhta Rybatskaya

Area No. 666—Area bounded by the shoreline and lines joining the following positions:

a. 44°34.5'N, 37°58.5'E. (shore)
b. 44°34.3'N, 37°57.9'E.
c. 44°34.2'N, 37°58.0'E.
d. 44°33.7'N, 37°58.9'E.
e. 44°33.9'N, 37°59.1'E.
f. 44°34.1'N, 37°59.0'E. (shore)

West of Mys Myskhako

Area No. 670—Area bounded by the shoreline and lines joining the following positions:

a. 44°40'08"N, 37°39'22"E. (shore)
b. 44°37'15"N, 37°41'37"E.
c. 44°36'00"N, 37°40'25"E.
d. 44°36'36"N, 37°35'01"E.
e. 44°38'14"N, 37°34'58"E.
f. 44°40'12"N, 37°38'07"E. (shore)

Approaches to Novorossiyskaya Bukhta

Area No. 671—A circular area with a radius of 0.27 mile and centered on position 44°35'57.5"N, 37°52'47.2"E.

Note.—For **Areas Prohibited for Stopping, Anchoring, Fishing, Underwater and Dredging Operations, Navigating With a Trailing Anchor, and Underwater Explosions** off the Black Sea and Sea of Azov coasts of Ukraine, see **Ukraine—Regulated Areas**.

Areas Temporarily Dangerous to Navigation

West of Mys Anapskiy

Area No. 744—Area bounded by lines joining the following approximate positions:

a. 44°46.5'N, 36°52.0'E.
b. 44°57.5'N, 36°52.0'E.
c. 44°53.5'N, 37°15.0'E.
d. 44°42.0'N, 37°20.0'E.

Southwest of Novorossiyskaya Bukhta

Area No. 745—Area of unknown boundaries in the vicinity of position 44°28'N, 37°08'E.

Area No. 746—Area of unknown boundaries in the vicinity of position 44°27'N, 37°01'E.

Area No. 747—Area of unknown boundaries in the vicinity of position 44°30'N, 37°10'E.

Area No. 748—Area of unknown boundaries in the vicinity of position 44°23'N, 37°00'E.

Area No. 749—Area of unknown boundaries in the vicinity of position 44°30'N, 37°24'E.

South of Novorossiyskaya Bukhta

Area No. 750—Area of unknown boundaries in the vicinity of position 44°11'N, 37°53'E.

Area No. 751—Area of unknown boundaries in the vicinity of position 44°06'N, 37°48'E.

Area No. 752—Area of unknown boundaries in the vicinity of position 44°21'N, 37°47'E.

Southwest of Gelendzhikskaya Bukhta

Area No. 753—Area bounded by lines joining the following positions:

a. 44°32'30"N, 37°52'55"E.
b. 44°33'54"N, 37°54'19"E.
c. 44°32'18"N, 37°59'43"E.
d. 44°30'30"N, 37°57'55"E.

Note.—For **Areas Temporarily Dangerous to Navigation** off the Black Sea and Sea of Azov coasts of **Ukraine, see Ukraine—Regulated Areas**.

For **Areas Temporarily Dangerous to Navigation** off the Black Sea coast of Georgia, see **Georgia—Regulated Areas.**

Area Used Periodically for Fleet Exercises

Taganrogskiy Zaliv (Sea of Azov)

Area No. 763—Area bounded by the shoreline and lines joining the following positions:

a. 46°39.5'N, 37°47.2'E. (shore)
b. 46°45.9'N, 37°45.4'E.
c. 46°53.5'N, 37°58.3'E.
d. 46°42.7'N, 38°15.4'E. (shore)

Note.—For **Areas Used Periodically for Fleet Exercises** off the Black Sea coast of Ukraine, see **Ukraine—Regulated Areas**.

Explosives Dumping Areas

Southeast of Kerchenskiy Proliv

Area No. 87—A circular area with a radius of 1 mile and centered on position 44°40.2'N, 36°44.7'E.

Area No. 88—Area bounded by lines joining the following positions:

a. 44°34.0'N, 36°46.7'E.
b. 44°34.0'N, 36°54.1'E.
c. 44°28.8'N, 36°54.1'E.
d. 44°28.8'N, 36°46.7'E.

Southeast of Novorossiyskaya Bukhta

Area No. 89—Area bounded by lines joining the following positions:

a. 45°32.0'N, 37°40.0'E.
b. 45°32.0'N, 37°46.2'E.
c. 44°29.0'N, 37°46.2'E.
d. 44°29.0'N, 37°40.0'E.

Southwest of Port Tuapse

Area No. 90—Area bounded by lines joining the following positions:

a. 44°05.3'N, 38°46.0'E.
b. 44°05.3'N, 38°50.0'E.
c. 44°02.3'N, 38°50.0'E.
d. 44°02.3'N, 38°46.0'E.

Area No. 91—Area bounded by lines joining the following positions:

a. 43°57.0'N, 38°54.0'E.
b. 43°57.0'N, 39°00.0'E.
c. 43°53.7'N, 39°00.0'E.
d. 43°53.7'N, 38°54.0'E.

Note.—For **Explosives Dumping Areas** off the Black Sea coast of Ukraine, see **Ukraine—Regulated Areas**.

For **Explosives Dumping Areas** off the Black Sea coast of Georgia, see **Georgia—Regulated Areas**.

Appendix III—Novorossiyak Vessel Traffic Service

The Novorossiyak VTS Operation Zone is bounded by lines joining the following positions:

a. 44°32'16.2"N, 38°04'24.0"E.
b. 44°30'27.0"N, 38°01'55.2"E.
c. 44°36'42.0"N, 37°34'00.0"E.
d. 44°40'34.2"N, 37°34'00.0"E.

The VTS Center can be contacted, as follows:

1. Call sign: Novotraffic Control
2. VHF: VHF channels 9, 11, 16, and 68
3. Telephone: 7-8-8617-676422
   7-8-8617-602847
   7-8-8617-676425
4. Facsimile: 7-8-8617-676427

Vessels should request permission from the VTS Center to enter the VTS Operation Zone 15 minutes prior to arrival. If entry into the zone is delayed by more than 15 minutes, another request should be made. The initial request message should contain the following information:

1. Vessel's name, flag, and type.
2. MMSI Number.
3. ETA at the VTS area.
4. Maximum speed when maneuvering.
5. Port of destination and agent's name.
6. Maximum actual draft.
7. Dangerous cargo on board.
8. Number of crewmembers and passengers on board.
9. State of main engine, steering gear, and radar equipment.
10. Any limitations in vessel operations.

Vessels should maintain continuous listening watches on VHF channels 9 and 16 while within the VTS Operation Zone.

An operational completion message (berthing, anchoring, weighing anchor, etc.) should be sent to the VTS Center no less than 3 to 5 minutes in advance.

When malfunctions affecting the safety of navigation occur or contact with the VTS Center is lost, the vessel should notify the VTS Center by any means available and leave the range line, cast the anchor, or drift. To resume passage, the vessel must contact the VTS Center to report the correction of the malfunctions and to request permission to continue further navigation.

Appendix IV—Sochi Vessel Traffic Service

The Sochi VTS Operation Zone is bounded by the arc of a circle, with a radius of 5.3 miles, centered on position 43°34.9'N, 39°43.2'E and radii drawn from this position in the directions of 151° and 295°. The area also includes the inner harbor.

The VTS provides the following information and services:

1. Issues permission for vessels to enter the VTS operational area, to leave a berth, or to weigh anchor.
2. Designates traffic priority, order, and route.
3. Assists in establishing communications between vessels and shore organizations.
4. Issues information and instructions to vessels on detecting a potential accident situation, violation of rules, shifting of vessels from the anchorage, displacement of aids to navigation from official positions, and in other cases affecting the safety of vessel navigation.
5. Provides radar pilotage of vessels during which the VTS operator constantly transmits a vessel's route coordinates, deviation from the fairway centerline, and the distance and time to the nearest waypoint or conspicuous landmark.
6. Ensures that a vessels arrives at the anchoring location.

The VTS Center can be contacted, as follows:

1. Call sign: Sochi Traffic Control
2. VHF: VHF channels 11 and 14
3. Telephone: 7-8-8622-922714

Participation in the VTS is mandatory for all vessels. The VTS communicates in both English and Russian.

Vessels must contact Sochi VTS 1 hour before entering the VTS area on VHF channel 14. The message should contain the following information:

1. Vessel's name.
2. Beam, freeboard, draft (fore and aft), and loa.
3. Time of arrival at the VTS operational area.
4. Maximum and minimum speed in maneuvering mode and engine power.
5. Agent's name.
6. The presence of deck cargo.
7. The presence of dangerous cargo and its IMDGC classification.
8. The condition of the vessel's equipment and systems affecting vessel's maneuvering and safety.
9. Port of departure.

Vessels must follow the instructions provided by the VTS concerning the following:

1. Priority of movement.
2. Route.
3. Speed.
4. Anchorage locations.
5. Prohibition of movement.
6. VHF radio watch.
7. The transmission of information on maneuvers or actions proposed or in progress.

Vessels must repeat VTS instructions which directly relate to it and, if unable to comply, state the reason and further intentions.

Vessels should maintain continuous listening watches on VHF channels 14 and 16 while at anchor in the anchorage area and in the harbor.

Vessels must not change anchorage or shift within the port area without obtaining permission from the VTS.

Appendix V—Tuapse Vessel Traffic Service

The Tuapse VTS Operation Zone is bounded on the NE by the coast and by lines joining the following positions:

a. 44°10'33.0"N, 38°56'22.8"E.
b. 44°06'40.8"N, 38°51'09.0"E.
c. 43°58'19.8"N, 39°03'01.8"E.
d. 44°02'13.8"N, 39°08'19.8"E.

The area also includes the inner harbor.

The tasks of the VTS are:

1. To ensure the safety of navigation in the VTS operational area.
2. To improve the efficiency of shipping and port operations.
3. To assist in the preservation of life at sea and the protection of the environment.

The main functions of the VTS are:

1. Organizing vessel traffic.
2. Monitoring vessel traffic and the position of vessels in anchorages.
3. Transmitting navigational, meteorological, operational, and other information to vessels.
4. Providing assistance to navigation.

The VTS controls traffic by transmitting mandatory instructions concerning:

1. Entry into the VTS operational area.
2. Traffic priority and routing.
3. Speed and distance between vessels.
4. Locations for anchoring and berthing.
5. Permission to leave a berth, weigh anchor, or start/end a movement.

The VTS Center can be contacted, as follows:

1. Call sign: Tuapse Traffic Control
2. VHF: VHF channel 10

Participation in the VTS is mandatory for all vessels.

Entering or departing the port, anchoring or weighing anchor, and mooring operation are prohibited without VTS permission.

Permission to move within the inner waters of the port is effective for 5 minutes after receipt of permission. If the movement has not begun within the 5-minute window, a new request for permission to move shall be made.

Vessels must contact Tuapse VTS 1 hour before entering the VTS area on VHF channel 10. The message should contain the information listed in the accompanying table.

Vessels must repeat VTS instructions which directly relate to it and, if unable to comply, state the reason and further intentions.

ID	Information Required
A	Vessel's name, call sign, flag, IMO number, and MMSI
C	Position of vessel (latitude/longitude). Either C or D may be used
D	Position of vessel (range/bearing from landmark). Either C or D may be used
G	Port of departure
I	Port of destination and ETA
O	Draft
P	Type and amount of cargo
Q	Existence of any restrictions affecting the maneuverability of the vessel
T	Agent
U	Beam, freeboard, and loa
W	Number of crew and passengers

Navigational assistance is provided by the VTS on VHF channel 10. The commencement and termination of assistance is based on agreement between the VTS and the vessel's master. The VTS will provide regular transmissions to the vessel of the following information:

1. The position of the vessel in relation to a navigational landmark, the fairway (any deviation from the centerline), and waypoints.
2. The track angle and actual speed of the vessel.
3. The positions and intentions of other vessels.
4. Recommendations on altering course and speed.

Vessels receiving navigational assistance must maintain a continuous listening watch on VHF channels 10.

In the event of failure of the main engine or steering gear, or in the event of situations arising which prevent movement, the master of the vessel must, taking into account prevailing conditions and situations, immediately report to the VTS and take all possible steps to ensure the safe movement of other vessels.

The master of a vessel observing drifting of another vessel lying at anchor must immediately notify the VTS.

Appendix VI—Taganrog Vessel Traffic Service

The Taganrog VTS Operation Zone includes the waters of the Gulf of Taganrog (Taganrogskiy Zaliv) bounded by the shoreline and extending E from meridian 38°14.0'E to its intersection with parallel 46°53.2'N, then along this parallel to Sazalnikskaya Kosa. The E boundary of the area is defined by meridian 39°13.0'E.

The tasks of the VTS are:

1. To ensure the safety of navigation in the VTS operational area.
2. To improve the efficiency of shipping and port operations.
3. To assist in the preservation of life at sea and the protection of the environment.

The VTS Center can be contacted, as follows:

1. Call sign: Taganrog Traffic Control
2. VHF: VHF channels 16, 68, and 74

Port State Control can be contacted, as follows:

1. Call sign: Taganrog Radio 1
2. VHF: VHF channels 16 and 69

Azov Port State Control can be contacted, as follows:

1. Call sign: Azov Portnadzor
2. VHF: VHF channels 16 and 71

Participation in the VTS is mandatory for all vessels.

Vessels entering the VTS operational area from the Sea of Azov (Azovskoye More) in an E direction must contact the VTS on VHF channel 74 to obtain confirmation of identification. Permission to enter the VTS operational area is to be requested when crossing the meridian of Kryva Kosa (38°14.0'E.).

Vessels proceeding into the Gulf of Taganrog (Taganrogskiy Zaliv) from the River Don must, before entering the VTS operational area, contact the VTS on VHF channel 74 to obtain confirmation of identification. Permission to enter the VTS operational area is to be requested when passing the River Don "0" kilometer marker. The boundary for reporting entry into the VTS operational area is 39°13'E.

Vessels entering the VTS operational area without having established VHF communication with the VTS are considered to be in distress. Such vessels may be provided with assistance at the discretion of the harbormaster, with any costs charged to the vessel's owner.

Vessels must maintain a continuous listening watch on VHF channel 74.

Should a vessel's radio equipment fail, vessels must move out of the traffic lane, lie adrift or at anchor, and take steps to establish communications with the VTS and Port State Control.

Within the VTS operational area, vessels must implement Port State Control instructions concerning:

1. The order in which movement is commenced.
2. Route and speed.
3. Anchorage location.
4. Transmission of requested information.
5. Implementation of an identification procedure on request from the VTS.
6. Maintenance of a continuous listening watch on the indicated VHF channels.

Vessels must repeat all Port State Control instructions which directly relate to it and, if unable to comply, state the reason and further intentions.

Permission for vessels to commence movements within the VTS operational area is effective for 30 minutes after receipt of permission. If the movement has not begun within the 30-minute window, a new request for permission to move shall be made.

Vessels must obtain permission to enter the Taganrog Approach Channel (TAC) in advance from Port State Control.

Vessels must obtain permission to enter the Azov-Don Sea Canal (ADSC) in advance from Azov Port State Control.

Vessels must advise the VTS and Port State Control of the actual time of departure from a berth, the actual time of anchoring, and the actual time of weighing anchor.

When entering and departing from Taganrog port, vessels must obtain permission to commence movement from Port State Control, with subsequent communications via the VTS.

Vessels not complying with VTS instruction for safety reasons must immediately notify the VTS and make an entry in the vessel's log.

Navigational assistance to vessels is provided by the VTS by regularly transmitting the following information:

1. The position of the vessel in relation to a navigational landmark, the fairway (any deviation from the centerline), and waypoints.
2. The track angle and actual speed of the vessel.
3. The positions and intentions of other vessels.
4. Recommendations on altering course and speed.

SAINT BARTHELEMY

General	**541**
Buoyage System	**541**
Currency	**541**
Government	**541**
Holidays	**541**
Industries	**542**
Languages	**542**
Navigational Information	**542**
Regulations	**542**
Search and Rescue	**542**
Ship Reporting System	**542**
Time Zone	**542**
U.S. Embassy	**542**

General

Saint Berthelemy is a hilly island almost completely surrounded by shallow reefs.

The island has a tropical climate with almost no variation in temperature. It has two distinct season—dry season and the humid season.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Government

Flag of Saint Barthelemy

Saint Berthelemy is an overseas collectivity of France. The island elects one senator to the French Senate.

Saint Berthelemy is governed by the president of the Territorial Council, who is elected by the members of the Territorial Council to a 5-year term. The unicameral directly-elected Territorial Council consists of 19 members serving 5-year terms.

The legal system is based on French law.

The capital is Gustavia.

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable

Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
May 8	World War II Victory Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
July 14	Bastille Day
August 15	Assumption Day
August 24	Saint Barthelemy Day
November 1	All Saints' Day
November 11	Armistice Day
December 25	Christmas Day

Industries

The main industries are high-end tourism and duty-free luxury commerce.

The main imports are food, energy resources, and manufactured goods.

Languages

French is the official language.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Saint Barthelemy are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines.

Regulations

Vessels in transit or stationary within the territorial waters, except when alongside in port, should maintain a continuous listening watch on VHF channel 16 and respond to calls by official vessels and French coast radio stations.

Vessels over 1,600 grt must remain at least 10 miles off the coast of Saint Barthelemy, except when in waiting areas or when using approach or access channels.

Search and Rescue

See **Martinique—Search and Rescue**.

Ship Reporting System

The SURNAV system is intended to prevent accidental pollution in the territorial waters of Saint Barthelemy as well as in the waters within 50 miles of the coast of Saint Barthelemy.

For further information, see **Martinique—Ship Reporting System**.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

Saint Barthelemy is an overseas collectivity of France. There is no diplomatic representation.

SAINT MARTIN

General	**543**
Buoyage System	**543**
Currency	**543**
Government	**543**
Holidays	**544**
Industries	**544**
Languages	**544**
Navigational Information	**544**
Regulations	**544**
Search and Rescue	**544**
Ship Reporting System	**544**
Time Zone	**544**
U.S. Embassy	**544**

General

Saint Martin is the smallest landmass in the world shared by two independent states. The N side of the island is French territory while the S side of the island is a territory of the Netherlands.

The subtropical climate of the islands is marked by low humidity, gentle trade winds, and brief intense rain showers. Termperatures average 27-30°C year round:

Saint Martin lies in the hurricane belt. The hurricane season is from July until November.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Government

Flag of Saint Martin

Saint Martin is an overseas collectivity of France. The island elects one senator to the French Senate.

Saint Martin is governed by the president of the Territorial Council, who is elected by the members of the Territorial Council to a 5-year term. The unicameral directly-elected Territorial Council consists of 23 members serving 5-year terms.

The legal system is based on French law.

The capital is Marigot.

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
May 8	World War II Victory Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
July 12	Schoalcher Day (Slavery Abolition Day)
July 14	Bastille Day
August 15	Assumption Day
November 1	All Saints' Day
November 11	Armistice Day
December 25	Christmas Day

Industries

The main industries are touris, light industry and manufacturing, and heavy industry.

The main imports are petroleum, food, and manufactured items.

Languages

French is the official language.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Saint Martin are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines.

Regulations

Vessels in transit or stationary within the territorial waters, except when alongside in port, should maintain a continuous listening watch on VHF channel 16 and respond to calls by official vessels and French coast radio stations.

Vessels over 1,600 grt must remain at least 10 miles off the coast of Saint Martin, except when in waiting areas or when using approach or access channels.

Search and Rescue

See **Martinique—Search and Rescue**.

Ship Reporting System

The SURNAV system is intended to prevent accidental pollution in the territorial waters of Saint Martin as well as in the waters within 50 miles of the coast of Saint Martin.

For further information, see **Martinique—Ship Reporting System**.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

Saint Martin is an overseas collectivity of France. There is no diplomatic representation.

SENEGAL

General	**545**
Buoyage System	**545**
Cautions	**545**
Currency	**545**
Government	**545**
Holidays	**546**
Industries	**546**
Languages	**546**
Navigational Information	**546**
Regulations	**546**
Search and Rescue	**546**
Time Zone	**546**
U.S. Embassy	**546**

General

Senegal lies less than 1,700 miles from the E bulge of Brazil. It borders Mauritania, Mali, Guinea, and Guinea-Bissau; Gambia forms a narrow extension into Senegal from the Atlantic Ocean for a distance of about 200 miles.

Most of the country is low plateau or plain, generally sloping toward the Atlantic Ocean. The greatest altitudes, which are about 488m, lie in the SE. Four major west-flowing rivers drain the country.

Climate varies from the desert to wet tropics. The coastal region has low rainfall and high humidity. The wet season is from May to November, being shorter in the N and longer in the S. The dry season, December to April, is dominated by hot, dry, harmattan wind.

The rainfall varies from 350mm in the N to 1,525mm in the S. Temperatures vary within the range of 24°C to 38°C, the highest being in the NE.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation in Senegal are unreliable. Lights may be extinguished; buoys and beacons may be missing, unlit, or out of position.

Cautions

Fishing vessels may be encountered off the entire coast of Senegal.

Currency

The official unit of currency is the Communaute Financiere Africaine franc (CFA franc), consisting of 100 centimes.

Government

Senegal is a republic under multi-party democratic rule. The country is divided into 14 regions.

Senegal is governed by a directly-elected President who serves for not more than two 5-year terms. The President appoints a Prime Minister. The Council of Ministers is appointed by the Prime Minister in consultation with the President. The bicameral Parliament consists of the 150-member National Assembly (90 directly-elected members and 60 members elected under a system of proportional representation from party lists) serving 5-year terms and a 100-member Senate (35 indirectly-elected members and 65 members appointed by the President).

The legal system is based on French civil law.

Flag of Senegal

The capital is Dakar.

Holidays

The following holidays are observed:

January 1	New Year's Day
April 4	Independence Day
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
August 15	Assumption Day
November 1	All Saints Day
December 25	Christmas Day

Islamic holidays, which are subject to the appearance of the moon, include Tabaski (Eid Al-Adha), Korite (Eid Al-Fitr), Tamkharit (Islamic New Yera), and the Prophet's Birthday.

Industries

The main industries are agriculture, fish processing, phosphate mining, fertilizer production, petroleum refining, construction materials, and ship construction and repair.

The main exports are fish, peanuts, petroleum products, phosphates, and cotton. The main export-trading partners are Mali, India, France, Italy, and Gambia.

The main imports are food and beverages, capital goods, and fuels. The main import-trading partners are France, Nigeria, and the United Kingdom.

Languages

French is the official language. Wolof, Pular, Jola, and Mandinka are also spoken.

Navigational Information

Enroute Volume

Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Maritime Claims

The maritime territorial claims of Senegal are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Claims straight baselines.

Regulations

Quarantine

Quarantine messages should be sent to Dakar 18 hours to 4 hours prior to arrival. The messages should be sent so they arrive from 0900 to 1230 or from 1500 to 1800, public holidays excluded.

Search and Rescue

The Maritime Rescue Coordination Center (MRCC) at Dakar can be contacted, as follows:

1. Telephone: 221-338-692326
2. Facsimile: 221-338-200600
   221-338-265000
3. E-mail: ccsdakar@yahoo.fr

Dakar Coast Radio Station (6VA) maintains a continuous listening watch for distress traffic on VHF channel 16.

Time Zone

The Time Zone description is ZULU. Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at Avenue Jean XXIII at the corner of Rue Kleber, Dakar.

The mailing address is B. P. 49, Dakar.

U. S. Embassy Senegal Home Page
http://dakar.usembassy.gov

SIERRA LEONE

General	**547**
Buoyage System	**547**
Cautions	**547**
Currency	**547**
Government	**547**
Holidays	**548**
Industries	**548**
Languages	**548**
Navigational Information	**548**
Search and Rescue	**548**
Time Zone	**548**
U.S. Embassy	**548**

General

Sierra Leone is at the SW extremity of the great African bulge. It borders Guinea and Liberia and faces the Atlantic Ocean on the SW for about 220 miles.

Leaving the low lying coastal plain one proceeds to rolling country to upland plateau and mountain ranges with some elevations exceeding 1,830m in the NE.

Temperatures and humidity are high with heavy rainfall. There are two distinct seasons, with the dry season lasting from December to March and the wet season lasting for the rest of the year.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation in Sierra Leone are unreliable. Lights may be extinguished; buoys and beacons may be missing, unlit, or out of position.

Cautions

Fishing vessels, many of which may be unlit, may be encountered off the entire coast of Sierra Leone.

Special Warning 119 (Issued 16 March 2001)

1. Mariners are strongly advised not to use any ports in Sierra Leone except for the port of Freetown, which is currently considered to provide safe harborage. Mariners should note that the Department of State warns U.S. citizens against travel to Sierra Leone. Although the security situation in Freetown has improved somewhat, areas outside the capital are still dangerous.

2. The Department of State has terminated the ordered departure status of U.S. Government personnel in non-emergency positions. The U.S. Embassy in Freetown currently operates with a reduced staff. Only emergency consular services to U.S. citizens are available, and the Embassy's ability to provide these services is limited. U.S. citizens in Sierra Leone should review their own personal security situations in determining whether to remain in the country.

Currency

The official unit of currency is the leone, consisting of 100 cents.

Government

Sierra Leone is a constitutional democracy. The country is divided into three provinces and one area.

Sierra Leone is governed by a directly-elected president who serves for not more than two 5-year terms. The Ministers of

Flag of Sierra Leone

State are appointed by the President. The unicameral Parliament is composed of 124 members serving 5-year terms; 112 members are directly-elected, while the remaining 12 members are appointed.

The legal system is based on English law and customary local law.

The capital is Freetown.

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Holy Saturday	Variable
Easter Sunday	Variable
Easter Monday	Variable
April 27	Republic Day
December 25	Christmas Day
December 26	Boxing Day

Islamic holidays, which are subject to the appearance of the moon, include Eid Al-Fitr (End of Ramadan), Tabaski (Islamic New Year), Eid Al-Adha, and the Prophet's Birthday.

Industries

The main industries are agriculture, diamond mining, small-scale manufacturing, petroleum refining, and small-ship repair.

The main exports are diamonds, rutile (a titanium mineral), cocoa, coffee, and fish. The main export-trading partners are Belgium, the United States, and the Netherlands.

The main imports are foodstuffs, machinery and equipment, fuels, lubricants, and chemicals. The main import-trading partners are Ivory Coast, the United Kingdom, the United States, China, and the Netherlands.

Languages

The languages of the country are English (official, regular use limited to literate minority), Mende (principal vernacular in the S), Temne (principal vernacular in the N), and Krio (English-based Creole).

Navigational Information

Enroute Volume

Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Maritime Claims

The maritime territorial claims of Sierra Leone are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Requires advance permission or notification for innocent passage of warships in the territorial sea.

Search and Rescue

The Sierra Leone Ports Authority is responsible for coordinating search and rescue operations.

Time Zone

The Time Zone description is ZULU. Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at Southridge-Hill Station, Freetown.

The mailing address is the same as street address.

U. S. Embassy Sierra Leone Home Page
http://freetown.usembassy.gov

SINT MAARTEN

General	**549**
Buoyage System	**549**
Currency	**549**
Government	**549**
Holidays	**550**
Industries	**550**
Languages	**550**
Navigational Information	**550**
Pilotage	**550**
Regulations	**550**
Search and Rescue	**550**
Signals	**550**
Time Zone	**550**
U.S. Embassy	**551**

General

Sint Maarten is the Dutch part of the island of Saint Martin, It is located on the S part of the island while the French part of the island is on the N.

The tropical maritime climate is eased by the Northeast Trade Winds, resulting in moderate termperatures. The average annual rainfall is about 150 cm. The hurrican season is from July to November.

The volcanic terrain is low and hilly.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Netherlands Antilles guilder (also known as the gulden or the florin), consisting of 100 cents.

Government

Sint Maarten is an integral part of the Kingdom of the Netherlands. It are fully autonomous concerning internal affairs. The Dutch government is responsible for defense and foreign affairs.

Sint Maarten is governed by a Governor-General, appointed by the Queen for a 6-year term following legislative elections. The unicameral Staten is composed of 15 directly-elected members serving 4-year terms.

The legal system is based on Dutch civil law, with some English common law influence.

The capital is Phillipsburg.

Flag of Sint Maarten

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
April 30	Queen's Birthday
May 1	Labor Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
July 1	Emancipation Day
July 2	Flag Day
Last Monday in July	Carnival Day
November 11 *	Sint Maarten Flag Day
December 25	Christmas Day
December 26	Boxing Day

* Local holiday celebrated on indicated island.

Industries

The main industries include tourism, light industry, and manufacturing.

The main export is sugar. The main export-trading partners are China, the United States, and Japan.

The main imports are crude oil, food, and manufactured goods. The main import-trading partners are China, Japan, the United States, and Brazil.

Languages

Dutch is the official language, although Papiamento, a Spanish-Portuguese-Dutch-English dialect, predominates. English is also widely understood.

Navigational Information

Enroute Volumes

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of Sint Maarten are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	To median lines.

* Claims straight baselines. Requires advance permission or notification for innocent passage of warships in the territorial sea.

Pilotage

Pilotage is essential at all ports for anchoring and berthing alongside.

Regulations

Vessels carrying dangerous cargo must obtain special permission before entering any port. Cargo in transit must be stored in a sealed hold while in port.

It is prohibited to dump oily wastes overboard within 50 miles of the coast.

Search and Rescue

See **Curacao—Search and Rescue**.

Signals

Visual storms signals are displayed by day in Groot Baai (Sint Maarten), as follows:

Signal	Meaning
One red triangular flag	Small craft warning. Winds up to 34 knots
Two red triangular flags, vertically disposed	Gale warning. Winds of 34 to 47 knots.
One square red flag, with a centered black square	Whole gale warning. Winds of 48 to 63 knots.
Two square red flags, with a centered black square, vertically disposed	Hurricane warning. Winds over 63 knots.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Consulate is situated at J. B. Gorsiraweg #1, Willemstad.

The mailing address is P.O. Box 158, Willemstad, Curacao.

U. S. Consulate Curacao Home Page
http://curacao.usconsulate.gov

SLOVENIA

General	**553**
Buoyage System	**553**
Currency	**553**
Government	**553**
Holidays	**554**
Industries	**554**
Languages	**554**
Navigational Information	**554**
Pilotage	**554**
Pollution	**554**
Regulations	**554**
Search and Rescue	**555**
Ship Reporting System	**555**
Time Zone	**555**
Traffic Separation Schemes	**555**
U.S. Embassy	**555**

General

Slovenia is located on the northern Adriatic Sea. The country has a short coastline between Italy and Croatia.

The climate along the coast is Mediterranean. Inland, the summers are mild to hot while the winters are cold.

The coast, which is generally high, with steep cliffs in places, is backed by the high mountains of the Julian Alps.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Marine Exploitation

Vessels engaged in seismic surveys and other research projects may be encountered in the Adriatic Sea, normally inside the 200m depth curve.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Government

Flag of Slovenia

Slovenia is a parliamentary democratic republic. The country consists of 210 municipalities.

Slovenia is governed by a directly-elected President serving a 5-year term. The President nominates the Prime Minister, who is elected by the National Assembly. The bicameral Par-li-

ament consists of the 90-member National Assembly (40 directly-elected members and 50 members selected on a proportional representation basis, although the number of directly-elected and proportional members can vary each election) serving 4-year terms, and the 40-member National Council, indirectly elected by an electoral college to 5-year terms.

The legal system is based on a civil law system.

The capital is Ljubljana.

Holidays

The following holidays are observed:

January 1-2	New Year's Day
February 8	Slovene Cultural Day
Easter Sunday	Variable
Easter Monday	Variable
April 27	Resistance Day
May 1-2	Labor Day
Whitsunday	Variable
June 25	National Day
August 15	Assumption Day
October 31	Reformation Day
November 1	All Saints' Day
December 25	Christmas Day
December 26	Independence Day

Industries

The main industries include agriculture, iron and aluminum products, lead and zinc smelting, electronics, trucks and automobiles, electic power equipment, wood products, textiles, chemicals, and machine tools.

The main exports are manufactured gods, machinery and transport equipment, chemicals, and food. The main export-trading partners are Germany, Italy, Croatia, Austria, and France.

The main imports are machinery and transport equipment, manufactured goods, chemicals, fuels, lubricants, and food. The main import-trading partners are Germany, Italy, Austria, and France.

Languages

Slovenian is the official language. Serbo-Croatian is also spoken.

Navigational Information

Enroute Volume

Pub. 131, Sailing Directions (Enroute) Western Mediter-ranean.

Maritime Claims

The maritime territorial claims of Slovenia are, as follows:

Territorial Sea *	12 miles.

* Foreign warships require a 24-hour advance notice for innocent passage throught the territorial sea and must use designated sea lanes only.

Maritime Boundary Disputes

A Croatia-Slovenia land and maritime boundary agreement, which would have ceded most of Piranski Zaliv (Pirin Bay) (45°30'N., 13°34'E.) and maritime access to Slovenia and several village to Croatia, remains controversial, has not been ratified, and has been complicated by Croatia's declaration of an ecological fisheries zone in the Adriatic Sea.

Pilotage

Pilotage is compulsory for all vessels over 500 gross tons entering or leaving Slovenian ports.

Pollution

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Any overboard discharge of harmful waste material into the waters of Slovenia should be reported to the nearest harbormaster's office.

ETA messages

All vessels calling at Slovenian harbors should send their ETA and draft 7 days, 3 days, and 48 hours prior to arrival, with a confirmation sent 24 hours prior to arrival.

Vessels carrying dangerous cargo should send their ETA and draft 48 hours prior to arrival through any coast radio station to the Slovenian Maritime Directorate, as follows:

1. Telephone: 386-5-6632100
2. Facsimile: 386-5-6632102
3. Telegraph: URSP KOPER

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU. For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or

polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Search and Rescue

The Maritime Rescue Coordination Center (MRCC) Koper is the search and rescue coordination center for Slovenia. MRCC Koper maintains a continuous listening watch for distress traffic on VHF channel 16 and VHF channel 70 and can be contacted, as follows:

1. Telephone: 386-5-6632108
   386-5-6632106
2. Facsimile: 386-5-6632110
3. E-mail: koper.mrcc@gov.si

Ship Reporting System

The Adriatic Ship Reporting System (ADRIREP), a mandatory system for certain vessels, is in effect for the Adriatic Sea N of latitude 40°25'N. For further information, see **Italy—Ship Reporting System**.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is maintained from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

An IMO-adopted Traffic Separation Scheme is located in the approaches to Koper.

U.S. Embassy

The U.S. Embassy is situated at Presernova 31, 1000 Ljubljana.

The mailing addresses are, as follows:

1. Slovenia address—
   Presernova 31
   1000 Ljubljana
2. U. S. address—
   American Embassy Ljubljana
   Department of State
   7140 Ljubljana Place
   Washington, DC (20521-7140)

U. S. Embassy Slovenia Home Page
http://slovenia.usembassy.gov

SPAIN

General	**557**
Areas to be Avoided	**557**
Buoyage System	**558**
Cautions	**558**
Currency	**558**
Firing Areas	**558**
Fishing Areas	**562**
Government	**562**
Holidays	**562**
Industries	**563**
Languages	**563**
Meteorology	**563**
Navigational Information	**563**
Pilotage	**563**
Pollution	**563**
Regulations	**563**
Search and Rescue	**564**
Ship Reporting System	**566**
Signals	**566**
Special Areas	**567**
Submarine Operating Areas	**567**
Time Zone	**568**
Traffic Separation Schemes	**568**
U.S. Embassy	**568**
Vessel Traffic Service	**568**

General

Spain is located in southwestern Europe. It is bound on the N side by the Bay of Biscay, France, and Andorra; on the E side by the Mediterranean Sea; on the S side by the Strait of Gibraltar and Gibraltar; and on the W side by the North Atlantic Ocean and Portugal.

The climate is temperate with clear, hot summers in the interior, and becomes more moderate and cloudy along the coast. Spain has cloudy, cold winters in the interior and becomes partly cloudy and cool along the coast.

The terrain has large, flat to dissected plateaus surrounded by rugged hills.

Spain controls the coastal enclaves of Ceuta and Melilla, in Morocco, in addition to the islands of Penon de Velez de la Gomera, Penon de Alhucemas, and the Islas Chafarinas.

Spain includes the Islas Baleares (Balearic Islands) in the Mediterranean Sea and the Islas Canarias (Canary Islands) in the North Atlantic Ocean. The principal islands of the Islas Baleares are Majorca, Minorca, Ibiza, Formentera, and Cabrera. The principal islands of the Islas Canarias are Tenerife, La Palma, Gomera, Hierro, Grand Canary, Fuerteventura, and Lanzarote.

Areas to be Avoided

IMO-adopted Areas to be Avoided have been established in the vicinity of the Islas Canarias. In order to prevent the risk of pollution in highly sensitive sea areas, all tankers and ships of over 500 gross tons carrying oil or dangerous bulk cargo as cargo should avoid the following areas:

1. **Off Isla de Lanzarote.—**An area contained between the meridians of 13°15'W and 13°39'W and the parallels of 29°07'N and 29°30'N.
2. **Off Isla de Tenerife.—**An area contained between the meridian of 17°22'W and and the S coast of the island and the parallels of 28°08'N and 26°00'N.
3. **Off Isla de Gran Canaria.—**An area contained be-

tween the meridian of 16°00'W and the coast and the parallels of 27°44'N and 28°00'N.

4. **Off Isla de La Palma.—**An area contained between the meridians of 17°35'W and 18°00'W and the parallels of 28°17'N and 29°00'N.

5. **Off Isla de Hierro.—**An area bounded by lines joining the following positions:
   a. 28°00'N, 18°21'W.
   b. 28°00'N, 17°42'W.
   c. 27°48'N, 17°11'W.
   d. 27°23'N, 17°58'W.
   e. 27°36'N, 18°25'W.

Vessels carrying oil and other dangerous bulk cargo to or from ports in the Islas Canarias which have to pass through the above areas in order to reach their destination must do so in the least possible time without compromising the safety of navigation.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See chart No. 1 for further IALA Buoyage System information.

Lights are shown from 15 minutes after sunset until 15 minutes before sunrise.

Many lights on the N and NW coasts of Spain are placed at elevations where mist frequently obscures the light, giving mariners little warning of their proximity.

Cautions

Abnormal Water Levels

Along the N coast of Spain in the Bay of Biscay, strong winds can cause abnormal water levels. In general, winds from a W quarter can raise sea levels from 0.2 to 1.4m, while winds from an E quarter can lower sea levels from 0.2 to 0.8m.

Abnormal Waves

Abnormal waves have been reported to occur under certain weather conditions in the vicinity of the 200m curve off the NW coast of Spain.

Coastal Conditions

Poor visibility is associated with onshore winds, especially in the area of the entrance points to the Bay of Biscay.

Westerly gales produce a heavy swell and a strong E current along the N coast of Spain. This current may attain a rate of as much as 5 knots at the E end of the N coast of Spain.

High Speed Craft

High speed craft operate in the Strait of Gibraltar. Vessels are advised to maintain a good lookout. Some high speed craft can generate large waves which can have a serious impact on small craft and their moorings close to the shoreline and on shallow off-lying banks.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

Tide Rips

In the E approaches to the Strait of Gibraltar, tide rips have been reported to occur under certain weather conditions during a W current. These tide rips, which have been detected on radar, may be up to 4 miles long.

Whales

From April through August, a sperm whales conservation areais in effect in the Strait of Gibraltar. For further information, see **Mediterranean Sea—Cautions—Whales**.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Firing Areas

North Coast

Firing exercises may take place in the following areas:

1. **Area LED-28—**An area bounded by lines joining the following positions:
   a. 44°20'30'N, 4°47'30"W.
   b. 44°17'20'N, 4°07'30'W.
   c. 43°36'00'N, 4°34'00'W.
   d. 43°40'00'N, 5°40'00'W.

Northwest Coast

Firing exercises may take place in the following areas:

1. **Area LED-39—**An area bounded by lines joining the following positions:
   a. 44°55'N, 11°00'W.
   b. 43°32'N, 9°00'W.
   c. 43°11'N, 9°28'W.
   d. 44°33'N, 11°00'W.
2. **Area LED-80—**An area bounded by lines joining the following positions:
   a. 43°29'N, 8°17'W.
   b. 43°29'N, 8°20'W.
   c. 43°30'N, 8°20'W.
   d. 43°30'N, 8°17'W.
3. **Area LED-81—**An area bounded by lines joining the following positions:
   a. 43°28'N, 8°27'W.
   b. 43°28'N, 8°57'W.
   c. 43°46'N, 8°57'W.
   d. 43°46'N, 8°27'W.
4. **Area LED-82—**An area bounded by lines joining the following positions:
   a. 42°10'N, 9°10'W.
   b. 42°10'N, 9°40'W.
   c. 42°30'N, 9°40'W.
   d. 42°30'N, 9°10'W.
5. **Area F-130—**An area bounded by a circle with a radius of 3 miles centered on position 43°45'N, 9°02'W. This area is presently (2005) inactive.

Southwest Coast

Firing exercises may take place in the following areas:

1. **Area LED-90 (Sector A)—**An area bounded by lines joining the following positions:
   a. 36°26'00"N, 6°35'00"W.
   b. 36°27'18"N, 6°32'54"W.

c. 35°58'48"N, 6°21'48"W.
d. 35°58'48"N, 6°41'00"W.

2. **Area LED-90 (Sector B)—**An area bounded by lines joining the following positions:
a. 35°58'48"N, 6°21'48"W.
b. 36°13'36"N, 6°27'36"W.
c. 36°27'36"N, 6°14'54"W.

3. **Area LED-90 (Sector C)—**An area bounded by lines joining the following positions:
a. 36°27'18"N, 6°32'54"W.
b. 36°29'00"N, 6°30'00"W.
c. 36°29'06"N, 6°25'12"W.
d. 36°27'36"N, 6°14'54"W.
e. 36°13'36"N, 6°27'36"W.

4. **Area LED-100—**An area bounded by lines joining the following positions:
a. 36°42'46"N, 6°26'24"W.
b. 36°45'30"N, 6°23'00"W.
c. 36°52'00"N, 6°10'30"W.
d. 36°41'05"N, 6°08'16"W.
e. 36°41'07"N, 6°25'09"W.

5. **Area LED-119—**An area bounded by lines joining the following positions:
a. 37°39'00"N, 6°45'00"W.
b. 36°56'50"N, 6°34'10"W.
c. 36°20'00"N, 7°21'30"W.
d. 36°55'30"N, 7°21'30"W.
e. 37°05'00"N, 7°07'10"W.

6. **Area LED-120—**An area bounded by lines joining the following positions:
a. 37°09'00"N, 6°45'00"W.
b. 36°56'50"N, 6°34'10"W.
c. 36°50'33"N, 6°43'03"W.
d. 37°05'37"N, 7°01'37"W.

7. **Area LED-121—**An area bounded by lines joining the following positions:
a. 37°05'37"N, 7°01'37"W.
b. 36°50'33"N, 6°43'03"W.
c. 36°20'00"N, 7°21'30"W.
d. 37°02'30"N, 7°21'30"W.

8. **Area LED-122—**An area bounded by lines joining the following positions:
a. 36°20'00"N, 7°21'30"W.
b. 36°13'30"N, 6°38'00"W.
c. 35°51'30"N, 6°42'30"W.
d. 35°57'00"N, 7°21'30"W.

9. **Area LED-128—**An area bounded by lines joining the following positions:
a. 36°56'30"N, 6°34'06"W.
b. 36°51'18"N, 6°29'18"W.
c. 36°13'18"N, 6°38'00"W.
d. 36°14'18"N, 6°43'02"W.
e. 36°50'20"N, 6°43'02"W.

10. **Area LED-129—**An area bounded by lines joining the following positions:
a. 36°50'20"N, 6°43'02"W.
b. 36°14'18"N, 6°43'02"W.
c. 36°20'00"N, 7°21'18"W.

Strait of Gibraltar

Firing exercises may take place in the following areas:

1. **Sierra del Retin**—An area bounded by lines joining the following positions:
a. 36°10'21.0"N, 5°53'34.2"W.
b. 36°08'40.8"N, 5°54'21.6"W.
c. 36°07'42.6"N, 5°55'31.8"W.
d. 36°06'15.6"N, 5°53'37.2"W.
e. 36°08'24.6"N, 5°51'04.8"W.

2. **Zona Centro**—An area bounded by lines joining the following positions:
a. 36°00.0'N, 5°36.0'W.
b. 35°57.5'N, 5°34.5'W.
c. 36°00.5'N, 5°24.0'W.
d. 36°04.0'N, 5°26.0'W.

3. **Zona Almina**—An area bounded by lines joining the following positions:
a. 35°54.2'N, 5°17.5'W.
b. 35°55.0'N, 5°03.0'W.
c. 35°53.0'N, 5°06.0'W.
d. 35°53.0'N, 5°19.5'W.

4. **Zona Estrecho (Cueta)**—An area bounded by lines joining the following positions:
a. 35°55.0'N, 5°22.0'W.
b. 35°59.0'N, 5°22.0'W.
c. 36°01.0'N, 5°16.5'W.
d. 36°01.5'N, 5°11.5'W.
e. 35°59.5'N, 5°09.0'W.
f. 35°54.0'N, 5°17.0'W.
g. 35°55.5'N, 5°19.0'W.

5. **Zona Tarifa**—An area bounded by lines joining the following positions:
a. 36°06.0'N, 5°49.0'W.
b. 36°01.0'N, 5°55.0'W.
c. 36°03.0'N, 5°41.0'W.
d. 35°58.0'N, 5°45.0'W.

6. **Zona Este**—An area bounded by lines joining the following positions:
a. 36°19.0'N, 5°14.0'W.
b. 36°14.0'N, 5°06.0'W.
c. 36°12.0'N, 5°19.0'W.
d. 36°18.0'N, 5°05.0'W.
e. 36°12.0'N, 5°05.0'W.

7. **Zona Estrecho A—**An area bounded by lines joining the following positions:
a. 36°00.0'N, 5°19.7'W.
b. 36°02.0'N, 5°06.0'W.
c. 35°56.5'N, 5°13.1'W.
d. 35°54.5'N, 5°22.5'W.
e. 35°53.5'N, 5°24.7'W.

8. **Zona Estrecho B**—An area bounded by lines joining the following positions:
a. 35°56.0'N, 5°23.0'W.
b. 35°53.0'N, 5°16.0'W.
c. 35°53.0'N, 5°22.0'W.
d. 35°55.0'N, 5°16.0'W.
e. 35°52.0'N, 5°09.0'W.

Southeast Coast

Surface to air exercises may take place in the following areas:

1. **Area LED-22**—An area bounded by lines joining the following positions:

a. 37°13'N, 1°15'W.
b. 37°13'N, 0°45'W.
c. 36°56'N, 0°45'W.
d. 36°56'N, 1°15'W.

2. **Area M-2**—An area lying between the coast and a line joining Cabo Tinoso (37°32'N., 1°06'W.) and Punta de Calnegre (37°40'N., 0°43'W.).

3. **Area M-3**—An area bounded by lines joining the following positions:
a. 37°30.4'N, 1°24.0'W. (Punta de Calnegre)
b. 37°26.5'N, 1°17.0'W.
c. 37°26.5'N, 1°06.5'W.
d. 37°32.2'N, 1°06.5'W.

4. **Area M-4**—An area bounded by the coast and lines joining the following positions:
a. 37°30.4'N, 1°24.0'W. (Punta de Calnegre)
b. 37°26.5'N, 1°17.0'W.
c. 37°26.5'N, 1°12.0'W.
d. 37°16.6'N, 1°17.2'W.
e. 37°26.0'N, 1°28.7'W. (Cabo Cope)

5. **Area M-5**—An area bounded by the coast and lines joining the following positions:
a. 37°26.0'N, 1°28.7'W. (Cabo Cope)
b. 37°16.6'N, 1°17.2'W.
c. 37°04.5'N, 1°33.2'W.
d. 37°15.0'N, 1°46.0'W. (Villaricos)

6. **Area M-6**—An area bounded by the coast and lines joining the following positions:
a. 37°15.0'N, 1°46.0'W. (Villaricos)
b. 37°04.5'N, 1°33.2'W.
c. 36°56.0'N, 1°45.0'W.
d. 36°56.0'N, 1°54.3'W. (Mesa Roldan)

7. **Area M-7**—An area bounded by lines joining the following positions:
a. 37°13.0'N, 1°15.0'W.
b. 37°30.0'N, 1°00.0'W.
c. 37°30.0'N, 1°00.0'W.

8. **Area M-8**—An area bounded by lines joining the following positions:
a. 37°13.0'N, 1°00.0'W.
b. 37°30.0'N, 1°00.0'W.
c. 37°30.0'N, 0°45.0'W.
d. 37°13.0'N, 0°45.0'W.

9. **Area M-9**—An area bounded by lines joining the following positions:
a. 37°13.0'N, 0°45.0'W.
b. 37°30.0'N, 0°45.0'W.
c. 37°30.0'N, 0°17.5'W.
d. 36°56.0'N, 0°34.0'W.

10. **Area M-10**—An area bounded by lines joining the following positions:
a. 36°56.0'N, 1°45.0'W.
b. 37°13.0'N, 1°15.0'W.
c. 37°13.0'N, 1°00.0'W.
d. 36°56.0'N, 1°00.0'W.

11. **Area M-11**—An area bounded by lines joining the following positions:
a. 36°56.0'N, 1°15.0'W.
b. 37°13.0'N, 1°15.0'W.
c. 37°13.0'N, 1°00.0'W.
d. 36°56.0'N, 1°00.0'W.

12. **Area M-12**—An area bounded by lines joining the following positions:
a. 36°56.0'N, 1°00.0'W.
b. 37°13.0'N, 1°00.0'W.
c. 37°13.0'N, 0°45.0'W.
d. 36°56.0'N, 0°45.0'W.

13. **Area M-13**—An area bounded by lines joining the following positions:
a. 36°56.0'N, 0°45.0'W.
b. 37°13.0'N, 0°45.0'W.
c. 37°13.0'N, 0°17.5'W.
d. 36°56.0'N, 0°34.0'W.

14. **Area M-14**—An area bounded by lines joining the following positions:
a. 36°43.5'N, 1°45.0'W.
b. 36°56.0'N, 1°45.0'W.
c. 36°56.0'N, 1°15.0'W.
d. 36°43.5'N, 1°15.0'W.

15. **Area M-15**—An area bounded by lines joining the following positions:
a. 36°43.5'N, 1°15.0'W.
b. 36°56.0'N, 1°15.0'W.
c. 36°56.0'N, 0°34.0'W.
d. 36°43.5'N, 0°52.0'W.

16. **Area M-20**—An area bounded by the coast and lines joining the following positions:
a. 41°00.0'N, 0°54.5'E. (coast)
b. 41°00.0'N, 2°31.0'E.
c. 40°00.0'N, 1°34.0'E.
d. 40°00.0'N, 0°02.5'E. (coast)

Naval air exercises may take place in the following areas:

1. **Area LED-19**—An area bounded by lines joining the following positions:
a. 36°38'N, 4°20'W.
b. 36°11'N, 2°02'W.
c. 35°50'N, 2°07'W.
d. 35°50'N, 4°54'W.

2. **Area LED-21A**—An area bounded by lines joining the following positions:
a. 40°30'12"N, 1°07'42"E.
b. 39°49'24"N, 1°13'12"E.
c. 39°49'24"N, 0°10'12"E.

3. **Area LED-21B**—An area bounded by lines joining the following positions:
a. 40°20'36"N, 1°08'12"E.
b. 39°53'24"N, 1°10'42"E.
c. 39°49'29"N, 0°10'12"E.
d. 39°26'36"N, 1°08'12"E.

4. **Area LED-22**—An area bounded by lines joining the following positions:
a. 38°37'N, 1°15'W.
b. 38°37'N, 0°45'W.
c. 37°36'N, 0°45'W.
d. 37°36'N, 1°15'W.

5. **Area LED-26**—An area bounded by lines joining the following positions:
a. 38°35'N, 1°07'E.
b. 38°20'N, 1°38'E.
c. 37°34'N, 1°03'E.
d. 37°57'N, 0°18'E.

e. 38°25'N, 0°33'E.

6. **Area LED-32**—An area bounded by lines joining the following positions:

a. 39°22'18"N, 0°16'00"W.
b. 39°16'30"N, 0°06'00"W.
c. 39°13'12"N, 0°10'00"W.
d. 39°20'30"N, 0°18'12"W.

7. **Area LED-56**—An area bounded by a circle with a radius of 5 miles centered on position 36°15'27.6"N, 4°59'30.0"W.

8. **Area LED-59—**An area bounded by lines joining the following positions:

a. 39°12'N, 0°07'W.
a. 38°50'N, 0°20'W.
b. then the arc of a circle with a radius of 55 miles centered on position 39°29'N, 0°29'W from position 38°50'N, 0°20'W to position 38°39'N, 0°00'W.
c. 39°07'N, 0°16'W.
d. then the arc of a circle with a radius of 25 miles centered on position 39°29'N, 0°29'W from position 39°07'N, 0°16'W to position 39°12'N, 0°07'W.

Minesweeping exercises may take place in the following areas:

1. **Area M-1**—An area lying between the coast and a line joining Punta Podadera and Cabo Tinoso (37°32'N., 1°06'W.).

2. **Area M-2**—An area lying between the coast and a line joining Cabo Tinoso (37°32'N., 1°06'W.) and Punta Calnegre.

3. **Area M-16**—An area bounded by the coast and lines joining the following positions:

a. 37°48.8'N, 0°45.0'W., then the minor arc of a circle with a radius of 10 miles centered on Cabo de Palos (37°38.5'N., 0°41.5'W.) to position
b. 37°30.0'N, 0°35.0'W.
c. 37°30.0'N, 0°24.0'W.
d. 38°04.8'N, 0°06.2'W.
e. 38°13.0'N, 0°30.3'W. (Cabo de Santa Pola)

4. **Area M-17**—An area bounded by the coast and lines joining the following positions:

a. 38°13.0'N, 0°30.3'W. (Cabo de Santa Pola)
b. 38°04.8'N, 0°06.2'W.
c. 38°25.0'N, 0°04.6'E.
d. 38°30.8'N, 0°12.9'W. (Villajoyosa)

5. **Area M-18**—An area bounded by the coast and lines joining the following positions:

a. 38°30.8'N, 0°12.9'W. (Villajoyosa)
b. 38°25.0'N, 0°04.6'E.
c. 38°44.2'N, 0°14.2'E. (Cabo de la Nao)

Area M-134—Depth charge exercises may take place in an area bounded by a circle with a radius of 2 miles centered on position 37°27'N, 1°00'W. This area is abandoned.

Area M-135—Depth charge exercises may take place in an area bounded by lines joining the following positions:

a. 39°53.1'N, 0°04.3'E.
b. 39°53.1'N, 0°40.8'E.
c. 39°54.8'N, 0°40.8'E.
d. 39°54.8'N, 0°04.3'E.

This area is abandoned.

Islas Baleares

Mine sweeping exercises may take place near Islas Baleares within the following areas:

1. **Area M-21—**An area bounded by the SW coast of Isla de Mallorca, the parallel 39°05'N, and the meridians 2°25'E and 2°49'E.

2. **Area M-22—**An area bounded by the E coast of Isla de Mallorca, the parallels 39°30'N and 40°00'N, and the meridians of 3°12'E and 3°49'E.

Islas Canarias

Firing exercises may take place off the Islas Canarias in the following areas:

1. **Area GCD-3—**An area bounded by lines joining the following positions:

a. 28°20'50"N, 14°13'00"W.
b. 28°20'50"N, 14°09'20"W.
c. 28°15'20"N, 14°09'20"W.
d. 28°14'20"N, 14°13'00"W.

2. **Area GCD-15—**An area bounded by lines joining the following positions:

a. 28°58'00"N, 13°49'36"W.
b. 28°58'00"N, 13°47'36"W.
c. 28°57'12"N, 13°47'36"W.
d. 28°57'12"N, 13°49'36"W.

3. **Area GCD-20 (Sector A)—**An area bounded by lines joining the following positions:

a. 27°30'00"N, 16°00'00"W.
b. 27°30'00"N, 15°30'00"W.
c. 27°20'00"N, 15°30'00"W.
d. 27°20'00"N, 16°00'00"W.

4. **Area GCD-20 (Sector B)—**An area bounded by lines joining the following positions:

a. 27°20'00"N, 16°00'00"W.
b. 27°20'00"N, 15°30'00"W.
c. 27°00'00"N, 15°30'00"W.
d. 27°00'00"N, 16°00'00"W.

5. **Area CGD-23—**An area bounded by lines joining the following positions:

a. 28°25'30"N, 16°16'25"W.
b. 28°19'00"N, 16°10'05"W.
c. 28°17'40"N, 16°15'15"W.

6. **Area GCD-29—**An area bounded by lines joining the following positions:

a. 28°30'00"N, 16°10'15"W.
b. 28°31'00"N, 16°06'00"W.
c. 28°26'00"N, 16°05'05"W.

7. **Area GCD-51—**An area bounded by lines joining the following positions:

a. 27°55'50"N, 15°21'44"W.
b. 27°59'44"N, 15°16'40"W.
c. 27°52'13"N, 15°16'20"W.

8. **Area GCD-53—**An area bounded by lines joining the following positions:

a. 28°10'08"N, 15°24'22"W.
b. 28°16'39"N, 15°19'27"W.
c. 28°16'39"N, 15°31'38"W.

9. **Area GCD-54—**An area bounded by lines joining the following positions:

a. 28°10'08"N, 15°25'10"W.

b. 28°12'18"N, 15°19'06"W.
c. 28°05'30"N, 15°20'08"W.
d. 28°09'39"N, 15°25'10"W.

10. **Area GCD-74—**An area bounded by lines joining the following positions:
a. 28°21'06"N, 16°23'00"W.
b. 28°16'00"N, 16°23'00"W.
c. 28°15'20"N, 16°15'00"W.
d. 28°20'20"N, 16°15'00"W.

11. **Area GCD-75—**An area bounded by lines joining the following positions:
a. 28°09'30"N, 15°24'00"W.
b. 28°09'30"N, 15°26'00"W.
c. 28°11'00"N, 15°26'00"W.
d. 28°11'00"N, 15°24'00"W.

12. **Area GCD-78—**An area bounded by lines joining the following positions:
a. 27°46'00"N, 15°33'00"W.
b. 27°46'00"N, 15°36'00"W.
c. 27°43'00"N, 15°36'00"W.
d. 27°43'00"N, 15°33'00"W.

13. **Area GCD-79—**An area bounded by lines joining the following positions:
a. 27°14'38"N, 18°59'03"W.
b. then the arc of a circle with a radius of 200 miles centered on position 28°04'38"N, 15°25'43"W from position 27°14'38"N, 18°59'03"W to position 24°51'07"N, 15°57'03"W.
c. 27°29'00"N, 14°00'00"W.
d. 27°45'48"N, 14°40'39"W.
e. then the arc of a circle with a radius of 45 miles centered on position 28°04'38"N, 15°25'43"W from position 27°45'48"N, 14°40'39"W to position 27°26'55"N, 15° 51'38"W.
f. then the arc of a circle with a radius of 70 miles centered on position 28°32'12"N, 16°16'09"W from position 27°26'55"N, 15°51'38"W to position 27°48'26"N, 17° 16'08"W back to the point of beginning.

Fishing Areas

Tunny fishing.—Tunny fisheries use large nets set at depths of 15 to 40m. Tunny fishing usually takes place with 10 miles of the coast. On dark nights, small vessels may be encountered fishing by the light of flares. these flares, owing to the movement of the ocean surface, may have the appearance of flashing lights and must not be mistaken for navigational lights.

In Spanish waters, each tunny net, when submerged, is usually marked, as follows:

1. By day—A red ball over a white ball is shown from the outer boat or buoy; if the net has an outer tail, the boat or buoy shows a red ball over a white ball
2. By night—A red light over a white light is shown from the outer boat or buoy; if the net has an outer tail, the boat or buoy shows a white over a red light.

Off the N coast of Spain, tunny vessels operate off the coast from July to November. For further information, see **France—Fishing Areas**.

The tunny season off the S coast of Spain and the Islas Baleares begins in the beginning of February and ends at the end of September.

Other fisheries.—From December to June, off the N coast of Spain, vessels normally work within 60 miles of the coast. The larger vessels (50 to 200 tons) use nets to catch mackeral in March and anchovies from March to June. The smaller vessels (20 to 50 tons) use hooks to catch hake from November to June and mackeral in March and April.

Trawlers work up to 100 miles offshore SW and W of the coast of Brittany, but elsewhere in the Bay of Biscay they are seldom found more than 50 miles offshore.

A large concentration of fishing vessels may be found SW of the Banco del Hoyo Traffic Separation Scheme, in an area bounded by lines joining the following positions:
a. 36°00'N, 6°50'W.
b. 36°00'N, 6°10'W.
c. 35°30'N, 6°10'W.
d. 35°30'N, 6°50'W.

The vessels fish with drift nets up to 1 mile long, which may show strobe lights to mark their positions.

For information on bluefin tuna fishing in the approaches to the Strait of Gibraltar, see **Mediterranean Sea—Fishing Areas**.

Government

Flag of Spain

The government is a parliamentary monarchy. The country is divided into 17 autonomous communities and two autonomous cities.

Spain is governed by a king. The President is named by the monarch after the national elections based on which party received the most seats in the National Assembly. The National Assembly is composed of a 264-member Senate, of which 208 members are directly elected and 56 members are appointed by the regional legislatures, serving 4-year terms, and a 350-member Congress of Deputies, who are directly elected based on a system of proportional representation, serving 4-year terms

The legal system is based on civil law, with regional applications.

The capital is Madrid.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 6	Epiphany
March 19	St. Joseph's Day

Holy Thursday	Variable
Good Friday	Variable
Easter Sunday	Variable
May 1	Labor Day
July 25	Santiago Apostol
August 15	Assumption Day
October 12	Spanish National Day
November 1	All Saints' Day
December 6	Constitution Day
December 8	Immaculate Conception
December 25	Christmas Day

In addition, two or more local holidays are usually celebrated in each locality. Autonomous provinces may celebrate certain local holidays instead of some of the general holidays.

Industries

The main industries include textiles and apparel, food and beverages, metals, chemicals, shipbuilding, automobiles, machine tools, tourism, clay and refactory products, pharmaceuticals, footwear, and medical equipment.

The main exports are machinery, motor vehicles, foodstuffs, pharmaceuticals, medicines, and consumer goods. The main export-trading partners are France, Germany, Portugal, the United Kingdom, and Italy.

The main imports are machinery and equipment, fuels, chemicals, semi-finished goods, foodstuffs, consumer goods, and measuring and medical-control instruments. The main import-trading partners are Germany, France, Italy, and the United Kingdom.

Languages

Spanish is the official language.

Meteorology

Marine weather forecasts for Spain, Islas Canarias, the western Mediterranean Sea, and the Atlantic Ocean are available in Spanish from the Instituto Nacional de Meteorologia Espana (http://www.aemet.es).

Navigational Information

Enroute Volumes

Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

Maritime Claims

The maritime territorial claims of Spain are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles **
Continental Shelf	200 miles or the Continental Margin.

* Claims straight baselines.

** Atlantic coast only. In the Mediterranean Sea, only claims a fishery limit to the median line.

Maritime Boundary Disputes

Morocco protests Spanish control over the coastal enclaves of Ceuta and Melilla, as well as the offshore islands of Penon de Velez de la Gomera, Penon de Alhucemas, and Islas Charfarinas.

Morocco rejected Spain's 2002 unilateral designation of a median line from the Islas Canarias (Canary Islands) to set limits to undersea resource exploration and refugee interdiction. In 2003, Spain and Morocco agreed to discuss comprehensive maritime delineations.

Pilotage

Pilotage is compulsory for all vessels over 500 gross tons entering, leaving, or maneuvering in Spanish ports.

Spanish pilot vessels generally display a blue flag with a white letter P (by day). At night they display the lights prescribed by COLREGS.

Pollution

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Pollution Insurance

It has been reported (2008) that all vessels over 1,000 gross tons that do not have proof of insurasnce or financial guarantees to cover the cost of fuel-sourced damage to the environment will not be allowed to enter or depart Spanish ports.

Regulations

Single-hull Tankers

All single-hull tankers carrying heavy fuel, tar, asphaltic bitumen, or heavy crude oil are not permitted to enter Spanish ports, terminals, and anchorage areas. This prohibition also includes all ports, terminals, and anchorage areas in the Canary Islands.

Radio Frequencies

The use of radio frequencies lower than 30 MHz by merchant vessels in or in the approaches to Spanish ports is prohibited, except for emergencies or with permission of the Maritime Authority.

Access to Spanish Ports

Access to Spanish ports may be prohibited, or subject to certain regulations, due to naval maneuvers, exercises, or other causes, as follows:

1. A warning signal will be shown from a conspicuous position. By day, three balls will be disposed vertically. By night, three red lights will be disposed vertically.
2. The same signals will be shown by the watch vessels.
3. Vessels wishing to enter or leave Spanish waters when the above signals are displayed must:
   a. By day—display the pilot flag and await the arrival of a watch vessel.
   b. By night—burn one or many lights; also sound a siren or whistle and await the arrival of a watch vessel.
4. If a watch vessel hails or fires a gun, a vessel must immediately stop or heave to.
5. Vessels will, if the occasion arises, submit to a visit from the watch vessel, which will provide the following information:
   a. If a special examination service is established and where it is to be found.
   b. If the port is closed and, if so, for how long.
   c. If there are any special directions for the navigation of any part of the port.
6. Necessary instructions will be provided, or the examination made, to vessels leaving the port by the Naval authorities, within the port.
7. Masters of vessels not complying with these regulations do so at their risk and peril, and are liable for any damage they may cause.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU. For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Particularly Sensitive Sea Areas (PSSA)

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

The waters off the W coast of the United Kingdom, Ireland, Belgium, France, Spain, and Portugal, from the Sheltand Islands in the N to Cabo San Vicente in the S, including the English Channel, were granted (2004) the status of PSSA by the International Maritime Organization. The Western Europe Tanker Reporting System (WETREP) was instituted to help protect the environment of the PSSA.

The waters surrounding the Islas Canarias were granted (2006) the status of a PSSA by the International Maritime Organization.

Search and Rescue

Information on the Sociedad de Salvamento y Seguridad Maritima (SASE), the national search and rescue agency of Spain, can be found, in Spanish, at the following web site:

SASE Home Page
http://www.salvamentomaritimo.es

The Maritime Rescue Coordination Center (MRCC) Madrid coordinates search and rescue operations and can be contacted, as follows:

1. Telephone: 34-91-7559132
   34-91-7559133
2. Facsimile: 34-91-5261440
3. E-mail: cncs@sasemar.es

Maritime Rescue Coordination Centers (MRCC) and Maritime Rescue Coordination Subcenters (MRSC) locations and contact information can be found in the table titled **Spain—MRCC and MRSC Contact Information**..

A network of coast radio stations maintains a continuous listening watch on international distress frequencies.

Lifeboats and rescue craft are stationed, as follows:

1. North coast (Bay of Biscay).
   a. San Sebastian (43°19'N., 1°59'W.).
   b. Bermeo (43°25'N., 2°43'W.).
   c. Santander (43°27'N., 3°48'W.).
   d. Gijon (43°34'N., 5°41'W.).
   e. Luarca (43°33'N., 6°32'W.).
   f. Burela (43°40'N., 7°21'W.).
2. Northwest coast (Atlantic Ocean).
   a. La Coruna (43°23'N., 8°22'W.).
   a. Puerto de Camarinas (43°08'N., 9°11'W.).
   a. O Son (42°44'N., 9°00'W.).
   b. Vigo (42°14'N., 8°44'W.).
   a. Puerto de Cangas (42°16'N., 8°47'W.).

Spain—MRCC and MRSC Contact Information

MRCC/MRSC	Telephone	Facsimile	E-mail
Atlantic Coast			
MRCC Bilbao	34-944-837053 34-944-839411	34-944-839161	bilbao@sasemar.es

Spain—MRCC and MRSC Contact Information			
MRCC/MRSC	**Telephone**	**Facsimile**	**E-mail**
MRSC Santander	34-942-213030 34-942-213060 34-942-213157	34-943-213638	santande@sasemar.es
MRCC Gijon	34-985-326050 34-985-326373 34-985-300475	34-985-320908	gijon@sasemar.es
MRSC Coruna	34-981-209541 34-981-209548 34-981-221005	34-981-209518	coruna@sasemar.es
MRCC Finisterre	34-981-767320 34-981-767738 34-981-767500	34-981-767740	finister@sasemar.es
MRSC Vigo	34-986-222230 34-986-228874 34-986-227112	34-986-228957	vigo@sasemar.es
MRSC Huelva	34-959-243000 34-959-243061 34-959-243073	34-959-242103	huelva@sasemar.es
MRSC Cadiz	34-956-214253	34-956-226091	cadiz@sasemar.es
MRCC Tarifa	34-956-684740 34-956-684757	34-956-680606	tarifa@sasemar.es
Mediterranean Coast			
MRSC Algeciras	34-956-580930 34-956-580931	34-956-585402	algecir@sasemar.es
MRCC Almeria	34-950-271726 34-950-275477	34-950-270402	almeria@sasemar.es
MRSC Cartagena	34-968-529594 34-968-529817	34-968-529748	cartagena@sasemar.es
	34-963-679204		
MRSC Castellon	34-964-737202 34-964-737187	34-964-737105	castelon@sasemar.es
MRSC Tarragona	34-977-216203 34-977-216215	34-977-216209	tarragon@sasemar.es
MRCC Barcelona	34-932-234733 34-932-234748	34-932-234613	barcelon@sasemar.es
MRSC Palamos *	34-972-600711	34-972-600517	palamos@sasemar.es
* MRSC Palamos operates only from June 1 until September 30. During non-operational periods, area coverage is maintained by MRCC Barcelona.			
MRCC Palma (Mallorca)	34-971-724562 34-900-202202	34-971-728352	palma@sasemar.es

Spain—MRCC and MRSC Contact Information			
MRCC/MRSC	Telephone	Facsimile	E-mail
Islas Canarias			
MRCC Las Palmas	34-928-467757	34-928-467760	laspalma@sasemar.es
	34-928-467955		
MRCC Tenerife	34-922-597551	34-922-597331	tenerife@sasemar.es
	34-922-597552		

3. Southwest coast (Atlantic Ocean).
   a. Huelva (37°16'N., 6°55'W.).
   b. Cadiz (36°30'N., 6°20'W.).
   c. Algeciras (36°08'N., 5°27'W.).
4. East coast (Mediterranean Sea).
   a. Malaga (36°43'N., 4°25'W.).
   b. Motril (36°43'N., 3°31'W.).
   c. Almeria (36°50'N., 2°27'W.).
   d. Garracha (37°11'N., 1°49'W.).
   e. Cartagena (37°36'N., 0°59'W.).
   f. Alicante (38°13'N., 0°31'W.).
   g. Javia (38°48'N., 0°11'E.).
   h. Valencia (39°28'N., 0°22'W.).
   i. Barriana (38°52'N., 0°04'E.).
   j. San Carlos de la Rapita (38°52'N., 0°04'E.).
   k. Tarragona (41°06'N., 1°14'E.).
   l. Barcelona (41°21'N., 2°10'E.).
   m. Palomos (41°51.0'N., 3°08'E.).
   n. El Port de la Selva (42°21'N., 3°12'E.).
5. Islas Baleares (Mediterranean Sea).
   a. Ibeza (38°55'N., 1°27'E.).
   b. Portal Nous (Puerto Portals) (39°32'N., 2°34'E.).
   c. Alcadia (39°50'N., 3°08'E.).
   d. Mahon (39°59'N., 4°18'E.).
6. Melilla, the Spanish enclave on the coast of Morocco (35°17'N., 2°56'W.).
7. Islas Canarias
   e. Arrecife (28°57'N., 13°33'W.).
   f. Gran Tarajal (28°12'N., 14°01'W.).
   g. Arquineguin (27°45'N., 15°40'W.).
   h. Las Palmas (28°08'N., 15°25'W.).
   i. Los Cristianos (28°03'N., 16°42'W.).
   j. San Sebastian de la Gomera (28°05'N., 16°42'W.).
   k. Santa Cruz de la Palma (28°40'N., 17°26'W.).

Lifeboats are maintained at a readiness level of 20 minutes response time. The boats are 13.5m long, with a beam of 3.7m, a speed of 13 knots, and a range of 290 miles. The boats have MF, VHF, and VHF DF equipment on board and are manned by a crew of six.

Ship Reporting System

Western Europe Tanker Reporting System (WETREP)

The Western Europe Tanker Reporting System (WETREP), a mandatory reporting system, is in effect. The Reporting Area covers the waters off Belgium; the W coast and English Channel coasts of France; Ireland; Portugal; the N and W coasts of Spain; and the English Channel and W coasts of the United Kingdom, including the Shetland Isles.

Further information on WETREP can be found in North Atlantic Ocean—Ship Reporting System.

FINREP

FINREP, a mandatory Vessel Traffic Service, is in operation off Cabo Finisterre, on the NW coast of Spain, including the TSS and Inshore Traffic Zones. The reporting system covers the area between the coast and the following lines:

1. A bearing of 130° to Cabo Villano Light.
2. A bearing of 075° to Cabo Finisterre Light.
3. The meridian of longitude 10°15'W.

Further information can be found in Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa (paragraph 5.2).

GIBREP

GIBREP, a mandatory Vessel Traffic Service, is in operation in the Strait of Gibraltar, including the TSS and Inshore Traffic Zones. The reporting system covers the area between longitudes 5°58'W and 5°15'W. Further information can be found in Pub. 131, Sailing Directions (Enroute) Western Mediterranean (paragraph 1.1).

CANREP

CANREP, a mandatory Vessel Reporting System for vessels of 600 dwt and over carrying certain petroleum products as cargo, is is operation surrounding the Islas Canarias. Further information can be found in Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa (Sector 8).

Signals

The following signals may be displayed in Spanish ports:

Day signal	Night signal	Meaning
Black cylinder	White light over red light over white light, vertically disposed	Local gale or strong wind. All boat traffic suspended.
Black triangle, point down, over black triangle, point up	White light over two red lights, vertically disposed	Moderate gale. Port closed to fishing vessels and small craft.

Special Areas

Explosives Dumping Grounds and Depth Charges Areas

Area F132—Circular area with a radius of 0.8 mile centered on position 36°14.6'N, 6°49.2'W.

Area C136—Circular area with a radius of 3 miles centered on position 28°09'N, 15°10'W.

Diving Exercises

Diving exercises are held in the following areas:

1. **Area E-51—**Circular area with a radius of 0.6 mile centered on 36°36'N, 6°29'W.
2. **Area E-52—**Circular area with a radius of 1.5 miles centered on 36°35'N, 6°18'W.
3. **Area E-53—**Circular area with a radius of 1.5 miles centered on 36°29'N, 6°20'W.
4. **Area E-54—**Circular area with a radius of 1.5 miles centered on 36°23'N, 6°16'W.
5. **Area M-23**—An area bounded by the coast and lines joining El Farallon, Bajo de Fuera, and Cabo de Palos.

Submarine Operating Areas

Submarine operating areas are described below. Some of these areas are shown on the charts. Spanish submarines may be found conducting exercises off the E coast of Spain between Cabo de San Sebastian and Cabo de Gata, in an area located between the coast and a line connecting the following points:

a. 41°54'N. 3°14'E.
b. 41°50'N, 3°20'E.
c. 38°44'N, 0°22'E.
d. 36°56'N, 0°34'W.
e. 36°43'N, 0°52'W.
f. 36°43'N, 2°11'W.

Submarine and anti-submarine exercises

Submarine and anti-submarine exercises are conducted in the vicinity of Cantabrico in an area bounded by lines joining the following positions:

a. 43°35'N, 10°04'W.
b. 43°13'N, 9°37'W.
c. 44°23'N, 7°45'W.
d. 44°47'N, 8°12'W.

Submarine and anti-submarine exercises are conducted in the vicinity of Ferrol and Coruna off the NW coast in an area bounded by lines joining the following positions:

a. 44°23.5'N, 8°23.5'W.
b. 43°57.0'N, 8°00.0'W.
c. 44°22.0'N, 9°18.0'W.
d. 43°48.5'N, 9°41.5'W.

Submarine and anti-submarine exercises are conducted in the vicinity of the Strait of Gibraltar, as follows:

1. **Area SA**—An area bounded, as follows:
   a. North limit—Spanish territorial waters.
   b. East limit—Spanish territorial waters.
   c. South limit—latitude 36°34.0'N.
   d. West limit—longitude 7°17.0'W.
2. **Area SB**—An area bounded, as follows:
   a. North limit—latitude 36°34.0'N.
   b. East limit—Spanish territorial waters.
   c. South limit—latitude 36°22.0'N.
   d. West limit—longitude 7°17.0'W.
3. **Area SC**—An area bounded by lines joining the following positions:
   a. 36°22.0'N, 7°17.0'W.
   b. 36°22.0'N, 6°28.3'W.
   c. 36°00.0'N, 7°17.0'W.
   d. 36°01.1'N, 6°08.0'W.
4. **Off Cartagena**—An area bounded, as follows:
   a. North limit—latitude 38°44.0'N.
   b. West limit—Spanish territorial waters.
   c. South limit—latitude 36°43.3'N.
   d. East limit—A line joining the following positions:
      i. 38°44.0'N, 0°30.0'E.
      ii. 36°56.0'N, 0°34.0'W.
      iii. 36°43.3'N, 0°52.0'W.

Visual Signals

Spanish naval vessels hoist the International Code group "NE 2" to indicate the proximity of submarines which may be submerged. Vessels in such cases ought to steer so as to give a wide berth to the vessels flying this signal.

If for whatever cause it were necessary to approach them, they ought to approach at slow speed maintaining at all times a good watch for submarines whose presence might only be indicated by the periscopes or bubbles emerging from the water.

Radio Signals

In certain circumstances notices that maneuvers are being carried out in specified zones may be broadcast.

Navigation Lights

It is possible to meet very frequently at night submarines on the surface in the vicinity of Cartagena and in the area between Cabo de Gata and Cabo de la Nao.

The lights on submarines can be confusing since these lights are necessarily in a very low position and too close together to be able to calculate the length of the submarine and its true direction or change of direction, and therefore can easily be confused with a much smaller vessel of the coastal type or even a fishing boat.

Spanish submarines operating on the surface display an all round flashing amber light showing 120 to 180 flashes per minute.

Sunken Submarines

Sunken submarines, unable to surface, will attempt to indicate their position by means of a indicator buoy.

Spanish submarines are provided with two indicator buoys, one at each end of the vessel, which can be released from inside the boat in case of necessity, or when, for whatever reason, the submarine may be viewed as incapable of surfacing.

The buoys are secured to the submarine by a cable not longer than 125m. When finding an indicator buoy in waters deeper than 150m, it can be assumed that it is adrift, and it also should be reported as soon as possible.

The indicator buoys are metallic, one at the bow (painted red and yellow) and the other at the stern (painted yellow). The bow buoy exhibits a white light and has a telephone which can be operated from inside the submarine. Each buoy is fitted with

a metal plate displaying the following information:

SUBMARINO (...)	Submarine (name)
AVISEN A LAS AUTORIDADED	Inform the authorities
CIUDADO	Take care
NO SE TIRE DE LA BOYA, QUITESE LA TAPA Y SIGANSE LAS INSTRUCTIONNES INTERIORES	Do not pull on the buoy, remove the cover and follow the instructions inside

Submerged submarines which cannot release the indicator buoys can signal by letting fuel oil or lubricant escape or by releasing air.

In all submarine accidents time is a decisive factor in regard to the chances of saving the survivors, therefore the finding of an indicator buoy ought to be taken as a warning of having discovered a real accident and of not letting any time be lost in taking appropriate measures. When a buoy of this kind is found, the first step to take is to report the discovery by the most rapid means available. If possible the name of the submarine should be listed in the reports that are sent.

In order that those in the submarine may be informed that assistance is on the way, naval vessels will drop small charges that can be heard from the inside. The use of small charges in these cases is perfectly acceptable, but it is absolutely essential that they not be dropped too close, since those that are just emerging could easily suffer fatal wounds because of extreme sensitivity to the submarine explosions. A distance of 0.25 mile is considered adequate. If not equipped with small charges, an acoustic sounder can be turned on or the hull of the vessel may be struck with an iron maul beneath the water line. These signals can normally be heard from inside a submarine and should be made at frequent intervals.

It is possible that a buoy has accidentally become unfastened without the submarine having actually sunk. In any case it is very important to determine conclusively if the telephone buoy is actually adrift or not. If something else cannot be done, it is permitted to lower a boat to verify the weight of the cable by hand. Extreme caution is recommended since it is absolutely essential that the cable not be broken.

In no case should the boat be secured to the buoy nor should it circle the cable, once it has been proved that the buoy is attached to the disabled submarine.

If it is found to be adrift, it shall not be considered as an indication that all is in order and that nothing has occurred, since the cable could have been broken and floating adrift after deliberate release from a submarine as a result of an accident.

All ships finding themselves in the presence of a telephone buoy of a submarine not adrift, will therefore remain and prepare to pick up survivors. These will emerge almost vertically so that it is very important to leave them sufficient free space to be able to do it without obstacles.

The survivors of a submarine accident may attempt their own rescue at any time after the accident. The internal conditions can worsen rapidly and such attempts will be delayed for only the time required to enable rescue boats to arrive at the disaster zone.

On their arrival at the surface the survivors may be exhausted or sick, so it is very helpful, if circumstances permit to have already lowered a boat to prepare to pick them up. Some will need to be taken to a decompression chamber and naval authorities will make efforts to transport with maximum urgency equipment of this type to the site of the disaster. Those still in the submarine should be informed that assistance is on the way.

The Spanish navy has a service in Cartagena for search and rescue operations. It is always available to render assistance. It is understood, nevertheless, that any vessel which at a determined moment may have evidence of a submarine disaster and goes into action in the sense of the given instructions, working quickly and with effectiveness, can render an important service and play a decisive role in the rescue. It will try according to the instructions written on the buoy to establish communication with the submarine.

Time Zone

The Time Zone description for Spain, the Islas Baleares, and Spanish possessions in North Africa (Al Hoceima, Ceuta, Islas Chafarinas, Melilla, Penon de Velez, and Isla de Alboran) is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is observed from the last Sunday in March until the last Sunday in October.

The Time Zone description for the Islas Canarias is ZULU. Daylight Savings Time (ALFA (-1)) is observed from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Spain are, as follows:

1. **Atlantic Ocean**
   a. Off Cabo Finisterre. (IMO adopted)
   b. Approaches to Puerto Vigo. (Government of Spain)
   c. Banco del Hoyo. (IMO adopted)
2. **Mediterranean Sea**
   a. In the Strait of Gibraltar. (IMO adopted)
   b. Off Cabo de Gata. (IMO adopted)
   c. Off Cabo de Palos. (IMO adopted)
   d. Off Cabo de la Nao. (IMO adopted)
   e. Approaches to Castellon. (Government of Spain)
   f. Approaches to Barcelona. (Government of Spain)
3. **Islas Canarias**
   a. East of Isla Gran Canaria. (IMO adopted)
   b. Northwest of Isla Gran Canaria. (IMO adopted)

U.S. Embassy

The U.S. Embassy is situated at Serrano 75, 28006 Madrid. The mailing address is PSC 61, APO AE (09642).

U. S. Embassy Spain Home Page
http://madrid.usembassy.gov

Vessel Traffic Service

Vessel Traffic Services are in operation, as follows:

1. Santander [1] (43°27'N., 3°49'W.).
2. Finisterre [1] (42°54'N., 9°17'W.).
3. Vigo [1] (42°14'N., 8°44'W.).
4. Cadiz [1] (36°33'N., 6°17'W.).

5. Cabo de Gata [2] (36°43'N., 2°12'W.).
6. Strait of Gibraltar [2] (35°54'N., 5°36'W.).

[1] For further information, see Pub. 143, Sailing Directions (Enroute) West Coast of Europe and Northwest Africa.

[2] For further information, see Pub. 131 (Sailing Directions (Enroute) Western Mediterranean.

ST. KITTS AND NEVIS

General	**571**
Buoyage System	**571**
Currency	**571**
Government	**571**
Holidays	**572**
Industries	**572**
Languages	**572**
Navigational Information	**572**
Search and Rescue	**572**
Ship Reporting System	**572**
Signals	**572**
Time Zone	**572**
U.S. Embassy	**572**

General

St. Kitts and Nevis is located in the N portion of the Leeward Islands.

Although the climate of both islands is hot, it is very healthy. Temperature extremes are moderated by the ocean winds.

The center of the NW portion of St. Kitts is dominated by Mount Liamuiga, which is usually covered by clouds. The SE portion of the island is much lower in elevation. Nevis is a circular island formed by volcanic action. The low coasts gradually rise to the high peaks of the interior.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation in St. Kitts and Nevis may be missing or unreliable.

Currency

The official unit of currency is the East Caribbean dollar, consisting of 100 cents.

Government

Flag of St. Kitts and Nevis

St. Kitts and Nevis is a democratic federal state. The country is divided into 14 parishes.

Elizabeth II, recognized as the Chief of State, appoints a Governor-General. The Prime Minister and the cabinet are appointed by the Governor-General. The unicameral Parliament is composed of three appointed members and 11 directly-elected members serving 5-year terms.

The legal system is based on English common law.

The capital is Basseterre.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 2	End of Carnival
Good Friday	Variable
Easter Monday	Variable
First Monday in May	Labor Day
Whitmonday	Variable
June 14	Queen's Birthday
First Monday in August	Bank Holiday
September 19	Independence Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are sugar production, tourism, cotton, salt, copra, clothing, footwear, and beverages.

The main exports are machinery, food, electronics, beverages, and tobacco. The main export-trading partners are the United States, Canada, and the Netherlands.

The main imports are machinery, manufactured goods, food, and fuels. The main import-trading partners are the United States and Trinidad and Tobago.

Languages

English is the official language.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of St. Kitts and Nevis are, as follows:

Territorial Sea	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

Maritime Boundary Disputes

Joins other Caribbean states to counter Venezuela's claim that Isla Aves (15°42'N., 63°38'W.) sustains human habitation, which would permit Venezuela to extend its Exclusive Economic Zone over a large portion of the Caribbean Sea.

Search and Rescue

The St. Kitts and Nevis Defense Force Coast Guard is responsible for coordinating search and rescue operations in association with MRCC Fort de France (Martinique).

MRCC Fort de France can be contacted, as follows:

1. Telephone: 596-596-709292
   596-596-731616
2. Facsimile: 596-596-632450
   596-596-735730
3. Telex: 298-912008 COSMA A
4. E-mail: antilles@mrccfr.au

Ship Reporting System

CARICOM (Caribbean Community) Advance Passenger Information System (APIS)

CARICOM APIS is a mandatory reporting system providing Advance Passenger Information (API) about passengers and crew to the Joint Regional Communications Center (JRCC) Barbados for vessels bound for or departing from a port in the CARICOM area. Further information can be found in **Caribbean Sea—Ship Reporting System**.

Signals

Visual storms signals are displayed by day in Charlestown, on the W coast of Nevis, as follows:

Signal	Meaning
One red triangular flag	Winds of 28 to 33 knots expected.
One square red flag, with a centered black square	Winds of 34 to 63 knots expected.
Two square red flags, with a centered black square, vertically disposed *	Winds over 63 knots expected.
* Red flares are displayed at night.	

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. does not have an embassy in St. Kitts and Nevis. The U.S. Ambassador to Barbados is accredited to St. Kitts and Nevis.

The embassy is situated in Wildey Business Park, Wildey, St. Michael, Bridgetown.

The mailing addresses are, as follows:

1. Barbados address—
   P.O. Box 302
   Bridgetown 11000
2. U. S. address—
   CMR 1014

APO AA (34055)

U. S. Embassy Barbados Home Page
http://barbados.usembassy.gov

ST. LUCIA

General	**575**
Buoyage System	**575**
Cautions	**575**
Currency	**575**
Government	**575**
Holidays	**576**
Industries	**576**
Languages	**576**
Navigational Information	**576**
Search and Rescue	**576**
Ship Reporting System	**576**
Signals	**576**
Time Zone	**577**
U.S. Embassy	**577**

General

St. Lucia is the second largest of the Windward Islands.

The climate is tropical, with a dry season from January through April. The rainy season is from May through August.

The island is mountainous and for the most part covered with forest and vegetation.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Most of the inshore areas are unsurveyed.

Currency

The official unit of currency is the East Caribbean dollar, consisting of 100 cents. U.S. dollars are also accepted.

Government

Flag of St. Lucia

St. Lucia is a parliamentary democracy. The country is divided into 11 quarters.

Elizabeth II, recognized as the Chief of State, appoints a Governor-General. The Prime Minister and the cabinet are appointed by the Governor-General. The bicameral Parliament is composed of a 11-member appointed Senate and a directly-elected 17-member House of Assembly serving 5-year terms.

The legal system is based on English law.
The capital is Castries.

Holidays

The following holidays are observed:

January 1-2	New Year's Days
February 22	Independence Day
Good Friday	Variable
Easter Monday	Variable
May 1	Labor Day
Whitmonday	Variable
Corpus Christi	Variable
End of Carnival Month	Variable
Emancipation Day	Variable
October 2	Thanksgiving Day
Defunct's Day	Variable
November 1	All Saints' Day
December 13	St. Lucia Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are clothing, assembling of electronic components, beverages, corrugated cardboard boxes, tourism, lime processing, and coconut processing.

The main exports are bananas, clothing, cocoa, vegetables, fruits, and coconut oil. The main export-trading partners are France, the United States, and the United Kingdom.

The main imports are food, manufactured goods, machinery and transportation equipment, chemicals, and fuels. The main import-trading partners are the United States, Trinidad and Tobago, Italy, France, Venezuela, the United Kingdom, Argentina, and the Netherlands.

Languages

The official language is English, but over 80 per cent of the population speaks a French creole.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of St. Lucia are, as follows:

Territorial Sea	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

Maritime Boundary Disputes

Joining other Caribbean states to counter Venezuela's claim that Isla Aves (15°42'N., 63°38'W.) sustains human habitation, which would permit Venezuela to extend its Exclusive Economic Zone over a large portion of the Caribbean Sea.

Search and Rescue

The Royal St. Lucia Police Force is responsible for coordinating search and rescue operations in association with MRCC Fort de France (Martinique).

MRCC Fort de France can be contacted, as follows:

1. Telephone: 596-596-709292
   596-596-731616
2. Facsimile: 596-596-632450
   596-596-735730
3. Telex: 298-912008 COSMA A
4. E-mail: antilles@mrccfr.au

Castries Port Authority Radio maintains a continuous listening watch for distress traffic on 2182 kHz and VHF channel 16.

A lifeboat station is located in Port Castires (14°01'N., 61°00'W.).

Ship Reporting System

CARICOM (Caribbean Community) Advance Passenger Information System (APIS)

CARICOM APIS is a mandatory reporting system providing Advance Passenger Information (API) about passengers and crew to the Joint Regional Communications Center (JRCC) Barbados for vessels bound for or departing from a port in the CARICOM area. Further information can be found in **Caribbean Sea—Ship Reporting System**.

Signals

Visual storms signals are displayed in Castries, as shown in the accompanying table titled **St. Lucia—Storm Warning Signals**.

St. Lucia—Storm Warning Signals

Day signal	Night signal	Meaning
One red triangular flag	One red light over one white light.	Winds of 28 to 33 knots expected.
Two red triangular flags, vertically disposed	One white light over one red light.	Winds of 34 to 48 knots expected.

St. Lucia—Storm Warning Signals		
Day signal	**Night signal**	**Meaning**
One square red flag, with a centered black square	Two red lights, vertically disposed.	Winds of 49 to 63 knots expected.
Two square red flags, with a centered black square, vertically disposed	One white light between two red lights, vertically disposed.	Winds over 63 knots expected.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. does not have an embassy in St. Lucia. The U.S. Ambassador to Barbados is accredited to St. Lucia.

The embassy is situated in Wildey Business Park, Wildey, St. Michael, Bridgetown.

The mailing addresses are, as follows:

1. Barbados address—
   P.O. Box 302
   Bridgetown 11000
2. U. S. address—
   CMR 1014
   APO AA (34055)

U. S. Embassy Barbados Home Page
http://barbados.usembassy.gov

ST. PIERRE AND MIQUELON

General	**579**
Buoyage System	**579**
Currency	**579**
Government	**579**
Holidays	**580**
Industries	**580**
Languages	**580**
Navigational Information	**580**
Regulations	**580**
Search and Rescue	**580**
Signals	**580**
Time Zone	**580**
U.S. Embassy	**580**

General

St. Pierre and Miquelon consists of two larger islands and several smaller adjacent islands lying about 10 miles off the S coast of Newfoundland.

The climate is cold and wet, with a large amount of mist and fog; which can be a hazard to navigation. Spring and autumn are windy.

The islands consist mostly of barren rock covered with thin soil and with scattered vegetation.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Currency

The official unit of currency is the Euro, consisting of 100 cents.

Government

Flag of St. Pierre and Miquelon

St. Pierre and Miquelon is a self-governing Territorial Collectivity of France.

St. Pierre and Miquelon is governed by the President of France, which is represented by a Prefect. St. Pierre and Miquelon has one representative in the French Senate and one representative in the French National Assembly. The local unicameral Territorial Council is composed of 19 directly-elected members serving 6-year terms; 15 members are elected from St. Pierre, while four members are elected from Miquelon.

The legal system is based on French civil law, with local modifications.

The capital is St. Pierre.

Holidays

The following holidays are observed:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 1	Labor Day
May 8	World War II Victory Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
July 14	Bastille Day
August 15	Assumption Day
November 1	All Saints' Day
November 11	Armstice Day
December 25	Christmas Day

Industries

The main industries are fishing, fish processing, and tourism.

The main exports are fish and fish products, soybeans, animal feed, mollusks and crustaceans, and animal pelts. The main export partners are Spain, Belgium, India, France, and the United States.

The main imports are meat, clothing, fuel, electrical equipment, machinery, and building materials. The main importtrading partners are France and Canada.

Languages

French is the official language.

Navigational Information

Enroute Volume

Pub. 146, Sailing Directions (Enroute) Newfoundland, Labrador, and Hudson Bay.

Maritime Claims

The maritime territorial claims of St. Pierre and Miquelon are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines.

Regulations

Quarantine

Quarantine messages should be sent to the harbormaster at least 12 hours prior to ETA at Rade de Saint Pierre. The harbormaster casn be contacted, as follows:

1. Telephone: 508-410974
   508-550308 (mobile)
2. Facsimile: 508-410979
3. E-mail herve.huet@equipement.gouv.fr

Search and Rescue

The Quartier des Affaires Maritimes (AFMAR Saint Pierre et Miquelon) is responsible for coordinating search and rescue operations and can be contacted, as follows:

1. Telephone: 508-411530
2. Facsimile: 508-414834

AFMAR Saint Pierre et Miquelon is also linked with the Maritime Rescue Coordination Subcenter, St. John's, Newfoundland, Canada.

Signals

The following signals may be displayed in addition to the normal port open/port closed signals.

St. Pierre and Miquelon Port Signals

Day signal	Night signal	Meaning
Three red balls, vertically disposed	Three red lights, vertically disposed	Port closed
Appropriate signal from the International Code of Signals	Three green lights, vertically disposed	Port open

Caution is necessary as these signals may only be indicating that obstructions are in the fairway. Vessels should follow any signals received from the harbor authorities.

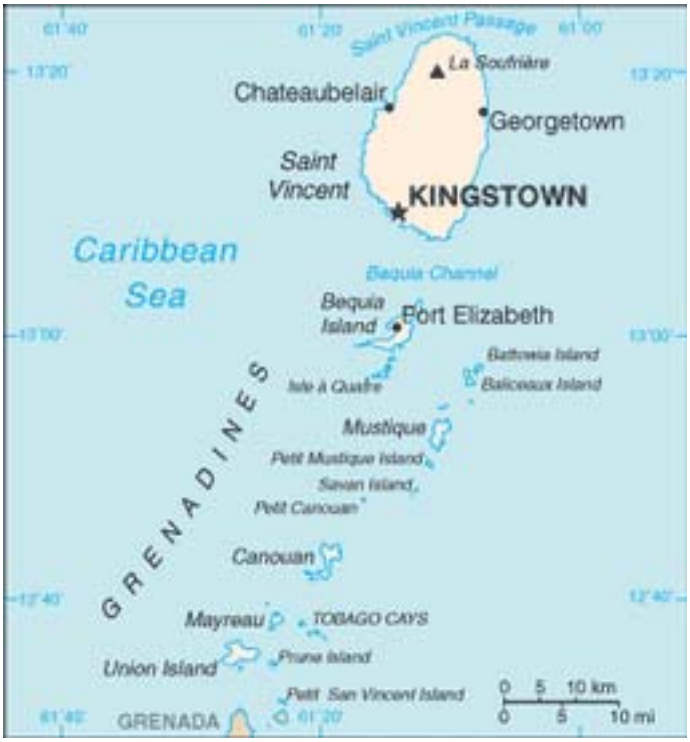
Time Zone

The Time Zone description is PAPA (+3). Daylight Savings Time (OSCAR (+2)) is maintained from the second Sunday in March until the first Sunday in November.

U.S. Embassy

St. Pierre and Miquelon is a self-governing Territorial Collectivity of France. There is no diplomatic representation.

ST. VINCENT AND THE GRENADINES



General	**581**
Buoyage System	**581**
Cautions	**581**
Currency	**581**
Government	**581**
Holidays	**582**
Industries	**582**
Languages	**582**
Navigational Information	**582**
Search and Rescue	**582**
Ship Reporting System	**582**
Signals	**582**
Time Zone	**582**
U.S. Embassy	**583**

General

St. Vincent and the Grenadines, located in the Windward Islands, consists of the island of St. Vincent, a high mountainous island with an active volcano near its N end, and a chain of smaller islands and islets, known as the Grenadines, extending SW from St. Vincent.

The climate is tropical, with the Northeast Trade Winds predominating and little variation in temperature. The rainy season is from May to November.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Depths off the N end of St. Vincent are from old surveys. Vessels should navigate with caution in this area.

Currency

The official unit of currency is the East Caribbean dollar, consisting of 100 cents.

Government

Flag of St. Vincent and the Grenadines

St. Vincent and the Grenadines is an independent parliamentary democracy with the British Commonwealth. The country is divided into six parishes.

Elizabeth II, recognized as the Chief of State, appoints a Governor-General. The Prime Minister and the cabinet are appointed by the Governor-General. The unicameral House of Assembly is composed of six appointed Senators and 15 directly-elected Members serving 5-year terms.

The legal system is based on English common law.

The capital is Kingstown.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 22	St. Vincent and the Grenadines Day
Carnival Tuesday	First Tuesday in March
Good Friday	Variable
Easter Monday	Variable
May 1	Labor Day
Whitmonday	Variable
Mardi Gras	First Monday in July
July 7	Caricom Day
First Monday in August	Bank Holiday
October 27	Independence Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are food processing, cement, clothing, furniture, and starch.

The main exports are bananas, taro, arrowroot starch, and tennis rackets. The main export-trading partners are France, Italy, Greece. Russia, and the United Kingdom.

The main imports are foodstuffs, machinery and equipment, chemicals and fertilizers, and minerals and fuels. The main import-trading partners are Singapore, Trinidad and Tobago, the United States, Italy, and Spain.

Languages

English is the official language. A French patois is also spoken.

Navigational Information

Enroute Volume

Pub. 147, Sailing Directions (Enroute) Caribbean Sea Volume 1.

Maritime Claims

The maritime territorial claims of St. Vincent and the Grenadines are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m.

* Claims archipelagic status. Requires advance permission or notification for innocent passage of warships in the territorial sea.

Maritime Boundary Disputes

Joins other Caribbean states to counter Venezuela's claim that Isla Aves (15°42'N., 63°38'W.) sustains human habitation, which would permit Venezuela to extend its Exclusive Economic Zone over a large portion of the Caribbean Sea.

Search and Rescue

The Saint Vincent and the Grenadines Coastguard is responsible for all maritime search and rescue operations. The Coastguard base at Calliagua maintains a continuous listening watch for distress traffic on 2182 kHz and VHF channel 16. The Coastguard radio station at Fort Charlotte in Kingstown maintains a continuous listening watch for distress traffic on 2182 kHz and VHF channel 16.

A lifeboat station is located in Kingstown (13°09'N., 61°14'W.).

Ship Reporting System

CARICOM (Caribbean Community) Advance Passenger Information System (APIS)

CARICOM APIS is a mandatory reporting system providing Advance Passenger Information (API) about passengers and crew to the Joint Regional Communications Center (JRCC) Barbados for vessels bound for or departing from a port in the CARICOM area. Further information can be found in **Caribbean Sea—Ship Reporting System**.

Signals

Storm signals are shown at Kingstown Bay, as follows:

Signal	Meaning
One square red flag, with a centered black square	Cautionary warning. Storm or hurricane force winds possible.
Two square red flags, with a centered black square, vertically disposed	Definite warning. Hurricane force winds will affect the island.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. does not have an embassy in St. Vincent and the Grenadines. The U.S. Ambassador to Barbados is accredited to St. Vincent and the Grenadines.

The embassy is situated in Wildey Business Park, Wildey, St. Michael, Bridgetown.

The mailing addresses are, as follows:

1. Barbados address—
   P.O. Box 302
   Bridgetown 11000
2. U. S. address—
   CMR 1014
   APO AA (34055)

U. S. Embassy Barbados Home Page
http://barbados.usembassy.gov

SWEDEN

General	585
Buoyage System	586
Cautions	586
Currency	586
Firing Areas	586
Fishing Areas	588
Government	588
Holidays	588
Ice	588
Industries	591
Languages	591
Meteorology	591
Mined Areas	591
Navigational Information	592
Pilotage	593
Pollution	594
Regulations	594
Restricted Areas	598
Search and Rescue	598
Ship Reporting System	598
Signals	598
Time Zone	600
Traffic Separation Schemes	600
U.S. Embassy	600
Vessel Traffic Service	600

General

Sweden is located in northern Europe bordering the Baltic Sea, the Gulf of Bothnia, and Skagerrak, between Finland and Norway.

The climate is temperate in the S, with cold cloudy winters and cool partly cloudy summers.

The terrain is mostly flat or gently rolling lowlands, and mountainous in the W.

Areas to be Avoided

All vessels of 500 gross tons and over should avoid the following IMO Areas to be Avoided:

1. **Hoburgs Bank—**An area bounded by lines joining the following positions:
   a. 56°49'31.2"N, 18°38'46.2"E.
   b. 56°40'13.8"N, 18°45'04.8"E.
   c. 56°24'03.6"N, 18°36'12.0"E.
   d. 56°22'46.2"N, 18°08'25.8"E.
   e. 56°39'57.6"N, 18°06'12.0"E.
2. **Norra Midsjobanken—**An area bounded by lines joining the following positions:
   a. 56°07'52.2"N, 17°38'24.6"E.
   b. 56°02'10.2"N, 17°13'10.2"E.
   c. 56°10'06.0"N, 17°13'40.8"E.
   d. 56°15'01.2"N, 17°25'36.6"E.

Buoyage System

IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

In winter, floating aids to navigation could be damaged, drift, or be lost. Weather conditions may also necessitate their withdrawal from station. At the beginning of winter many lightships and lighted buoys are replaced by small buoys more capable of resisting damage or loss.

Topmarks and radar reflectors on remaining buoys are removed. Red reflectors may bleach causing a yellow reflection; care should be exercised not to confuse these with white reflectors.

Buoys fitted with racons are generally replaced by lighted buoys when icing is expected to prevent damage to the sensitive and expensive electronic equipment.

Cautions

Air Cushion Vehicles

Air Cushion Vehicles operate between Malmo and Kobenhavn, on the same route as hydrofoils. They have a maximum speed of 35 knots and operate in accordance with the International Rules of the Road. When airborne they carry a rotating yellow warning light. The vehicle makes difficult leeway with the wind abeam. Signals made on a ship's bell are difficult to hear aboard the air cushion vehicle.

Chemical Munitions

Chemical muntions, including mustard gas, are known to have been dumped in the following locations:

a. 15 miles E of Christiano (55°20'N., 15°11'E.).
b. 52 miles SSE of Hoburg (56°55'N., 18°09'E.).

It must be assumed that these munitions were spread over a larger area than charted during dumping operations and it is known that some were dumped during the transit from Peenemunde to the dumping areas. It is also likely that these munitions have moved outside the charted areas due to activity on the sea bed.

Floating Hazards

In the coastal waters and archipelagic waters of Sweden, numerous drifting logs may be encountered throughout the year, especially after storms and spring freshets. These may constitute a serious hazard to small and medium-sized vessels.

Unexploded Ordnance

Unexploded ordnance, which may cause a dangerous explosion if disturbed, lies on the sea bed and could present a hazard to vessels anchoring, fishing, or engaging in submarine or seabed operations, as follows:

1. East coast—
   a. 59°00.1'N, 18°11.7'E.
   b. 58°59.8'N, 18°11.7'E.
   c. 58°57.3'N, 18°27.0'E.
   d. 58°50.8'N, 17°57.5'E.
   e. 58°49.8'N, 18°20.0'E.
   f. 58°49.7'N, 18°14.7'E.
   g. 58°45.5'N, 18°26.2'E.
   h. 58°35.0'N, 18°45.2'E.
   i. 58°30.5'N, 17°34.8'E.
   j. 58°28.0'N, 17°23.0'E.
   k. 57°51.4'N, 17°15.9'E.
   l. 57°46.1'N, 17°11.7'E.
   m. 57°49.4'N, 19°09.0'E.
2. South coast—
   a. 56°00.6'N, 16°07.5'E.
   b. 55°53.2'N, 16°30.9'E.
   c. 55°52.9'N, 16°30.8'E.
   d. 55°52.3'N, 16°28.6'E.
   e. 55°52.1'N, 16°31.9'E.
   f. 55°52.0'N, 16°30.5'E.
   g. 56°00.7'N, 15°25.3'E.
   h. 56°00.2'N, 15°19.2'E.
   i. 55°58.2'N, 15°10.0'E.
   j. 55°52.4'N, 15°09.4'E.
   k. 55°52.1'N, 15°03.8'E.
   l. 56°05.6'N, 15°03.0'E.
   m. 56°01.1'N, 15°02.6'E.
   n. 56°01.3'N, 14°56.0'E.
3. West coast—
   a. 57°33.4'N, 11°21.5'E.
   b. 58°14.6'N, 11°16.7'E.
   c. 58°31.4'N, 11°06.9'E.
   d. 58°49.2'N, 11°00.2'E.
   e. 58°24.4'N, 10°30.1'E.
   f. 58°27.9'N, 10°32.8'E.
   g. 58°28.3'N, 10°48.8'E.

Currency

The official unit of currency is the krona, consisting of 100 ore.

Firing Areas

General

It should be noted that Sweden is in the process (2011) of reclassifying certain Firing Areas as Administrative Areas.

Baltic Sea—Northern Part

Area R66—An area bounded by lines joining the following positions:

a. 58°52.0'N, 17°52.2'E.

b. 58°55.0'N, 17°41.0'E.
c. 58°51.9'N, 17°34.4'E.
d. 58°47.4'N, 17°33.7'E.
e. 58°44.0'N, 17°35.7'E.
f. 58°37.6'N, 17°52.9'E.

Area R71—An area bounded by lines joining the following positions:

a. 58°52.0'N, 17°52.2'E.
b. 58°37.6'N, 17°52.9'E.
c. 58°18.2'N, 18°05.8'E.
d. 58°49.0'N, 18°50.0'E.
e. 58°56.0'N, 19°00.0'E
f. 59°00.9'N, 18°29.3'E.
g. 58°52.4'N, 17°57.8'E.

Area D175S—An area bounded by lines joining the following positions:

a. 58°29.7'N, 17°58.2'E.
b. 58°18.2'N, 18°05.8'E.
c. 58°33.0'N, 18°50.0'E.
d. 58°40.4'N, 18°30.2'E.
e. 58°32.7'N, 18°12.0'E.

Area D175E—An area bounded by lines joining the following positions:

a. 58°40.4'N, 18°30.2'E.
b. 58°33.0'N, 18°50.0'E.
c. 58°45.0'N, 19°20.0'E.
d. 58°55.6'N, 19°02.0'E.
e. 58°48.2'N, 18°50.0'E.

Uto Restricted Area—An area bounded by lines joining the following positions:

a. 58°57.0'N, 18°15.7'E.
b. 58°44.6'N, 18°09.1'E, then the minor arc of a circle 13 miles in radius centered on position 58°57.0'N, 18°15.7'E to
c. 58°55.2'N, 18°40.6'E.

Note.—Warnings are not announced daily to merchant vessels. Special firing practices will be announced in Sweden Notice to Mariners and/or on Swedish National Radio, with requests to avoid the area of interest.

The Uto Restricted Areas may be temporarily closed to shipping.

Further information can be obtained from Naval Control Musko, as follows:

1. VHF: VHF channel 16
2. Telephone: 46-10823-1823
3. E-mail: sjoc-sskmusko@mil.se

Baltic Sea—Southern Part

Area R64S (Torhamn Storre)—An area bounded by lines joining the following positions:

a. 56°14.9'N, 16°02.8'E.
b. 56°10.0'N, 16°24.8'E.
c. 56°05.0'N, 16°24.8'E.
d. 55°50.0'N, 15°47.3'E.
e. 56°03.7'N, 15°47.3'E.

Area R64M (Torhamn Mindre)—An area bounded by lines joining the following positions:

a. 56°03.7'N, 15°49.6'E.
b. 56°08.1'N, 16°16.8'E.
c. 55°56.0'N, 16°07.0'E.

Area R63A (Sturko Nord)—An area bounded by lines joining the following positions:

a. 56°03.9'N, 15°24.0'E.
b. 56°07.0'N, 15°28.7'E.
c. 56°07.0'N, 15°37.6'E.
d. 56°03.7'N, 15°47.3'E.
e. 55°56.8'N, 15°47.3'E.
f. 55°54.0'N, 15°39.9'E.
g. 56°00.0'N, 15°39.9'E.
h. 56°02.5'N, 15°36.0'E.

Area R63B (Sturko Syd)—An area bounded by lines joining the following positions:

a. 56°03.9'N, 15°24.0'E.
b. 56°02.5'N, 15°36.0'E.
c. 56°00.0'N, 15°39.9'E.
d. 55°54.0'N, 15°39.9'E.
e. 55°54.6'N, 15°33.5'E.
f. 55°58.0'N, 15°27.8'E.

Area R63C (Sturko Nytt)—An area bounded by lines joining the following positions:

a. 56°07.0'N, 15°28.7'E.
b. 56°11.8'N, 15°30.4'E.
c. 56°10.0'N, 15°48.8'E.
d. 56°03.7'N, 15°47.3'E.
e. 56°07.0'N, 15°37.6'E.

Area D164 (Hano Nord)—An area bounded by lines joining the following positions:

a. 55°58.2'N, 14°49.0'E.
b. 56°06.6'N, 14°58.2'E.
c. 56°07.0'N, 15°05.2'E.
d. 56°03.9'N, 15°24.0'E.
e. 55°58.7'N, 15°27.8'E.
f. 55°54.7'N, 15°33.8'E.

Area D165 (Hano Vast)—An area bounded by lines joining the following positions:

a. 55°40.0'N, 14°39.9'E.
b. 55°50.0'N, 14°39.9'E.
c. 55°58.2'N, 14°49.0'E.
d. 55°56.4'N, 15°09.7'E.
e. 55°40.0'N, 15°09.7'E.

Area D166 (Hano Ost)—An area bounded by lines joining the following positions:

a. 55°40.0'N, 15°09.7'E.
b. 55°56.4'N, 15°09.7'E.
c. 55°54.0'N, 15°39.9'E.
d. 55°40.0'N, 15°39.9'E.

Area R38A (Rinkaby)—An area bounded by the coast and lines joining the following positions:

a. 55°59.4'N, 14°23.0'E. (coast)
b. 55°58.0'N, 14°29.0'E.
c. 55°53.6'N, 14°22.0'E.
d. 55°56.4'N, 14°19.5'E. (coast)

Area R34 (Ravlunda)—An area bounded by the coast and lines joining the following positions:

a. 55°45.8'N, 14°12.0'E. (coast)
b. 55°53.8'N, 14°19.9'E.
c. 55°53.0'N, 14°22.5'E.
d. 55°56.6'N, 14°25.3'E.
e. 55°47.3'N, 14°32.5'E.
f. 55°42.6'N, 14°32.5'E.
g. 55°35.3'N, 14°27.2'E.
h. 55°43.1'N, 14°19.5'E. (coast)

Note.—Warnings are not announced daily to merchant ves-

sels. Gunnery exercises are announced daily on a Swedish-language telephone answering service (46-455-10000).

Further information can be obtained from Naval Control Goteborg, as follows:

1. VHF: VHF channel 16
2. Telephone: 46-3169-2838
3. E-mail: sjoc-sskgoteborg@mil.se

Gulf of Bothnia

Lulea Archipelago.—Junkon.—Limits of a gunnery range are bounded by lines joining the following positions:

a. 65°27'48.0"N, 22°20'27.0"E.
b. 65°25'15.0"N, 22°25'15.0"E.
c. 65°23'42.0"N, 22°17'57.0"E.
d. 65°27'15.6"N, 22°15'57.6"E.
e. 65°27'52.2"N, 22°20'27.0"E.

Warning Signals

When gunnery and underwater clearance exercises are being conducted in Swedish territorial waters, the following signals are shown:

1. By day—Red flag, green flare (when needed), and repeated short blasts from the ship's whistle.
2. At night.—All-around red light, green flare (when needed), and repeated short blasts from the ship's whistle.

Helicopters will drop an orange-colored smaoke flare day or night.

Fishing Areas

Eel fishing, using fixed and floating gear, occurs along the coast of Sweden. the gear is set at right angles to the shore and can extend several miles seaward. Along eel fishing is prohibited along range lines and within the white sectors of entrance sector lights, fishing activity is frequently found very close to them.

For further information, see **Baltic Sea—Fishing Areas**.

Government

Flag of Sweden

Sweden is a constitutional monarchy. The country is divided into 21 counties.

King Carl XVI Gustav is the Head of State. The Prime Minister is elected by the Parliament. The unicameral Parliament consists of 349 members, directly-elected according to a system of proportional representation, serving 4-year terms.

The legal system is based on civil law influenced by customary law.

The capital is Stockholm.

Holidays

The following holidays are observed:

January 1	New Year's Day
January 5	Eve of Epiphany
January 6	Epiphany
Holy Thursday	Variable
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
April 30	Valborg's Eve
May 1	Labor Day
Ascension Day	Variable
Whitsunday	Variable
Whitmonday	Variable
June 6	National Day
Friday after June 19	Midsummer Eve
Saturday after June 19	Midsummer Day
Friday after October 30	All Saints' Eve
Saturday after October 30	All Saints' Day
December 24	Christmas Eve
December 25	Christmas Day
December 26	Second Day of Christmas
December 31	New Year's Eve

Ice

The government of Sweden operates a fleet of state-owned icebreakers managed by the Swedish Maritime Administration (SMA). The icebreakers, which are manned by the Swedish Naval Forces, break ice between open water, and waters protected from sea ice, pack ice, and similar ice obstacles. Helicopters are based aboard some of these vessels and are utilized for air reconnaissance purposes and directing.

Municipal or private vessels may be contracted to assist state-owned icebreakers, when necessary.

The ice breaking service is administrated by the Director of the SMA, Ship Management and Icebreaking, assisted by local offices and, when necessary, through the regional offices in Malmo, Gothenburg, and Trollhatten.

The Swedish Icebreaking Service can be contacted, as follows:

1. VHF: VHF channel 16
   Available 0800 to 1640
2. Telephone: 46-11-191000 (Switchboard)
   Available 0800 to 1640
   46-11-191210 (Operations)

Available 24 hours during the icebreaking season.

3. Facsimile: 46-11-103100
4. E-mail: opc@sjofartsverket.se
5. Web site: http://www.sjofartsverket.se

In accordance with the Ice Breaking Ordinance, ships suitable for winter navigation can receive ice breaking assistance through the Government Ice Breaking Service in Swedish coastal waters and in sea routes to these waters between the open sea and waters which are protected from sea ice, drift ice, pack ice, or similar obstacles. Severe ice can, to a certain extent determined by the Administration, be broken with the aid of the government service in Lake Vanern, Lake Malaren, and the Angermanalven River.

No charge is made for towing or other icebreaker assistance provided by state icebreakers in conjunction with the breaking of sea ice.

The SMA does not accept any responsibility for delay, damage, or other loss caused to a ship, its crew, passengers, or cargo as a result of ice conditions. Every ship is responsible for its own safety.

Assistance and advice is given to ships at their own risk.

For a vessel to obtain state icebreaker assistance it must, as a minimum, have the Finnish-Swedish ice class (or equivalent) and the minimum dwt that are applicable to a specific ice region in accordance with ice restrictions imposed by the SMA.

The SMA may refuse to give state ice breaker assistance to a ship if it is known that the arrangements of the ship are not functional before the assistance, or if the ship, with regard to hull, engine power, equipment, or crew is in such condition that operation in ice can be presumed to endanger the safety of the ship, or if there is good reason to suspect that the ship is less suitable for operation in ice than what is generally expected for ships belonging to the same ice class.

The Executive Boards of the Finnish Icebreaking Service and the Swedish Icebreaking Service have jointly decided that tugs with barges (barges connected with cables or hawsers) and so-called river vessels are not suitable for winter navigation and cannot count on state icegreaker assistance, even if they have the relevant ice class granted by their classification society.

The following are the minimum requirements to be complied with if a ship is to be considered suitable for winter navigation:

1. The ship shall be classified as being of the highest ice class by a Classification Society approved by the state in question or shall otherwise have shown itself to be of a corresponding construction and strength at an inspection of seaworthiness.
2. The ship shall be equipped with propulsion machinery powerful enough for the ship to make its way through light ice or through broken channels within the archipelago without icebreaker assistance.
3. The ship shall be of at least 500 dwt.
4. The stability of the ship shall be such that even when carrying deck cargo a certain amount of icing can occur without risk for capsizing.

The Executive Board of the Ice Breaking Service of the SMA issues directions and restrictions for sea traffic based on current and expected ice and weather conditions and on the ice breaking resources available. The restrictions issued include requirements concerning minimum tonnage, engine power, and ice strengthening (ice class) for those ships which can expect ice breaking assistance.

The SMA will announce the tightening of restrictions 6 days (including Saturdays and holidays) in advance, if possible, before they enter into force. When restrictions are eased or lifted by the SMA, these decisions come into force on the same day as announced.

Current ice charts of the Baltic Sea, Kattegat, and Skagerrak can be obtained from the following web sites:

1.	Baltic Icebreaking Management	http://www.baltice.org
2.	Swedish Meteorological and Hydrological Institute	http://www.smhi.se
3.	Finnish Institute of Marine Research	http://www.fimr.fi

The ice charts can also be obtained in A4 format by telefax after making special arrangements with the Swedish Meteorological and Hydrological Institute Ice Service in Norkoppong, as follows:

1. Telephone: 46-11-4958533
2. Facsimile: 46-11-4958053
3. Telex: 54-64470
4. E-mail: ice@.smhi.se
5. Web site: http://www.smhi.se/icechart

Daily updates on ice conditions and restrictions in Skagerrak, Kattegat, the Baltic Sea proper, the Gulf of Bothnia, the Gulf of Fnland, the Gulf of Riga, and Lake Vanern are issued, as follows:

1. Ice charts: 0930 (UTC)
2. Ice reports:: 1000 (UTC)
3. Ice restrictions: 1000 (UTC)
4. Fairway codes: 1030 (UTC)

For information on obtaining general ice information for the Baltic Sea, see **Baltic Sea—Ice**.

The Director will decide whether, having due regard for the traffic directions issued, the ship in question can count on assistance from an icebreaker and if the ship shall utilize the services of an ice pilot in conjunction with this. Ships which have not been granted the right to assistance from an icebreaker will be recommended to refrain from fulfilling the voyage in question.

Unless special reasons indicate otherwise, ships in need of help will be assisted in the following order, no matter what their nationality:

1. Ships in distress or in need of help because of danger to the lives of those on board.
2. Ships destined for or coming from Denmark, Finland, Norway, Sweden, and Germany. In this case preference shall be given to passenger ships and ships carrying goods of special importance.
3. Other ships.

Ships seeking assistance will be grouped in convoys whenever conditions require this. Dispensation from sea traffic restrictions which have been issued cannot be counted on.

Ships which can count on assistance from an icebreaker will receive the necessary instructions for the voyage in question.

Vessels bound for Swedish ports and requiring icebreaker as-

sistance shall, well in advance of entering ice-covered waters, report to an icebreaker in accordance with the instructions given in the daily ice report. In addition, vessels bound for harbors in the Gulf of Bothnia which have traffic restrictions due to ice are requested to report the following information, in Swedish or English, on VHF channel 84 (call sign: Ice Info) or directly by telephone (46-31-699100) when passing Svenska Bjorn Light (59°33'N., 20°01'E.):

1. Name and call sign.
2. Nationality.
3. Destination.
4. Speed.
5. ETA.

Monitoring also takes place on VHF channel 16. Reporting may be carried out in Swedish or in English, using the IMO Marine Standard Phrases.

The reporting line can be moved further S based on ice conditions.

Special reports during the winter may be required, as follows:

1. Arrival reports should be broadcast on VHF channel 16 (call sign: Ice Info) when the vessel is moored, stating the following:
   a. Vessel name.
   b. ETD.
   c. Next port-of-call.
2. Departure reports should be broadcast on VHF channel 16 (call sign: Ice Info) at least 6 hours prior to departure.

In connection with reporting, ships bound for specific harbors will be ordered to contact the relevant state icebreaker before passing a point specified by VTS Gavle to get information and directions as to the route and assistance.

Requests for assistance from state icebreakers shall, when the state icebreaker (this term includes other ships used in the state ice breaking service) is in the waters where the assistance is required to be made to the captain of the icebreaker or a specific icebreaker designated to receive notifications.

Information on the reporting procedure will be given in daily ice reports and in coast radio station transmissions.

Unless otherwise agreed with the icebreaker providing assistance, ships shall monitor their radios continuously.

VHF radio shall be used for signaling between icebreakers and assisted ships.

Icebreakers continuously monitor VHF channel 16 and 2332 kHz when at sea. Vessels receiving assistance should maintain a continuous listening watch on the channel specified by the icebreaker.

Calls to ice breakers can be established by coastal radio stations. Icebreakers contact information can also be found in the table titled **Sweden—Icebreaker Contact Information.**

The Executive Board of the Ice Breaking Service recommends that vessels navigating in ice-covered waters be equipped with a transponder for automatic identification of ships (AIS).

Vessels shall adhere to the following regulations when in company with an icebreaker, or in convoy:

1. All instructions given from the icebreaker shall be followed.
2. Particular attention shall be paid to the following:
   a. The VHF channel specified shall be monitored continuously.
   b. The propulsion machinery of the ship shall be constantly ready for rapid maneuvers.
   c. The icebreaker shall determine when the ship is to be towed.
   d. If any ship should spring a leak or suffer damage that may affect the vessel's ability to follow the icebreaker or otherwise comply with the directives given by the icebreaker, this shall be immediately communicated to the icebreaker.
   e. To be eligible for icebreaker assistance, vessels navigating in ice-covered waters must be equipped with a powerful searchlight. Ships which form part of a convoy and which have stuck in the ice shall keep their searchlights extinguished.
3. Instructions to the ship being assisted are usually given via VHF on the dedicated assistance channel
4. In order to avoid collisions, a vessel in a convoy shall immediately inform other vessels on the dedicated assistance channel if it stops or slows down its speed substantially.

Sweden—Icebreaker Contact Information

Ice breaker	Call sign	Telephone	E-mail
Ale	SBPQ	46-11-191600	isbrytaren@ale.sjofartsverlet.se
Atle	SBPR	46-11-191630	bridge@atle.sjofartsverlet.se
Frej	SBPT	46-11-191620	bridge@frej.sjofartsverlet.se
Oden	SMLQ	46-31-7518209	bridge@ib-oden.se
Ymer	SDIA	46-11-191610	bridge@ymer.sjofartsverlet.se
Tor Viking II	SLJT	47-210-38210	bridge.tor.viking@rabt.se
Balder Viking	SLKA	47-514-07760	bridge.balder.viking@rabt.se
Vidar Viking	SLKD	47-210-38205	bridge.vidar.viking@rabt.se
Baltica	SJOY	46-8-6666691	baltica@sjofartsverlet.se
Scandica	SKFZ	46-11-191081	scandica@sjofartsverlet.se

5. State icebreakers show a blue light visible around the horizon at their masthead during the hours of darkness.
6. Ships which do not follow the traffic regulations and traffic instructions which have been issued or the orders given by the ice breaker can be refused assistance.
7. Finnish icebreakers are provided with two rotating red lights, one placed above the other, which are switched on when the icebreaker makes an unexpected stop or a sharp reduction in speed. The assisted ship(s) must then immediately take whatever measures are necessary to promptly execute full astern. Note that this warning signal is NOT used on Swedish icebreakers.

Industries

The main industries include iron and steel, precision equipment, pulp and paper products, processed foods, and motor vehicles.

The main exports are machinery, motor vehicles, paper products, pulp and wood, iron and steel products, and chemicals. The main export-trading partners are the United States, Germany, Norway, the United Kingdom, Denmark, and Finland.

The main imports are machinery, petroleum and petroleum products, chemicals, motor vehicles, iron and steel, foodstuffs, and clothing. The main imports-trading partners are Germany. Denmark, Norway, the United Kingdom, the Netherlands, and Finland.

Languages

Swedish is the official language.

Meteorology

Marine weather information is available in Swedish and English from the Swedish Meteorological and Hydrographical Institite (http://www.smhi.se).

Mined Areas

The location of former NEMEDRI Mine Danger Area No. 10, in which residual dangers are still considered to exist, is given below.

Kattegat.—All waters bounded by lines joining the following approximate positions:

a. 57°18.5'N, 11°37.2'E.
b. 57°01.0'N, 12°06.2'E.
c. 56°48.5'N, 12°20.7'E.
d. 56°21.4'N, 12°24.8'E.
e. 56°17.7'N, 12°22.0'E.
f. 56°15.7'N, 12°16.6'E.
g. 56°37.9'N, 12°16.9'E.
h. 56°51.9'N, 11°49.5'E.

The Sound.—All waters bounded by lines joining the following approximate positions:

a. 55°38.7'N, 12°53.5'E.
b. 55°39.1'N, 12°54.8'E.
c. 55°38.2'N, 12°55.6'E.
d. 55°37.0'N, 12°52.8'E.

The Sound—South Approaches.—All waters bounded by lines joining the following positions and the coast of Sweden:

a. 55°36.6'N, 12°58.4'E.
b. 55°36.7'N, 12°56.7'E.
c. 55°36.6'N, 12°56.2'E.
d. 55°36.0'N, 12°54.9'E.
e. 55°36.2'N, 12°54.6'E.
f. 55°37.6'N, 12°55.3'E.
g. 55°36.8'N, 12°53.3'E.
h. 55°34.4'N, 12°49.2'E.
i. 55°34.0'N, 12°47.8'E.
j. 55°32.1'N, 12°43.9'E.
k. 55°23.3'N, 12°43.5'E.
l. 55°18.8'N, 12°41.6'E.
m. 55°16.7'N, 12°40.6'E.
n. 55°12.6'N, 12°4.11'E.
o. 55°06.0'N, 12°50.3'E.
p. 55°07.1'N, 13°09.9'E.
q. 55°15.0'N, 13°09.9'E.
r. 55°18.6'N, 13°08.4'E.
s. 55°20.5'N, 12°58.4'E.
t. 55°20.5'N, 12°56.4'E.
u. 55°23.6'N, 12°5.07'E. (S entrance to the Falsterbo Kanal)

There are numerous restricted areas throughout the Swedish coast which are regarded as dangerous for all forms of sea bed activity due to the presence of unrecovered mines. These areas undergo changes on a frequent basis.

Surface traffic is not normally at risk but caution should be shown be those performing sea bed activities and exploitation such as cable laying, wind turbine construction, fishing, etc. Swedish military authorities have deemed the likelihood od coming into contact with mines is small.

Complete and up-to-date information can be found at the Swedish Maritime Administration web site:

Swedish Maritime Administration (Mines) Home Page
http://www.sjofartsverket.se/mines

Defensive Mine Fields

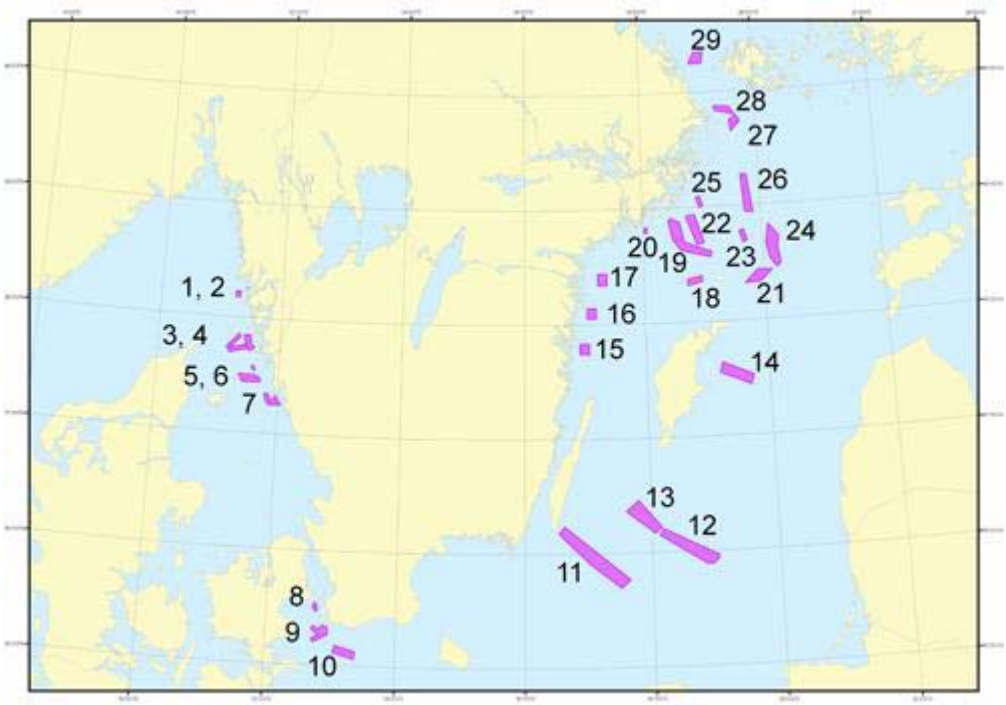
Along the Swedish coast are a number of areas where mines are already laid in peacetime. These mined areas are usually found in harbor entrances and archipelago channels where the waters can be observed and the mines controlled from observation posts on shore. The mines are not activated and may only be detonated remotely from the observation post.

Anchorage is prohibited in these areas due to the risk of damage to the mine equipment; during thunderstorms, vessels navigate in these areas at their own risk as full security cannot be guaranteed in such conditions.

If a vessel must anchor in the mined area in an emergency, anchoring should be done as near to the outer limit of the area as possible in order to minimize damage to the mine gear.

Defensive mine fields are laid in the following areas:

1. In the approaches to Guovik (56°12'N., 15°01'E.) and Jarnavik (56°11'N., 15°04'E.).
2. In the S approach to Karlskrona (56°10'N., 15°35'E.).
3. In the E approach to Karlskrona S of Torhamnsudde (56°05'N., 15°51'E.).
4. In the E approach to Karlskrona in the entrance to Kallafjarden NW of Eldstein Beacon (56°02'N., 15°45'E.).
5. Stockholm (Landsort Entrance)—In the vicinity of



Swedish Maritime Administration

Sweden—Defensive Minefields

Mallsten (58°51'N., 18°02'E.) extending 1 mile N of the island and 1.5 to 2 miles S of the island.

6. Stockholm (Landsort Entrance)—Between the N end of Uto (58°57'N., 18°15'E.) and the S end of Orno, 2 mile NE.

7. Stockholm (Landsort Entrance)—In the vicinity of Vettskar between Galon (59°05'N., 18°18'E.) and Orno, about 1 mile SE.

8. Across the entrance to Slite Hamn (57°42'N., 18°48'E.).

9. Across the N entrance and the S entrance to Farosund (57°53'N., 19°03'E.).

10. Approaches to Goteburg (57°42'N., 11°55'E.)—Three mine fields. The N field lies across the approaches of the N main channel. The central field lies across the approches across the N channel and the SW channel. The S field lies across the approaches of the S channel.

11. In the approaches to Bulkhammen (56°00'N., 12°43'E.).

12. In the approaches to Raa Hamn (55°59'N., 12°45'E.).

Navigational Information

Enroute Volumes

Pub. 193, Sailing Directions (Enroute) Skagerrak and Kattegat.

Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

Pub. 195, Sailing Directions (Enroute) Gulf of Finland and Gulf of Bothnia.

Maritime Claims

The maritime territorial claims of Sweden are, as follows:

Territorial Sea	12 miles. *
Fisheries or Economic Zone	200 miles. **
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines. Territorial sea limits reduced in the following areas to retain a high seas corridor:

1. Kattegat.
2. Northern and southern approaches to The Sound.
3. Samso Baelt.
4. Kadet Renden.
5. Fehmarn Belt.
6. Kieler Bucht.
7. Bornholmsgat.

** To defined coordinates.

National Sea Surveillance Centers

The main duty of each center is to gather and study information concerning all maritime activities. The centers continuously monitor VHF channel 16. These centers are located, as follows:

1. Harnosand (62°38'N., 17°56'E.).
2. Musko (59°02'N., 18°07'E.).
3. Karlskrona (56°10'N., 15°35'E.).
4. Malmo (55°37'N., 13°00'E.).
5. Goteborg (57°42'N., 11°55'E.).

VHF Communications

The following VHF frequencies are allocated to Swedish stations:

1. Calling, distress, and safety—VHF channel 16.
2. Pilotage—VHF channel 13.
3. Harbor traffic and pilotage—VHF channel 12.
4. Intership—VHF channel 6.

Unless otherwise stated, the call signs of Swedish stations are, as follows:

1. Pilot stations: Lotsama ... (name of station).
2. Ports: ... (name of port) Hamnradio.

Pilotage

Pilotage is controlled by the Swedish Navigation Authority and is compulsory in Swedish coastal waters and along certain pilot leads (fairways) connecting ports along the coast.

The vessels subject to compulsory pilotage vary in size and type, according to location. For this purpose, vessels are divided into the following categories:

1. Category 1—Vessels carrying or with uncleaned tanks which last carried:
   a. Liquefied gas.
   b. Liquid chemicals defined in MARPOL 73 Supplement 2 Annex 2 as Category A, B, or (if vessel does not have a double-skin hull under all cargo tanks) C.
   c. Liquid chemicals which, according to the IMO Bulk Chemical Code should be carried in Type 1 or Type 2 vessels.
2. Category 2—All other chemical tankers which are laden or have uncleaned tanks and all laden oil tankers.
3. Category 3—All other vessels.

When the vessel reports to the vessel reporting service (see **Regulations—Vessel Reporting Service (FRS)**) 24 hours prior to arrival at the destination (arrival berth, not the pilot boarding position), it also gives notification for ordering a pilot. A separate preliminary request for a pilot is also made using the e-services, with the ETA at the pilot boarding position given. A definitive request for pilotage must be made at least 5 hours in advance. In exceptional cases, the pilot may be ordered by e-mail, telephone, facsimile, telex, or VHF.

For additional information, see the following web site:

Swedish Maritime Administration Home Page
http://www.sjofartsverket.se

Recommended Pilotage

Pilotage is recommended by IMO Resolution MSC 138(76) for the following vessels when transiting Sundet (The Sound):

1. Loaded oil tankers with a draft of 7m and over.
2. Loaded chemical tankers and gas carriers, regardless of size.
3. Vessels carrying shipments of irradiated nuclear fuel, plutonium, or high level radioactive waste (INF cargo).

The limits of the area where this pilotage is recommended is, as follows:

1. North limit—A line connecting Svinbaden Light (56°09'N., 12°33'E.) in Sweden and Hornbaek Harbor (56°06'N., 12°28'E.) in Denmark.
2. South limit—A line connecting Skanor Harbor (55°25'N., 12°50'E.) in Sweden and Alfandshage (55°33'N., 12°36'E.), the southernmost point of Amager Island in Denmark.

Vessels should use the pilotage service established by the governments of Denmark and Sweden. However, Danish pilots may not conduct pilotage E of the island of Ven; Swedish pilots may not use the Drogden traffic lane.

Swedish pilots (Sound Pilots) are ordered through the Vessel Reporting Service (FRS) and can be contacted, as follows:

1. Telephone:46-40-204352
2. Facsimile: 46-40-301868
3. E-mail: southcoastpilot@sjofartsverket.se

Deep Sea Pilotage Contact Information

	Kattegat from North Sea and Skagerrak via the Sound	Baltic Sea and Kattegat		Baltic Sea and the Gulf of Bothnia
	Goteborg Pilots	Swedish Sound Pilots (Malmo)	Stockholm Pilots	Lulea Pilots
Telephone	46-31-647770	46-40-204352	46-8-55424500	46-920-258390
Facsimile	46-31-647779	46-40-301868	46-8-55424505	46-920-55306
E-mail	westcoastpilot@sjofartsverket.se	southcoastpilot@sjofartsverket.se	eastcoastpilot@sjofartsverket.se	vtslulea@sjofartsverket.se
Pilot boarding position(s)	Off Vinga (37°38'N., 11°36'E.)	Off M1 Lighted Buoy (56°07'18.6"N., 12°31'28.8"E.) Off M41 Lighted Buoy (55°24'58.8"N., 12°40'31.8"E.) Off Trelleborg	Off Sandhamn	—

Danish pilots (Sound Pilots) are ordered through DanPilot (The Sound), Kobenhavn and can be contacted, as follows:

1. Telephone: 45-35-386700
2. Facsimile: 45-35-431017
3. Web site: http://www.pilotage.dk
4. E-mail: soundpilot@pilotage.dk

Deep Sea Pilotage

Vessels requiring a licensed deep sea pilot in the Baltic Sea area should send request at least 24 hours in advance to one of the following stations listed in the table titled **Deep Sea Pilotage Contact Information**.

Large Tankers

According to an agreement between the Swedish Navigation Authority and a combination of the Swedish Petroleum Institute and Owners Association, loaded oil tankers employed by Swedish oil companies, with a draft greater than 12m or carrying more than 50,000 tons of petroleum products, must employ a Swedish pilot on voyages in the Baltic Sea N of latitude 55°25'N.

Pollution

The point of contact for receipt, transmission, and processing of urgent reports involving harmful substances, including oil from ships in the Swedish EEZ, is the Swedish Coast Guard Headquarters in Karlskrona, which can be contacted, as follows:

1. Telephone: 46-455-353535
2. Facsimile: 46-455-81275
3. E-mail: registrator@kustbevakningen.se

The Regional Commanders of the Regional Operating Centers and their staffs plan and direct operations in the four regions (North, East, South, and West); they can be contacted as listed in the table titled **Sweden Coast Guard—Regional Operating Centers—Contact Information**.

Monitoring Single Hull Tankers

The transport of heavy grade oils is not allowed on single hull tankers of certain sizes and ages. Denmark, Estonia, Finland, Latvia, Norway, and Sweden have adopted measures to monitor the observance of theses regulations. For further information, see **Denmark—Pollution**.

MARPOL Special Area

The Baltic Sea, including the Gulf of Bothnia and the Gulf of Finland, has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

This Special Area is under intensive surveillance for pollution and violations of traffic rules. Further information on pollution reporting can be found in **Baltic Sea—Pollution—Pollution Reporting**.

Regulations

Ships should obtain a copy of the harbor regulations from the harbormaster of each port. The regulations described below are in force at most of the ports.

Masters of merchant ships arriving in port must report to the harbormaster the usual information relative to the ship, crew, and cargo.

Ships, unless obliged by necessity, must not anchor in, or off, the entrance channels, but if forced to do so, must shift berth at the first opportunity.

On entering the harbor limits, ships must display their national colors, and keep them flying by day until after the completion of the Customs visit.

Berths will be allotted by the harbormaster, and must not be shifted without his permission. Ships must shift berth if and when required to do so by the harbormaster.

Ships lying alongside a quay, or one another, must use sufficient and proper fenders, and if required by the harbormaster, must have their anchors stowed inboard, davits turned in, etc.

Ships are not to move inside the harbor at a greater speed than necessary for their convenient handling. They must not use their engines except at the slowest speed and for as short a time as possible just previous to their departure.

Steam whistles and sirens must not be sounded within the harbor, unless necessary to do so to avoid danger, or in accordance with the International Regulations for Preventing Collisions at Sea.

Securing cables, hawsers, warps, etc., must only be taken to the proper securing positions (bollards, rings, etc.) provided.

Sweden Coast Guard—Regional Operating Centers—Contact Information

Area	Call sign	Telephone	Facsimile	E-mail
North (Gulf of Bothnia)	Swedish Coast Guard Harnosand	46-611-33550	46-611-85549	registrator.krn@coastguard.se
East (Aland Sea, N and central Baltic Sea, and Lake Malaren)	Swedish Coast Guard Stockholm	46-8-7897994	46-8-7162688	registrator.kro@coastguard.se
South (Southern Baltic Sea and the Sound)	Swedish Coast Guard Karlskrona	46-455-353535	46-455-81275	registrator.krs@coastguard.se
West (Kattegat, Skagerrak, Lake Vanern, and Lake Vattern)	Swedish Coast Guard Goteberg	46-31-7279100	46-31-297395	registrator.krv@coastguard.se

In many places special by-laws are enforced to prevent pollution of the water by the discharge of oil or other noxious matter from ships. Provision must be made when working cargo to prevent any falling overboard.

Ships are to pass jetties, harbor installations and moored boats at the slowest possible speed compatible with safe navigation to avoid damaging them by wash.

Ships passing lighted structures, which are in process of being replenished by boats carrying gas containers, or piers or jetties at which such boats are loading or discharging gas containers, should do so at a speed not greater than 5 knots when within a distance of about 200m from them; such boats can be distinguished by a red ball in the rigging.

Special regulations are in force in the inner coastal waters of Sweden against causing damage to the sides of channels cut through the ice, and for the marking of temporary bridges thrown across such channels. Ships carrying, loading or discharging explosive, inflammable or dangerous cargo (including radioactive materials) must display by day, Flag B of the International Code of Signals and exhibit, at night, two red lights, disposed horizontally about the centerline and at least 2m apart. These signals need not be shown by a vessel carrying only a small quantity of dangerous cargo, below the limits prescribed in Swedish regulations.

Anchorage is prohibited in the vicinity of submarine cables in Swedish waters. The positions of cables are usually marked by beacons or buoys, but the prohibition may or may not be indicated on the chart. This prohibition applies equally to power cables and telegraph cables.

Foreign state vessels (naval vessels and other vessels and hovercraft which are owned or used by a state and employed for non-commercial purposes) are not allowed to stop or anchor within Swedish territory unless it is necessary for the safety of the vessel. If the vessel is compelled to stop or if it enters Swedish internal waters because of distress, it shall make this known by giving an international signal and by notifying a Swedish military authority of the circumstances.

Quarantine

Vessels or their agents shall inform Swedish Customs as soon as possible before the vessel's arrival at a port in Sweden of any cases of illness indicative of a disease of an infectious nature or evidence of a public health risk on board as soon as such illness or public health risks become known on the vessel.

Swedish Customs can be contacted, as follows:

1. Telephone: 46-771-520520 (office hours)
   46-771-232323 (office hours)
   46-980-84550 (24 hours)
2. E-mail: tullverket@tullverket.se
3. Web site: http://www.tullverket.se

Dangerous or Polluting Cargo

Dangerous Cargo is cargo classified in the International Maritime Dangerous Goods Code, Chapter 19 of the International Gas Carriers Code, and Chapter 17 of the International Bulk Carriers Code.

Polluting Cargo is oil as defined in MARPOL Annex I, noxious liquid substances as defined in MARPOL Annex II, and harmful substances as defined in MARPOL Annex III.

Vessels entering or leaving Swedish ports and carrying dangerous or polluting cargo must provide the following information to MRCC Goteberg:

1. Vessel name and call sign.
2. Nationality.
3. Length and draft in meters.
4. Port of destination.
5. ETA at port of destination or pilot boarding position.
6. ETD.
7. Intended route.
8. The correct technical name of the dangerous or polluting cargo; the UN numbers, where they exist; the IMO hazard classes in accordance with the IMDG Code, the IBC Code, and the IGC Code; the quantity of the cargo and its location on board; and, if in portable tanks or freight containers, their identification marks.

MRCC Goteberg can be contacted, as follows:

1. Telephone: 46-31-699050
2. Facsimile: 46-31-648010
3. Telex: 54-62190 MRCC S (fax delivery)
   54-20180 MRCCGBG S (e-mail delivery)
4. E-mail: hazmat@amrcc.sjofartsverket.se

Advance notification for merchant shipping

The vessel's master or representative must give advance notification to the Swedish Coast Guard no less than 24 hours prior to arrival. The form titled *Notification in Advance* should be used. The document can be obtained from the Internet, as follows:

Swedish Coast Guard Home Page
http://www.kustbevakningen.se

Any changes should immediately be reported to the Swedish Coast Guard. Any change in departure time should be reported not later than 4 hours in advance.

Advance notification requirements for foreign vessels

The following foreign-flagged vessels are subject to additional advance notification requirements:

1. Gas and chemical tankers older than 10 years of age as determined by the date indicated in the vessel's safety certificates.
2. Bulk carriers older than 12 years of age as determined by the date indicated in the vessel's safety certificates.
3. Oil tankers over 3,000 gross tons and older than 15 years of age as determined by the date indicated in the vessel's safety certificates.
4. Passenger vessels older than 15 years of age as determined by the date indicated in the vessel's safety certificates.

The advance notification shall be sent at least 3 days prior to the ETA at the port. If the voyage from the previous port is expected to take less than 3 days, the advance notification shall be sent prior to leaving the previous port.

The advance notification shall be submitted to the Swedish Coast Guard by one of the following methods:

1. E-mail: sweden24@coastguard.se
2. Facsimile: 46-611-20190

The advance notification shall contain the following information:

1. Vessel name.
2. Flag.
3. IMO number.
4. Deadweight tons.
5. Date of construction of the vessel, as determined by the date indicated in the vessel's safety certificates.
6. For tankers:
   a. Configuration (single hull, single hull with segregated ballast tanks).
   b. Condition of the cargo and ballast tanks (full, empty, inerted).
   c. Volume and type of cargo.
7. ETA at the port and the pilot station.
8. Planned duration of the port call.
9. Planned operations at the port of destination (loading, unloading, other).
10. Planned statutory survey inspections and substantial maintenance/repair work to be conducted in the port of destination.

Swedish SafeSeaNet (FRS)

Vessels greater than 300 gross tons are required to submit information regarding calling at Swedish ports or anchorages, hazardous (dangerous or polluting) cargo, and ship-generated waste to the Swedish SafeSeaNet (FRS) of the Swedish Maritime Administration not later than 24 hours prior to arrival at a port or anchorage in Sweden. Vessels shall submit, via their agent, the following information:

1. Ship's name, type, call sign, MMSI number, and IMO number.
2. Destination (port/anchorage), ETA/ETD, number of persons on board, and arrival draft.
3. Pilot Exemption Number, if any.
4. Last port of call or anchorage.
5. Next port of call or anchorage.

For further information, see the Swedish Maritime Administration web site, as follows:

Swedish Maritime Administration Home Page
http://www.sjofartsverket.se
Click on **eservices**, then on **Vessel Reporting Service**

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU.

The reports should be sent electronically through the Swedish SafeSeaNet (FRS) of the Swedish Maritime Administration.

For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Recommendation on Baltic Sea Navigation

The IMO has issued recommendations regarding vessel transits of the entrances to the Baltic Sea. For further information, see **Baltic Sea—Regulations**.

Particularly Sensitive Sea Areas (PSSA)

The Baltic Sea area of Sweden, Denmark, Finland, Estonia, Lithuania, Latvia, Poland, and Germany (except for waters under Russian jurisdiction) has been declared by the IMO to be a PSSA.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

Schengen Agreement

The aim of the Schengen Agreement is to create free movement for persons within the European Union (EU) and to intensify the fight against cross-border crime. In practice, the Schengen Agreement means that personal checks on journeys between the member states will cease, while the external frontier controls will be intensified, i.e. towards countries that are not signatories to the Schengen Agreement.

Sweden's operational participation in the Schengen treaty is governed by the Schengen regulations and by national legislation, particularly aliens' legislation. In accordance with the Schengen legislation, the check means that merchant ships are obliged to submit details regarding the ship, the voyage and persons on board following a system for Advance Notification.

The aim of the regulations on ship security is to protect the maritime sector from serious crimes of violence, i.a. terrorism. The legislation requires information of ship security nature in accordance with a system for Advance Notification from all ships over 500 gross tons, which intend to call at a Swedish port.

In Sweden, the Maritime Safety Inspectorate has the main responsibility for implementation of the new legislation and for surveying that the Rules and regulations concerning maritime. security are adhered to, but also other authorities are involved.

There is a special agreement with the Maritime Safety Inspectorate and the Coast Guard concerning the participation of the Coast Guard in the ship security work, but the Inspectorate also cooperates with the Police and the Swedish Customs.

Background.—In accordance with Article 6 of the Regulation (EC) No. 725/2004 of the European Parliament and of the Council on enhancing ship and port facility security, all ships of a certain size intending to call at a Swedish port wIll be required to give information of ship security nature by virtue of the regulation.

Point of Contact.—As per Regulation 7, Appendix 1 of the EC Regulation (threat to ships), contracting governments shall provide a point of contact through which ships operating in their territorial sea or having communicated an intention to enter their territorial sea, can request advice or assistance and to which such ships can report any security concerns about other ships, movements, or communications.

In Sweden, the Swedish Coast Guard is responsible for this

function through the Coordination Centre of the Regional Command North in Harnosand. This function is called "Swedish Coast Guard Maritime Clearance."

External borders.—The term external border means the border of a Schengen state on a third country and the state's ports and airports which have traffic to and from a third country. A Schengen state's sea border is mainly regarded as an external border since the sea territory borders on international waters (the open sea), which is equivalent to a third country. In terms of shipping, Sweden's external border with a third country therefore consists of the country's entire sea border.

Advance Notification.—It is the duty of the master, the shipping company, or its representative to give Advance Notification to the Swedish Coast Guard Maritime Clearance in Harnosand, Sweden, as follows:

1. Call sign: Swedish Maritime Clearance
2. VHF: VHF channel 16
3. Telephone: 46-611-33-55-30
4. Facsimile: 46-611-201-90
5. E-mail: sweden24@coastguard.se

The notification shall be given not later than 24 hours before the vessel is due to land at its point of destination. If the voyage is less than 24 hours duration, the information should be sent at the time of departure. If the destination is not known, the information should be send as soon as it becomes known.

Fishing vessels registered in a third country or which has called at a port in a third country should be given not later than 6 hours before the vessel is due to land at its point of destination. Fishing vessels that operate only in coastal waters, i.e. vessels that return daily or almost daily to their port of registry or to another port in the territory of a Member State without calling at a port in a third country, are exempt from the obligation to submit an Advance Notification.

The required information is the same for both merchant vessels and fishing vessels and can be found in **North Atlantic Ocean—Regulations—Schengen Rules.**

For notification, the forms established by IMO's Facilitation Committee (FAL) should be used. In case the notification is made in another way it shall state, among other things, details on the ship, persons on board, passengers, and data concerning the ship security.

The notification shall be typed in Swedish or English. On completion of the check, the Coast Guard shall send back a stamped copy of the notification that shall be kept on board the vessel throughout its stay in Swedish waters.

When FAL forms are used for Advance Notification to the Swedish Coast Guard Maritime Clearance in Harnosand, the following forms shall be used:

1. IMO FAL Form 1—General Declaration
2. National Annex to FAL Form 1 (can be found on the website of the Swedish Coast Guard).

Swedish Coast Guard Home Page
http://www.kustbevakningen.se

or

http://www.coastguard.se

3. IMO FAL Form 5—Crew List.
4. IMO FAL Form 6—Passenger List (when passengers are carried on board).

In cases when the fields of the FAL forms do not correspond to information requested, such information can be given in the Notes space or in an enclosure.

Any changes to information contained in the Advance Notification shall immediately be reported to the Swedish Coast Guard Maritime Clearance in Harnosand, Sweden.

Note.—Radio contact can be established by VHF using call sign "Maritime Clearance Sweden" but should only be used in extreme circumstances.

Any change in departure time shall, however, be notified not later than 4 hours in advance.

The Advance Notification also constitutes a request for permission to call at a port that has not been designated a border control point. The signed and returned copy of the Advance Notification constitutes a permit to call at the port to which the Advance Notification applies.

Low-sulphur Fuel

Vessels in Swedish ports are prohibited from using fuel oil containing more than 0.1% sulpher.

General Calling Procedures

The Swedish Transport Agency recommends the following vessels participate in a general call procedure:

1. Vessels of 300 grt and over.
2. Vessels, including tows, with a length of 45m and greater.

A general call should be made, in English, on VHF channel 16 when passing reporting points and when departing from a quay or anchorage. The following information should be stated:

1. "All ships" call and VHF channel.
2. Ship name and type.
3. Name and location of reporting point or place of departure.
4. Intended route.
5. Destination.

Maritime Traffic Areas

The coast of Sweden is divided into six maritime Traffic Areas, as follows:

1. **Bay of Bothnia Maritime Traffic Area.—**South from the Finnish border to latitude 62°58.0'N. The area is controlled from Lulea.
2. **Sea of Bothnia Maritime Traffic Area.—**From latitude 62°58.0'N to latitude 60°36.0'N. The area is controlled from Gavle.
3. **East Coast Maritime Traffic Area.—**From the border with the Sea of Bothnia Maritime Traffic Area in the N (approximate latitude 60°36.0'N) to the border between Ostergotland County and Kalmar County along latitude 58°00.0'N to position 58°00.0'N, 18°06.0'E; continuing SSW to position 56°40.0'N, 17°50.0'E and then in a 090° direction. The Maritime Traffic Area also includes the sea area around Gotland, Sodertalje Canal, Lake Vatterm, Lake Malaren, and Lake Hjalmaren. The area is controlled from Stockholm.
4. **South Coast Maritime Traffic Area.—**From the border with the East Coast Maritime Area to a straight line at the coast and border between Skane County and Halland

County to position 56°31.0'N, 12°48'E and continuing on in a 270° direction. This area does not include Lake Vattern. The area is controlled from Malmo.

5. **West Coast Maritime Traffic Area.—**From the border with the South Coast Maritime Traffic Area to the Norwegian border and the Gota River up to the N part of Goteborg Harbor. This area is controlled from goteborg.

6. **Lake Vanern Maritime Traffic Area.—**Lake Vanern, the Gota Alv River, the Byalven River, and the Saffle Canal. This area is controlled from Trollhattan.

Restricted Areas

Restricted Military Areas

Within Swedish waters, several Restricted Military Areas have been established for the protection of defense installations and areas of special significance to the defense of Sweden. Under normal circumstances, foreign persons and vessels may stay in these areas without special permission. However, during times of increased military, or at such other times as the Swedish government may decide, special regulations will apply; the details of any special regulations will be promulgated by Swedish Notice to Mariners.

These Restricted Military Areas are located, as follows:

1. Karlskrona Restricted Area.
2. Gotland Restricted Area.
3. Landsort Restricted Area.
4. Musko Restricted Area.
5. Huvudskar Restricted Area.
6. Morto-Bunson Restricted Area.
7. Uto Semi-Restricted Area.
8. Goteberg Restricted Area.
9. Uddevalla Restricted Area.

Special Regulations

Vessels in Swedish territorial waters, when in company with Swedish warships in daylight or when within 1 mile of Restricted or Semi-Restricted areas, are required to hoist their national flag. When at anchor in company with Swedish warships the national flag must be hauled down.

Vessels may be hailed by Swedish maritime, air or defense authorities, using signal SO or L of the International Code of Signals, and required to alter course or stop. They may also be boarded or instructed to enter harbor for examination. Restrictions may also be ordered on the use of the vessel's radio.

It is prohibited to land and remain on several islands and regions close to the Swedish coast. Notices are posted to this effect. This edict also pertains to military installations and naval dockyards. Foreign ships should obtain copies of the Police Regulations for restrictions against photography, surveying, and anchoring in defensive areas.

Swedish War Harbors

Foreign warships are not, without special permission, allowed to enter Swedish war harbors, and any foreign vessel within the limits of these harbors must employ a pilot and only proceed through the authorized channels.

Search and Rescue

The Swedish Maritime Agency is responsible for search and rescue operations. The Joint Rescue Coordination Center (JRCC) Sweden, located in Goteborg, can be contacted, as follows:

1. Call sign: Sweden Rescue
2. Telephone: 46-31-699050 (for vessels)
   46-31-699080 (for emergencies)
   46-31-648020 (Maritime Assistance Center)
3. Facsimile: 46-31-648010
4. E-mail: mrcc@amrcc.se

JRCC Sweden maintains a continuous listening watches on VHF channel 16 and VHF/MF DSC for distress traffic.

The Swedish Sea Rescue Society (SSRS) operates 64 rescue stations, with about 160 rescue units, along the coasts and interior lakes of Sweden. The SSRS can be contacted, as follows:

1. Telephone: 47-77-579-00-90 (0800-1645 weekdays)
2. E-mail: info@ssrs.se

Ship Reporting System

SOUNDREP

SOUNDREP, a voluntary ship reporting system, has been established between Denmark and Sweden in the central and southern parts of The Sound in order to improve safety and protect the marine environment. This reporting system, which is operated by Sound VTS, includes a Reporting Area and an inner Operational Area.

On 1 September, 2011 the operational area of SOUNDREP increases to cover the entire area of The Sound, as well as the N and S approaches to The Sound. On this date, participation in SOUNDREP also becomes mandatory for all vessels of 300 gross tons and over proceeding to or from ports or anchorages in The Sound or when passing through the reporting area.

For further information, see Sector 1 in Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part.)

Signals

Minesweepers

Minesweepers engaged in minesweeping operations display the signals prescribed by the International Regulations for Preventing Collisions at Sea.

In addition, Swedish naval vessels will use the following signals:

1. When engaged in acoustic minesweeping, Morse Code Letter "U" flashed in the direction of any approaching vessel; a minesweeper making this signal should not be approached within at least 1.5 miles.

2. When towing minesweeping apparatus or other military gear, but not engaged in minesweeping operations the vessel will display:
   a. By day—Flag "D."
   b. By night—Three lights, red, white, green, disposed vertically.

   Such vessels should not be approached within 0.1 mile.

3. When engaged in destroying mines or rendering mines safe, a vessel will display:
   a. By day—A red flag.
   b. By night—A red light.

Such vessels should be given a wide berth.

Dredges

Dredges in Swedish waters and vessels at anchor similarly obstructing navigation show the following signals in addition to the lights and signals for a vessel at anchor required by the International Regulations for Preventing Collisions at Sea:

1. On the side on which a vessel may not pass:
   a. By day—A red ball.
   b. By night—A white light over a red light.
2. On the side on which a vessel may pass:
   a. By day—Two black cones, points together, vertically disposed.
   b. By night—A white light over a green light.
3. In fog and reduced visibility:
   a. Vessels to pass N or E of the dredge—Double strokes of the bell every minute.
   b. Vessels to pass S or W of the dredge—Triple strokes of the bell every minute.

During diving operations a red and blue flag, divided diagonally, is shown; vessels should proceed with caution and if possible pass with engines stopped.

Marking of Fishing Gear

Drift nets are marked by day with a black barrel or buoy, or with a buoy which may have a triangular flag. By night, they are marked by a white light.

Fixed nets are marked at the outer ends by day with two square flags, one of dark color and the other of light color, and at night with a violet light.

On the Swedish coast, fishing gear which is not laid in the customary navigational channels is marked with floats by day and by night, with a violet light at the fixed end and a white light at the drifting end.

Swedish Fishing Markers

In Swedish waters, fishing gear which is not laid in the customary navigational channels is marked with floats by day.

At night, a violet light marks the fixed end and a white light the drifting end. Caution must be exercised not to foul the gear.

Eel nets are usually set out from May to December along the S coast of Sweden. The nets are either made fast to poles or strung from anchored plastic balls. The outer end is marked by a fixed violet light and a black flag, or a topmark on the outermost pole. Vessels are advised not to approach this coast within a distance of 1.5 miles.

Swedish Lightships

Swedish lightships may exhibit the following signals if a vessel is observed standing into danger. A gun may be fired, the Morse letter "U" may be made by siren or flashing light, or the International Code flag "U" is displayed.

Lightships out of position discontinue their characteristic lights and fog signals. If possible, they will lower their daymarks and make the following signals:

1. By day—Two black balls, one forward and one aft. Red flags may be substituted, if the balls constitute the normal daymark .The International Code Signal "LO" is also shown.
2. By night—Two red lights, one forward and one aft. Also two flare-up lights, one white and one red shown simultaneously every 15 minutes. If the flare-ups are not available, a red and a white light will be shown.

Speed Signals

Ships passing through mined waters close astern of naval ships, or leading ships with the pilot aboard, shall comply with the following semaphore and sound signals made by flag or whistle:

1. By day:
   a. PROCEED—Flag extended horizontally.
   b. STOP—Flag extended overhead and swung to both sides.
   c. REVERSE—Flag extended vertically downward.
2. By night or in fog:
   a. PROCEED—The Morse code letter "C."
   b. STOP—The Morse code letter "H."
   c. REVERSE—The Morse code letter "S."

A red ball displayed in the rigging of a vessel lying at a light station indicates that passing ships must not proceed at a speed greater than 5 knots at 0.1 mile off the moored vessel.

Local speed restrictions are in force within harbors and channels, especially in the Swedish archipelago.

Firing and Exercise Area Signals.

See **Firing Areas**.

Submarine Operating Areas

Swedish submarines underway on the surface may exhibit the following navigational lights:

1. In place of the white lights described in Rule 23 of the 72 COLREGS, a blue light on the forestaff, visible for at least 2 miles, and a white top light in another suitable position, visible for at least 5 miles, may be shown.
2. In addition to the sidelights described in Rule 23, a second light on each side of the submarine, either above or below the first sidelight, may be displayed.

Swedish submarines which have been submerged for a long period may release a towing buoy to warn surface vessels of the position of the submarine and that the submarine may be about to surface, as follows:

1. By day—The towing buoy may be released either by itself or in conjunction with a telephone buoy. The towing buoy is cylindrical, is painted in withe and orange horizontal bands, and displays a small triangular flag at its forward end.
2. At night—A telephone buoy will be released before the submarine surfaces. The buoy contains a light which makes short flashes.

Surface vessels should pass astern of these buoys when sighted.

Swedish submarines carry special telephone buoys for communications in the events of the submarine being sunk. These buoys are can-shaped and painted orange, with a white rim on the lid, to which a ring is attached. They are fitted with a signal lamp that can be worked from the submarine, as well as a board inscribed with instructions for use and the name of the submarine. Ay vessel finding such a buoy should immediately notify the nearest Sedish naval vessel, pilot, or shore authority.

Some submarines are also equipped with special rising buoys. They are painted red, with a dark green lid, and are used to assist crewmembers escaping from a sunken submarine.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time (BRAVO (-2)) is maintained from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Sweden are, as follows:

1. Approaches to Stockholm—Sandhamn Entrance. (Government of Sweden)
2. West Klintehamn. (IMO adopted)
3. Midsjobankarna. (IMO adopted)
4. North Hoburgs Bank. (IMO adopted)
5. South Hoburgs Bank. (IMO adopted)
6. Off Oland Island. (IMO adopted)
7. In The Sound. (IMO adopted)
8. Off Falsterborev. (IMO adopted)
9. In Bornholmsgat. (IMO adopted)
10. Off Hoburg. (IMO adopted)
11. Off Kopu Peninsula. (IMO adopted)
12. North Aland Sea and South Aland Sea (IMO adopted)

U.S. Embassy

The U.S. Embassy is situated at Dag Hammarskjold Vag 31, Stockholm.

The mailing addresses are, as follows:

1. Sweden address—
   Dag Hammarskjold Vag 318
   SE-11589, Stockholm
2. U. S. address—
   Department of State
   5750 Stockholm Place
   Washington, DC (20521-5750)

U. S. Embassy Sweden Home Page
http://stockholm.usembassy.gov

Vessel Traffic Service

The following vessels are required to report to the appropriate Vessel Traffic Service center during a passage within a VTS area or when passing a reporting point:

1. All vessels 45m long and over.
2. All vessels 300 gross tons and over
3. A towing vessel with a length of 45m and over, including the tow.

All vessels 15m long and over, 20 gross tons and over, and smaller registered fishing vessels should participate in the reporting if their passage is considered to affect the safety of other vessels during the transit.

All participating vessels shall maintain a continuous listening watch on VHF channel 16 and on the assigned VHF channel for the respective VTS area.

Participating vessels should report the indicated information to the appropriate VTS center, as follows:

1. When entering a VTS area and immediately prior to departure from a berth or anchorage:
   a. Vessel name.
   b. Call sign.
   c. Position.
   d. Planned route.
   e. Destination.
   f. Actual draft.

   The VTS center must be notified well in advance with the correct information prior to departure from a berth or anchorage. Vessels are not permitted to leave a quay or anchorage in the VTS area without permission from VTS Goteborg.
2. When passing the reporting points, on arrival at a quay, when changing the route, upon anchoring, when involved in an incident such as a grounding or collision, or the occurence of any defect which might affect the safety of navigation:
   a. Vessel name.
   b. Position.
   c. Destination.
   d. Reason for reporting.

All maritime accidents shall be reported to MRCC Goteborg on VHF channel 16 (call sign: Sweden Rescue). The appropriate VTS center shall also be immediately informed in the event of any grounding, collision, incident, breakdown, or other event affecting maritime safety and maritime traffic.

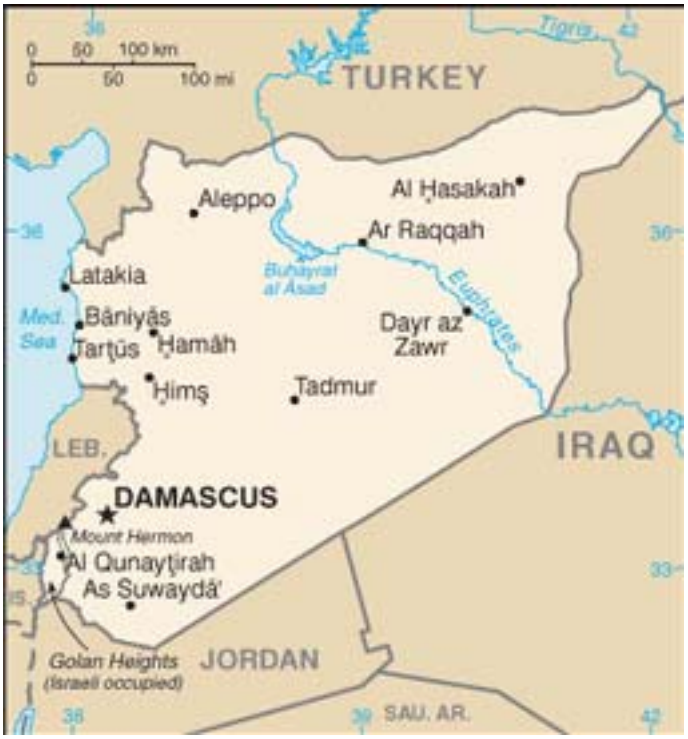
Vessel Traffic Services are in operation, as follows:

1. Goteborg [1] (57°42'N., 11°56'E.).
2. Lysekil [1] (58°16'N., 11°27'E.).
3. Marstrand [1] (57°53'N., 11°35'E.).
4. Lulea [2] (65°33'N., 22°15'E.).
5. Malaran/Landsort [2] (59°09'N., 17°09'E.).
6. Oxelosund [2] (58°38'N., 16°51'E.).
7. Sodertalje Kanal [2] (59°12'N., 17°38'E.).
8. Stockholm [2] (59°43'N., 18°44'E.).

[1] These VTS activities located along the W coast of Sweden are operated from the VTS Center in Goteborg. For further information, see Pub. 193, Sailing Directions (Enroute) Skagerrak and Kattegat.

[2] For further information, see Pub. 194, Sailing Directions (Enroute) Baltic Sea (Southern Part).

SYRIA



General	**601**
Buoyage System	**601**
Cautions	**601**
Currency	**601**
Government	**601**
Holidays	**602**
Industries	**602**
Navigational Information	**602**
Languages	**602**
Pilotage	**602**
Pollution	**602**
Regulations	**602**
Search and Rescue	**603**
Signals	**603**
Time Zone	**603**
U.S. Embassy	**603**

General

Syria is located in the Middle East bordering the Mediter-ranean Sea, between Lebanon and Turkey.

The climate is mostly desert with hot dry sunny summers and mild rainy winters along the coast.

The terrain is primarily semi-arid and desert plateau, with narrow coastal plains rising to mountains in the W.

Buoyage System

IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Special Warning 121 (Issued 20 March 2003)

Information on Special Warning 121 can be found in **North Atlantic Ocean—Cautions**.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

Miscellaneous

Areas prohibited to navigation may extend up to 25 miles off the Syrian coast. Vessels navigating off the Syrian coast or bound for Syrian ports should obtain the latest information from their agents.

Currency

The official unit of currency is the Syrian pound, consisting of 100 piastres.

Government

Syria is a republic under an authoritarian military regime since March 1963. The country is divided into 14 provinces.

Syria is governed by a President appointed by the People's Council, and approved by a popular referendum, for a 7-year term. The President appoints the Prime Minister and the Council of Ministers. The People's Council is composed of 250 directly-elected members serving 4-year terms.

Flag of Syria

The legal system is based on Islamic law and local civil law. The capital is Damascus.

Holidays

The following holidays are observed:

January 1	New Year's Day
February 22	Unity Day
March 8	Revolution Day
March 22	Arab League Day
Easter Sunday (Catholic)	Variable
Easter Sunday (Orthodox)	Variable
April 17	Independence Day
May 1	Labor Day
May 6	Martyrs' Day
December 25	Christmas Day

Islamic holidays, which are subject to the appearance of the moon, include Eid Al-Fitr (End of Ramadan), Eid Al-Adha (End of Pilgrimage), Hijrah (Islamic New Year), and the Prophet's Birthday.

Industries

The main industries are agriculture, petroleum, textiles, food processing, beverages, tobacco, petroleum, phosphate rock mining, cement, and oil seeds.

The main exports are crude oil, petroleum products, fruits and vegetables, cotton fiber, clothing, meat, livestock, and wheat. The main export-trading partners are Iraq, Germany, Lebanon. and Italy.

The main imports are machinery and transport equipment, electric power machinery, food, livestock, metal and metal products, chemicals and chemical products, platics, yarn, and paper. The main import trading partners are Saudi Arabia, China, Egypt, and the United Arab Emirates.

Languages

Arabic is the official language. Kurdish, Armenian, Aramaic, Circassian, and French are widely understood.

Navigational Information

Enroute Volume

Pub. 132, Sailing Directions (Enroute) Eastern Mediter-ranean.

Maritime Claims

The maritime territorial claims of Syria are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines. Requires advance permission or notification for innocent passage of warships in the territorial sea.

Pilotage

Vessels calling at Syrian ports should contact the appropriate pilot station or signal tower when entering Syrian territorial waters and give the following information:

1. Ship's name.
2. Nationality.
3. Nature of cargo.
4. ETA at the Waiting Zone.

Pollution

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Vessels calling at Syrian ports are required to communicate the following information, through a Syrian coast radio station, when 50 miles off the Syrian coast:

1. Ship's name (and former name, if any).
2. Nationality.
3. Characteristics (i.e. type of vessel).
4. Position and time.
5. Maritime passage (route) to port of call.
6. Speed.

When entering Syrian territorial waters, vessels should pass the following information to the appropriate pilot station or signal tower:

1. Ship's name.
2. Nationality.
3. Nature of cargo.
4. ETA at the Waiting Zone.

Normal international courtesies, such as flying the flag of

Syria at the foremast, should be carefully adhered to while in the waters and ports of Syria

Search and Rescue

The General Director of Ports in Lattakia is responsible for coordinating search and rescue operations in Syrian waters. The Maritime Rescue Coordination Center (MRCC) Syria can be contacted by telephone (963-41-233333, 963-41-233876, and 963-41-235890).

A network of coast radio stations maintains a continuous listening watch on international distress frequencies.

Signals

Signals used in Syrian ports are given in the accompanying table.

Syria Port Signals		
Sound signal	**Light signal**	**Meaning**
Six short blasts	Six flashes from the foremast	Attacked by thieves
Six long blasts	Six long flashes	Fire on board or alongside
Two long blasts	Two long flashes	Serious injury
Four long blasts	Four long flashes	Stranding

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time (CHARLIE (-3)) is maintained from the first Friday in April until the last Thursday in October.

U.S. Embassy

The U.S. Embassy is situated at Abou Roumaneh, Al-Mansur Street, No. 2, Damascus.

The mailing address is P.O. Box 29, Damascus.

U. S. Embassy Syria Home Page
http://damascus.usembassy.gov

TRINIDAD AND TOBAGO

General	605
Buoyage System	605
Cautions	605
Currency	605
Government	605
Holidays	606
Industries	606
Navigational Information	606
Languages	606
Pilotage	606
Pollution	606
Signals	607
Search and Rescue	606
Ship Reporting System	607
Signals	607
Time Zone	607
U.S. Embassy	607

General

Trinidad and Tobago are two islands located in the Caribbean Sea NE of Venezuela.

The climate is tropical and humid, with a rainy season from June to December.

The terrain is mostly plains, with some hills and low mountains.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Oil Platforms

Many drilling platforms, well heads, and pipelines are located off the coasts of Trinidad, especially in the Gulf of Paria, as well as ENE and ESE of Galeota Point (10°09'N., 60°00'W.), the SE extremity of Trinidad.

Caution should be exercised off the S coast of Trinidad and in the approaches to Serpent's Mouth as many of the structures in theses areas are uncharted.

High Speed Craft

High speed craft operate bewteen Scarborough, Tobago and Port of Spain, Trinidad and transit Boca de Huevos and Boca de Navios.

Currency

The official unit of currency is the Trinidad and Tobago dollar, consisting of 100 cents.

Government

Trinidad and Tobago is a parliamentary democracy. The country is divided into nine regional corporations, three borough corporations, two city corporations, and one ward.

Trinidad and Tobago is governed by a President, elected by the Parliament, who serves a 5-year term. The bicameral Parliament consists of an appointed 31-member Senate, serving 5-year terms, and a 41-member directly-elected House of Representatives, serving 5 year terms.

Flag of Trinidad and Tobago

The legal system is based on English common law.
The capital is at Port-of-Spain, on the island of Trinidad.

Holidays

The following holidays are observed:

January 1	New Year's Day
March 30	Liberation Day (Shouter Day)
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
May 30	Indian Arrival Day
Corpus Christi	Variable
June 19	Labor Day
August 1	Emancipation Day
August 31	Independence Day
September 24	Republic Day
Eid Al-Fitr	Variable
Divali	Variable
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are petroleum, chemicals, tourism, food processing, cement, beverages, and cotton textiles.

The main exports are petroleum and petroleum products, chemicals, steel products, fertilizer, sugar, cocoa, coffee, citrus, and flowers. The main export-trading partners are the United States and Bermuda.

The main imports are machinery, transportation equipment, manufactured goods, food, and livestock. The main import-trading partners are the United States, Venezuela, and Brazil.

Languages

English is the official language. Other languages spoken include Hindi, French, and Spanish.

Navigational Information

Enroute Volumes

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2.

Maritime Claims

The maritime territorial claims of Trinidad and Tobago are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	200 miles or the Continental Margin.

* Claims archipleagic status.

Maritime Boundary Disputes

Barbados is seeking arbitration on the claim that the N limit of Trinidad and Tobago's maritime boundary extends into the territorial waters of Barbados. Guyana has also expressed its intention to challenge the boundary claim.

Pilotage

Pilotage is compulsory for Grier Channel leading to the deep water wharves at Port of Spain and for berthing at Chaguaramas Bay, Cronstadt, Tembladora Terminal, Lisas Point Port, Point Lisas Industrial Port, Pointe-A-Pierre, Brighton and La Brea, Point Fortin, and the SBM at Galeota Terminal.

If a pilot is required elsewhere, agents, if informed 48 hours in advance, can arrange for a pilot to board off the entrances to the Gulf of Paria (10°20'N., 62°00'W.) or off Five Islands for the Port of Spain roadstead.

Pollution

Heavy fines may be assessed for any discharge of oil into the territorial waters of Trinidad and Tobago.

Search and Rescue

The Trinidad and Tobago Coast Guard (MRCC Port of Spain) is responsible for coordinating search and rescue operations, and can be contacted, as follows:

1. Telephone: 1-868-6341476 (SAR direct line)
   1-868-6254939
   1-868-6342718
   1-868-6344439
   1-868-6344440
2. Facsimile: 1-868-6344494
3. E-mail: 1ttcg1@tsdf.mil.tt

North Post Trinidad Coast Radio Station (9YL) maintains a continuous listening watch for distress traffic on 2182 kHz and VHF channel 16, and can be contacted, as follows:

1. Telephone: 1-868-6374474
2. Facsimile: 1-868-6379104
3. E-mail: npradio-9yl@tstt.net.tt

Ship Reporting System

CARICOM (Caribbean Community) Advance Passenger Information System (APIS)

CARICOM APIS is a mandatory reporting system providing Advance Passenger Information (API) about passengers and crew to the Joint Regional Communications Center (JRCC) Barbados for vessels bound for or departing from a port in the CARICOM area. Further information can be found in **Caribbean Sea—Ship Reporting System**.

Signals

The following signals are shown as a hurricane (winds speeds of 64 knots and over) warning:

1. Day signal—Black cross.
2. Night signal—One red light over one white light.

Time Zone

The Time Zone description is QUEBEC (+4). Daylight Savings Time is not observed.

U.S. Embassy

The U.S. Embassy is situated at 15 Queen's Park West, Port-of-Spain.

The mailing address is P.O. Box 752, Port-of-Spain.

U. S. Embassy Trinidad and Tobago Home Page
http://trinidad.usembassy.gov

TUNISIA

General	**609**
Buoyage System	**609**
Cautions	**609**
Currency	**610**
Firing Areas	**610**
Fishing Areas	**610**
Government	**610**
Holidays	**610**
Industries	**610**
Languages	**611**
Navigational Information	**611**
Pollution	**611**
Regulations	**611**
Search and Rescue	**611**
Time Zone	**611**
Traffic Separation Schemes	**611**
U.S. Embassy	**611**

General

Tunisia is located in North Africa, bordering the Mediterranean Sea between Algeria and Libya.

The climate is temperate in the N with mild rainy winters and hot dry summers.

The terrain is mountainous in the N with a hot dry central plain.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Oil Exploration

Oil exploration is taking place off the coast of Tunisia.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

Currency

The official unit of currency is the Tunisian dinar, consisting of 1,000 millimes.

Firing Areas

Banzart (Bizerte) Exercise Area

A dangerous area exists to the NNE of Banzart. This area is used by the Tunisian Navy for firing practice and is bounded by the parallels 37°45'N and 38°00'N, and the meridians 10°15'E and 10°30'E.

The firing practices are announced by Tunis Radio on the eve and the day of the exercise.

Susah (Sousse) Exercise Area

A dangerous area exists to the ESE of Susah. This area is used by the Tunisian Navy for firing practice and is bounded by the parallels 35°30'N and 35°40'N, and by the meridians 11°30'E and 11°50'E.

The firing practices are announced by Tunis Radio on the eve and the day of the exercise.

Fishing Areas

Tunny Fishing

For general information on tunny fishing, see **Spain—Fishing Areas**.

Tunny Net Areas

On shore tunny nets are marked by masonry beacons, 2.1m high, surmounted by two spherical top marks, the upper one white and the lower one red. At sea, tunny nets are marked by buoys, surmounted by a white ball over a red ball, that mark the limits of the areas occupied by the nets, corresponding to the beacons on shore.

The seaward extremities of the nets are marked by a lightboat, showing by day a white ball over a red ball, and at night two fixed lights, the upper white and the lower red.

The lightboat may be replaced by a lighted buoy showing the same signals.

Tunny nets may be set from April to August in the NE part of Golfe de Tunis at the following locations:

1. Sidi Daoud (37°00'N., 10°54'E.) (PA).
2. Ras el Ahmar (37°03'N., 10°54'E.) (PA).
3. El Haouaria (37°03'N., 10°59'E.) (PA).

The positions and lengths of the tunny nets can vary from one year to the next. Vessels should give the nets a wide berth and keep watch, in particular, for the tunny net of Ras el Ahmar, the end of which lies 1.4 miles S ofthe islet of Zembretta. This net is marked by a N cardinal lighted buoy.

A tunny net may be set from April to August in the area NW of Cap Zebib (37°16'N., 10°04'E.). Its extremity is marked by a N cardinal lighted buoy. Vessels should give it a wide berth.

Tunny nets may be set from April to August in the following areas:

1. North of Munastir.
2. Northnorthwest of Ile Kuriat.
3. Northnortheast of Ras Kabudiyah.

Government

Flag of Tunisia

Tunisia is a republic. The country is divided into 24 governates.

Tunis is governed by a directly-elected President who serves a 5-year term. The Prime Minister is selected by the President. The unicameral National Assembly (Chamber of Deputies) is composed of 214 directly-elected members serving 5-year terms. There is also a 126-member Chamber of Advisors, of which 85 members are elected by municipal counselors, deputies, mayors, professional associates and trade unions, and the remaining 41 members appointed by the President; all members serve 6-year terms.

The legal system is based on Islamic law and French civil law.

The capital is Tunis.

Holidays

The following holidays are observed:

January 1	New Year's Day
March 20	Independence Day
March 21	Youth Day
April 9	Martyr's Day
May 1	Labor Day
July 25	Proclamation of the Republic
August 13	Women's Day
November 7	Commemoration Day

Islamic holidays, which are subject to the appearance of the moon, include Eid Al-Fitr (End of Ramadan), Eid Al-Adha (End of Pilgrimage), Hijrah (Islamic New Year), and the Prophet's Birthday.

Industries

The main industries are petroleum, mining (phosphate and iron ore), tourism, textiles, footwear, agriculture, and beverages.

The main exports are clothing, semi-finished goods and textiles, agricultural products, mechanical goods, phosphates,

chemicals, and hydrocarbons. The main export-trading partners are France, Italy, Germany, and Spain.

The main imports are textiles, machinery and equipment, hydrocarbons, chemicals, and food. The main import-trading partners are France, Italy, and Germany.

Languages

Arabic is the official language. French is also spoken commercially.

Navigational Information

Enroute Volume

Pub. 131, Sailing Directions (Enroute) Western Mediterranean.

Maritime Claims

The maritime territorial claims of Tunisia are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone	24 miles.
Fisheries or Economic Zone	200 miles.

* Claims straight baselines enclosing Khalij Tunis and Khalij Gabes as internal waters.

Pollution

MARPOL Special Area

The Mediterranean Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Regulations concerning foreign pleasure craft entering Tunisian ports are in effect and restrict the first entry to those ports which have a Customs Officer.

Search and Rescue

The Tunisian navy is responsible for search and rescue operations in Tunisian waters. Maritime Rescue Coordination Center Tunis can be contacted, as follows:

1. Telephone: 216-71-560240
   216-71-560244
2. Facsimile: 216-71-561804

A lifsaving station is located at Sfax (34°44'N., 10°46'E.).

A network of coast radio stations maintains a continuous listening watch on international distress frequencies.

Time Zone

The Time Zone description is ALFA (-1). Daylight Savings Time is not observed.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Tunisia are, as follows:

1. Off Iles Cani. (IMO adopted)
2. Off Ras at Tib (Cap Bon). (IMO adopted)

U.S. Embassy

The U.S. Embassy is situated at Zone Nord-Est des Bergus du Lac Nord de Tunis 1053, Tunis.

The mailing address is the same.

U. S. Embassy Tunisia Home Page
http://tunisia.usembassy.gov

TURKEY

General	**613**
Buoyage System	**613**
Cautions	**613**
Currency	**614**
Firing Areas	**614**
Government	**618**
Holidays	**618**
Ice	**618**
Industries	**618**
Languages	**618**
Meteorology	**618**
Navigational Information	**618**
Pilotage	**618**
Pollution	**621**
Regulations	**621**
Search and Rescue	**621**
Ship Reporting System	**621**
Signals	**622**
Submarine Operating Areas	**622**
Tides	**623**
Time Zone	**623**
Traffic Separation Schemes	**623**
U.S. Embassy	**623**
Vessel Traffic Service	**623**
Appendix I—Turkish Strait VTS and Reporting System—Sector Information	**627**
Appendix II—Naval Prohibited Areas and Maritime Special Security Areas	**629**

General

Turkey is located in southwest Asia, bordering the Black Sea, between Bulgaria and Georgia, and the Aegean Sea and the Mediterranean Sea, between Greece and Syria.

The climate is temperate with hot dry summers and mild wet winters.

The terrain is mostly mountainous, with narrow coastal plains and a high central plateau.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Special Warning 121 (Issued 20 March 2003)

Information on Special Warning 121 can be found in **North Atlantic Ocean—Cautions**.

Locust Reports

See **North Atlantic Ocean—Cautions** for further information.

Bridges in Istanbul

Two bridges cross Istanbul Bogazi in the vicinity of Istanbul, as follows:

1. The Bogazi Bridge, a suspension bridge, crosses from Ortako (41°03'N., 29°02'E.) on the European shore to Beylerhei on the Asiatic shore. There is a vertical clearance of 58m at each end. Although there is a vertical clearance of 64m over a central width of 400m, the safe passage height is still only 58m.
2. The Fatih Sultan Bridge, a suspensio bridge, crosses from Rumelihisari (41°05.5'N., 29°03.5'E.) on the European shore to a point close S of Kanlica Koyu on the Asiatic shore. There is a vertical clearance of 67m over a central width of 400m.

Vessels with a vertical clearance of 58m or greater are prohibited from transiting Istanbul Bogazi. Vessels with a vertical

clearance of btween 54m and 58m are required to have tug assistance when transiting Istanbul Bogazi.

Currency

The official unit of currency is the new Turkish lira, consisting of 100 kurus.

Firing Areas

Training and firing exercises are announced at least 3 days prior to the training by Turkish radio stations and stations broadcasting navigational warnings.

Mariners are warned that if a training and firing exercise area, announced by notice, is entered, the responsibility for any damage incurred lies with the ship entering the area.

Firing and Training Areas in the Aegean Sea

Area 61 (Saros Korfezi).—The area E of the line connecting position 40°37'00"N, 26°04'42"E (on the coast) and position 40°19'N, 26°13'E (Buyukkemikli Burnu Light).

Area 62 (Meric).—Area bounded by lines joining the following positions:
a. 40°37'N, 26°04'E.
b. 40°37'N, 25°58'E.
c. 40°19'N, 25°58'E.
d. 40°19'N, 26°13'E.

Area 63 (Anafarta Training Area).—Area bounded by lines joining the following positions:
a. 40°19'N, 26°13'E.
b. 40°19'N, 26°03'E.
c. 40°08'N, 26°03'E.
d. 40°08'N, 26°13'E.

Area 64 (Mehmetcik).—Area bounded by lines joining the following positions:
a. 40°08'00"N, 26°13'00"E.
b. 40°08'00"N, 26°03'00"E.
c. 40°02'30"N, 26°03'00"E.
d. 40°02'30"N, 26°10'00"E.

Area 65 (Kumkale).—Area bounded by lines joining the following positions:
a. 40°00'N, 26°11'E.
b. 40°00'N, 26°00'E.
c. 39°53'N, 26°00'E.
d. 39°53'N, 26°09'E.

Area 66 (West of Kumkale) (training area).—Area bounded by lines joining the following positions:
a. 40°00'N, 26°00'E.
b. 40°00'N, 25°43'E.
c. 39°53'N, 25°43'E.
d. 39°53'N, 26°00'E.

Area 67 (North Aegean Sea).—Area bounded by lines joining the following positions:
a. 40°15'N, 25°35'E.
b. 40°35'N, 24°58'E.
c. 40°18'N, 24°43'E.
d. 40°09'N, 25°00'E.
e. 40°09'N, 25°29'E.

Area 68 (North Aegean Sea).—Area bounded by lines joining the following positions:
a. 40°09'N, 25°00'E.
b. 40°18'N, 24°43'E.
c. 39°57'N, 24°23'E.
d. 39°41'N, 24°35'E.

Area 69 (Ezine).—Area bounded by lines joining the following positions:.
a. 39°48'00"N, 26°09'21"E.
b. 39°48'00"N, 25°43'00"E.
c. 39°23'00"N, 25°15'00"E.
d. 39°15'00"N, 25°38'00"E.
e. 39°29'00"N, 25°53'00"E.
f. 39°29'00"N, 26°04'00"E.

Area 70 (Central Aegean Sea).—Area bounded by lines joining the following positions:
a. 39°15'N, 25°38'E.
b. 39°23'N, 25°15'E.
c. 39°09'N, 25°08'E.
d. 38°56'N, 25°25'E.
e. 39°04'N, 25°42'E.

Area 71 (Central Aegean Sea).—Area bounded by lines joining the following positions:
a. 39°06'N, 25°06'E.
b. 39°21'N, 24°46'E.
c. 39°09'N, 24°32'E.
d. 38°54'N, 24°52'E.

Area 72 (Foka).—Area bounded by lines joining the following positions:
a. 38°58'N, 26°48'E.
b. 38°51'N, 26°36'E.
c. 38°51'N, 26°19'E.
d. 38°42'N, 26°19'E.
e. 38°40'N, 26°40'E.

Area 72-I (Foka).—Area bounded by lines joining the following positions:
a. 38°40'50"N, 26°34'00"E.
b. 38°51'00"N, 26°36'06"E.
c. 38°51'15"N, 26°46'15"E.
d. 38°44'30"N, 26°45'00"E.
e. 38°40'00"N, 26°44'30"E.

Area 72-II (Foka).—Area bounded by lines joining the following positions:
a. 38°40'40"N, 26°36'00"E.
b. 38°49'10"N, 26°36'00"E.
c. 38°49'10"N, 26°44'30"E.
d. 38°44'30"N, 26°44'30"E.
e. 38°40'00"N, 26°44'30"E.

Area 73 (Kara Burun).—Area bounded by lines joining the following positions:

a. 39°00'N, 25°48'E.
b. 38°51'N, 26°19'E.
c. 38°42'N, 26°19'E.
d. 38°45'N, 25°41'E.

Area 73-I (Kara Burun).—Area bounded by lines joining the following positions:
a. 39°00'00"N, 25°48'00"E.
b. 38°45'00"N, 25°41'00"E.
c. 38°42'44"N, 26°10'00"E.
d. 38°53'32"N, 26°10'00"E.

Area 74 (Uzun Ada) (training area).—Area bounded by lines joining the following positions:
a. 38°40'00"N, 26°44'30"E.
b. 38°40'40"N, 26°35'30"E.
c. 38°28'00"N, 26°41'00"E.
d. 38°28'00"N, 26°50'00"E.

Area 74-I (Uzun Ada) (training area).—Area bounded by lines joining the following positions:
a. 38°40'50"N, 26°34'00"E.
b. 38°40'00"N, 26°44'30"E.
c. 38°37'06"N, 26°46'00"E.
d. 38°33'45"N, 26°38'45"E.

Area 75 (Central Aegean Sea).—Area bounded by lines joining the following positions:
a. 38°45'N, 25°21'E.
b. 38°45'N, 24°52'E.
c. 38°18'N, 24°52'E.
d. 38°18'N, 25°21'E.

Area 76 (Sigacik Korfezi).—Area bounded by lines joining the following positions:
a. 38°07'00"N, 26°47'00"E.
b. 38°07'00"N, 26°26'00"E.
c. 37°56'00"N, 26°37'40"E.
d. 37°56'00"N, 26°58'00"E.

Area 77 (Cesme).—Area bounded by lines joining the following positions:
a. 38°07'00"N, 26°26'00"E.
b. 38°00'00"N, 25°58'00"E.
c. 37°45'30"N, 25°58'00"E.
d. 37°56'00"N, 26°37'40"E.

Area 78 (Central Aegean Sea).—Area bounded by lines joining the following positions:
a. 38°00'00"N, 25°58'00"E.
b. 38°00'00"N, 25°10'00"E.
c. 37°38'30"N, 25°30'00"E.
d. 37°45'30"N, 25°58'00"E.

Air to Air Firing Ranges

Area LT-D1 (Canakkale).—Area bounded by lines joining the following positions:
a. 39°25'N, 25°55'E.
b. 39°25'N, 26°02'E.
c. 39°46'N, 25°55'E.
d. 39°46'N, 26°02'E.

Area LT-D2 (Canakkale).—Area bounded by lines joining the following positions:
a. 40°29'00"N, 26°31'00"E.
b. 40°35'30"N, 26°26'00"E.
c. 40°35'00"N, 26°20'30"E.
d. 40°25'00"N, 25°58'30"E.
e. 40°15'45"N, 26°03'00"E.

Firing and Training Areas in the Mediterranean Sea

Area 91 (Fethiye).—Area bounded by lines joining the following positions:
a. 36°25'N, 29°19'E.
b. 36°30'N, 28°34'E.
c. 36°00'N, 28°34'E.
d. 36°00'N, 29°19'E.

Area 91-I (Fethiye).—Area bounded by lines joining the following positions:
a. 36°25'N, 29°19'E.
b. 36°30'N, 28°34'E.
c. 36°15'N, 28°34'E.
d. 36°00'N, 29°00'E.
e. 36°00'N, 29°19'E.

Area 91-II (Fethiye).—Area bounded by lines joining the following positions:
a. 36°30'N, 28°34'E.
b. 36°23'N, 28°34'E.
c. 36°09'N, 29°19'E.
d. 36°25'N, 29°19'E.

Area 92 (Toros).—Area bounded by lines joining the following positions:
a. 35°28'N, 28°43'E.
b. 35°53'N, 28°21'E.
c. 35°20'N, 27°26'E.
d. 34°55'N, 27°49'E.

The above areas are activated with advance warning.

Area A-67 (Antalya Korfezi).—Area bounded by lines joining the following positions:
a. 36°42'N, 31°05'E.
b. 36°37'N, 31°33'E.
c. 36°26'N, 31°30'E.
d. 36°32'N, 31°02'E.

Area A-71 (South of Fener Burnu).—Area bounded by lines joining the following positions:
a. 36°19'N, 35°08'E.
b. 36°19'N, 35°32'E.
c. 36°04'N, 35°32'E.
d. 36°04'N, 35°08'E.

Area A-76 (Iskenderun Korfezi).—Area bounded by lines joining the following positions:
a. 36°15'00"N, 35°49'00"E.
b. 36°15'00"N, 35°32'30"E.
c. 36°34'30"N, 35°32'00"E.
d. 36°50'00"N, 35°53'00"E.
e. 36°35'00"N, 36°08'00"E.

Area A-77 (West of Fener Burnu).—Area bounded by lines joining the following positions:
a. 36°37'N, 35°01'E.
b. 36°30'N, 35°20'E.
c. 36°26'N, 35°16'E.
d. 36°36'N, 34°55'E.

Area A-78 (Kirlangic Burnu).—Area bounded by lines joining the following positions:
e. 36°17'15"N, 30°21'15"E.
f. 36°07'50"N, 30°15'55"E.
g. 36°07'30"N, 30°30'00"E.
h. 36°12'30"N, 30°30'00"E.
i. 36°12'00"N, 30°25'00"E.

Area A-79.—Area bounded by lines joining the following positions:
a. 36°28'N, 31°02'E.
b. 36°31'N, 31°12'E.
c. 36°19'N, 31°55'E.
d. 36°00'N, 32°08'E.
e. 36°03'N, 31°04'E.

Area A-80 (Marmaris).—Area bounded by lines joining the following positions:
a. 36°50'00"N, 28°27'00"E.
b. 36°41'30"N, 28°22'00"E.
c. 36°41'30"N, 28°32'30"E.
d. 36°46'54"N, 28°32'30"E.
e. 36°50'00"N, 28°27'06"E.

Air to Air Firing Ranges

Area LT-D8 (Manavgat).—Area bounded by lines joining the following positions:
a. 36°45'N, 31°09'E.
b. 36°30'N, 32°00'E.
c. 36°23'N, 32°00'E.
d. 36°38'N, 31°09'E.

Area LT-D13 (Mersin Korfezi).—Area bounded by lines joining the following positions:
e. 36°40'N, 34°52'E.
f. 36°32'N, 34°42'E.
g. 36°17'N, 35°24'E.
h. 36°26'N, 35°29'E.

Area LT-D16 (Besadalar).—Area bounded by lines joining the following positions:
a. 36°07'50"N, 30°15'55"E.
b. 36°17'15"N, 30°21'15"E.
c. 36°12'00"N, 30°25'00"E.
d. 36°12'30"N, 30°30'00"E.
e. 36°07'50"N, 30°30'00"E.

Firing and Training Areas in the Sea of Marmara

Air to Air Firing Ranges

Area No. LT-D6—Area bounded by lines joining the following positions:
a. 40°38'00"N, 28°07'00"E.
b. 40°29'30"N, 28°31'00"E.
c. 40°28'30"N, 28°40'00"E.
d. 40°25'00"N, 28°39'00"E.
e. 40°26'00"N, 28°16'00"E.
f. 40°32'00"N, 28°01'00"E.

Firing and Training Areas in the Black Sea

Area No. 001 (Gorele).—Area bounded by lines joining the following positions:
a. 41°48'N, 39°00'E.
b. 41°48'N, 40°20'E.
c. 41°19'N, 40°20'E.
d. 41°19'N, 39°00'E.

Area No. 002.—Area bounded by lines joining the following positions:
a. 42°26.0'N, 36°00.0'E.
b. 41°56.0'N, 37°29.0'E.
c. 41°26.0'N, 37°29.0'E.
d. 41°56.0'N, 37°00.0'E.

Area No. 003—Area bounded by lines joining the following positions:
a. 42°43.0'N, 33°12.0'E.
b. 42°13.0'N, 33°12.0'E.
c. 42°13.0'N, 34°40.0'E.
d. 42°43.0'N, 34°40.0'E.

Area No. 004—Area bounded by lines joining the following positions:
a. 42°09.0'N, 31°49.0'E.
b. 41°15.0'N, 32°44.0'E.
c. 42°08.0'N, 32°44.0'E.
d. 42°41.0'N, 31°49.0'E.

Area No. 005—Area bounded by the shoreline and lines joining the following positions:
a. 41°48.8'N, 32°34.0'E. (shore)
b. 42°03.0'N, 32°34.0'E.
c. 42°03.0'N, 32°11.0'E.
d. 41°38.6'N, 32°11.0'E. (shore)

Area No. 006—Area bounded by the shoreline and lines joining the following positions:
a. 41°38.6'N, 32°11.0'E. (shore)
b. 41°55.1'N, 32°11.0'E.
c. 41°55.1'N, 31°49.0'E.
d. 41°28.7'N, 31°49.0'E. (shore)

Area No. 007—Area bounded by the shoreline and lines joining the following positions:
a. 41°28.7'N, 31°49.0'E. (shore)
b. 41°45.0'N, 31°49.0'E.
c. 41°45.0'N, 31°28.5'E.
d. 41°19.9'N, 31°28.5'E. (shore)

Area No. 008—Area bounded by lines joining the following positions:
a. 41°20.0'N, 31°00.0'E.
b. 41°35.0'N, 31°00.0'E.
c. 41°35.0'N, 31°28.5'E.
d. 41°20.0'N, 31°28.5'E.

Area No. 009—Area bounded by the shoreline and lines joining the following positions:
a. 41°19.9'N, 31°28.5'E. (shore)
b. 41°19.9'N, 31°00.0'E.
c. 41°15.3'N, 31°00.0'E.
d. 41°15.3'N, 31°07.0'E.
e. 41°05.5'N, 31°07.0'E. (shore)

Area No. 010—Area bounded by lines joining the following positions:
a. 41°15'N, 30°54.0'E.
b. 41°15'N, 31°07.0'E.
c. 41°08'N, 31°07.0'E.
d. 41°08'N, 30°54.0'E.

Area No. 011—Area bounded by lines joining the following positions:
a. 41°55'N, 29°38'E.
b. 41°55'N, 30°58'E.
c. 41°33'N, 30°58'E.
d. 41°33'N, 29°38'E.

Area A011-I.—Area bounded by lines joining the following positions:
a. 41°55'N, 29°38'E.
b. 41°55'N, 30°58'E.
c. 41°33'N, 30°58'E.
d. 41°33'N, 30°04'E.
e. 41°46'N, 29°38'E.

Area No. 012—Area bounded by the shoreline and lines joining the following positions:
a. 41°08.5'N, 30°06.0'E. (shore)
b. 41°25.7'N, 30°06.0'E.
c. 41°25.7'N, 29°37.2'E.
d. 41°10.7'N, 29°37.2'E. (shore)

Area No. 013—Area bounded by the shoreline and lines joining the following positions:
a. 41°13'00"N, 29°10'00"E.
b. 41°34'00"N, 29°15'00"E.
c. 41°34'08"N, 29°35'00"E.
d. 41°10'21"N, 29°35'00"E.

Area No. 014—Area bounded by the shoreline and lines joining the following positions:
a. 41°13.0'N, 29°09.7'E. (shore)
b. 41°17.2'N, 29°16.0'E. then the minor arc of a circle with a radius of 15 miles centered on position 41°13.0'N, 29°09.7'E and extending clockwise to position
c. 41°11.3'N, 29°29.0'E. (shore)

Area No. 015—Area bounded by lines the shoreline and joining the following positions:
a. 41°14.2'N, 29°06.8'E. (shore)
b. 41°28.1'N, 29°00.7'E. then the minor arc of a circle with a radius of 15 miles centered on position 41°14.2'N, 29°06.8'E and extending counterclockwise to position
c. 41°18.0'N, 28°48.0'E. (shore)

Area No. 016—Area bounded by the shoreline and lines joining the following positions:
a. 41°18'N, 28°45'E.
b. 41°43'N, 28°45'E.
c. 41°34'N, 29°05'E.
d. 41°14'N, 29°07'E.

Area No. 017—Area bounded by lines joining the following positions:
a. 41°36.0'N, 28°28.0'E.
b. 41°29.0'N, 28°41.0'E.
c. 41°24.0'N, 28°38.0'E.
d. 41°29.0'N, 28°25.0'E.

Area No. 018—Area bounded by lines joining the following positions:
a. 42°59'N, 36°59'E.
b. 42°59'N, 38°59'E.
c. 42°26'N, 38°59'E.
d. 42°26'N, 36°59'E.

Area No. 019—Area bounded by lines joining the following positions:
a. 42°35'N, 37°01'E.
b. 42°35'N, 37°11'E.
c. 42°30'N, 37°11'E.
d. 42°30'N, 37°01'E.

Area No. 020—Area bounded by lines joining the following positions:
a. 43°11'N, 29°46'E.
b. 43°11'N, 32°15'E.
c. 42°39'N, 32°15'E.
d. 42°39'N, 29°46'E.

Area No. 021—Area bounded by lines joining the following positions:
a. 42°47'N, 31°40'E.
b. 42°47'N, 31°49'E.
c. 42°43'N, 31°49'E.
d. 42°43'N, 31°40'E.

Area No. 022—Area bounded by the shoreline and the major arc of a circle, with a radius of 15 miles, centered on position 41°19.0'N, 31°24.0'E beginning in position 41°06.2'N, 31°14.0'E (shore) and extending clockwise to position 41°25.3'N, 31°42.2'E. (shore)

Area No. 023—Area bounded the shoreline and the major arc of a circle, with a radius of 15 miles, centered on position 41°42.8'N, 32°17.2'E beginning on shore at position 41°49.7'N, 32°35.0'E and extending counterclockwise to the shore at position 41°33.8'N, 32°01.2'E.

Air to Air Firing Ranges

Area No. LT-D6—Area bounded by lines joining the following positions:
a. 41°15'N, 30°10'E.
b. 41°25'N, 30°10'E.
c. 41°25'N, 31°00'E.
d. 41°15'N, 31°00'E.

Area No. LT-D11—Area bounded by lines joining the following positions:

a. 42°00'N, 34°00'E.
b. 42°05'N, 34°00'E.
c. 42°00'N, 34°50'E.
d. 42°12'N, 35°03'E.

Area No. LT-D17 (Gerze).—Area bounded by lines joining the following positions:

a. 41°56'N, 35°15'E.
b. 41°59'N, 35°18'E.
c. 41°47'N, 35°52'E.
d. 41°43'N, 35°50'E.

Government

Flag of Turkey

Turkey is a republican parliamentary democracy. The country is divided into 81 provinces.

Turkey is governed by a President elected by the National Assembly to a 5-year term. The Prime Minister is appointed by the President. The unicameral National Assembly consists of 550 members, who are directly elected under a system of proportional representation to serve 4-year terms.

The legal system is based on various continental European legal systems.

The capital is Ankara.

Holidays

The following holidays are observed:

January 1	New Year's Day
April 23	National Sovereignty and Children's Day
May 19	Ataturk Commemoration and Youth and Sports Holiday
August 30	Victory Day
October 29	Anniversary of the Proclamation of the Republic

Islamic holidays, which are subject to the appearance of the moon, include Sheker Bayram (End of Ramadan) and Kurban Bayram (End of Pilgrimage).

Ice

Drift ice from the Black Sea jams parts of Istanbul Bogazi (The Bosporus) during severe winters.

Industries

The main industries include textiles, food processing, automobiles, mining (coal, chromite, copper, and boron), steel, petroleum, construction, lumber, and paper.

The main exports are apparel, foodstuffs, textiles, metal goods, and transport equipment. The main export trading partners are Germany, the United Kingdom, Italy, the United States, and France.

The main imports are machinery, chemicals, semi-finished goods, fuels, and transport equipment. The main import trading partners are Germany, Russia, Italy, China, and France.

Languages

Turkish is the official language. Arabic and Kurdish are also spoken.

Meteorology

Marine weather forecasts in Turkish, English, and German are available from the Turkish State Meteorological Service (http://www.dmi.gov.tt).

Navigational Information

Enroute Volume

Pub. 132, Sailing Directions (Enroute) Eastern Mediterranean.

BA NP 24, Black Sea Pilot (British Admiralty publication)

Maritime Claims

The maritime territorial claims of Turkey are, as follows:

Territorial Sea *	12 miles in the Black Sea and the Mediterranean Sea. 6 miles in the Aegean Sea.
Fisheries or Economic Zone	200 miles (Black Sea only).

* Claims straight baselines. Requires advance permission or notification for innocent passage of warships in the territorial sea.

Maritime Boundary Disputes

Complex maritime, air, and territorial disputes with Greece in the Aegean Sea.

Pilotage

Turkish Straits

Pilotage through Istanbul Bogazi (The Bosporus) and Canakkale Bogazi (The Dardanelles) is not required but is strongly advised because of the strong currents and high density of

traffic. Pilotage, however, is compulsory for the following areas:

1. Canakkale Karanlik Liman.
2. Izmit Korfezi.
3. The port of Galata and the inner port of Istanbul.
4. Selviburnu oil installation and Cubuklu oil installation, in Istanbul Bogazi.
5. Anchorages at Dolmabahce.

Pilots should be requested using Sailing Plan 1 (SP1) or Sailing Plan 2 (SP2). For further information, see **Vessel Traffic Service—Procedures and Appendix I**.

Vessels should maintain a listening watch on the VHF working frequencies of the relevant sector during passage through or anchorage within the Turkish Straits Vessel Traffic Service (TSVTS) area. Vessels stopped or anchored in the straits should report their position to the relevant sector. For further information, see Vessel Traffic Service—VTS Centers and Appendix I

Vessels over 200m long or with a draft greater than 15m are advised to pass through the straits during daylight hours only.

Pilots board, as follows:

1. North entrance of Istanbul Bogazi—3 miles NNE of Cali Burnu Light (41°12.3'N., 29°06.7'E.). The pilot disembarks 3 miles NE of Fili Burnu Light (41°12.2'N., 29°07.0'E.).
2. South entrance of Istanbul Bogazi—5 miles S of Ahirkapi Light (41°00.4'N., 28°59.2'E.). The pilot disembarks 5 miles SW of Ahirkapi Light.
3. Haydarpasa (Inci Burnu)—in position 40°59.5'N., 29°01.2'E.).
4. North entrance of Canakkale Bogazi—3 miles NE of Gelibolu Light (40°24.6'N., 27°41.0'E.). The pilot disembarks 2.5 miles ENE of Gelibolu Light.
5. South entrance of Canakkale Bogazi—3 miles SW of Mehmetcik Light (40°02.7'N., 26°10.5'E.). The pilot disembarks 2.5 miles WSW of Mehmetcik Light.

Pilot station contact information can be found in the table titled **Istanbul Bogazi (The Bosporus) and Canakkale Bogazi (The Dardanelles)—Pilot Station Contact Information**.

TURKISH STRAITS AND MARMARA DENIZI (SEA OF MARMARA) PORTS

Ambarli (40°58'N., 28°41'E.)

Pilotage is compulsory for foreign vessels over 500 gross tons and is ordered through the agent. Pilots board in position 48°55'36"N, 28°40'39"E.

Bandirma (40°21'N., 27°57'E.)

Pilotage is compulsory. Pilots board at the harbor entrance.

Izmit Korfezi (40°45'N., 29°40'E.)

Pilotage, available 24 hours and provided from Darica (40°45'N., 29°23'E.), is compulsory in Izmit Korfezi for all foreign vessels and yachts of 150 gross tons and over bound for or leaving ports/anchorages and berthing/unberthing at wharves, quays, or buoys, as follows:

1. Darica (40°45'N., 29°23'E.).
2. Derince (40°45'N., 29°50'E.).
3. Diliskelesi (40°46'N., 29°32'E.).
4. Hereke (Karamursel) (40°47'N., 29°37'E.).
5. Izmit (40°45'N., 29°55'E.).
6. Tutunciftlik Refinery (40°45'N., 29°46'E.).
7. Yalova (Aksa Terminal) (40°40'N., 29°16'E.).
8. Yarimca (40°46'N., 29°44'E.).

Izmir Korfezi—Pilot Contact Information

	Dekas Maritime Pilotage	Med Marine
Call sign	Dekas Pilot	Med Pilot
VHF	VHF channels 12 and 16	VHF channels 12 and 16
E-mail	pilot@dekaspilot.com	—
Web site	http://www.dekaspilot.com	http://www.medpilot.net

Istanbul Bogazi (The Bosporus) and Canakkale Bogazi (The Dardanelles)—Pilot Station Contact Information

Call sign	VHF	Telephone	Facsimile
Kavak Pilot Station (41°10'36.0"N. 29°04'24.0"E.)—North entrance to Istanbul Bogazi			
Kavak Pilot	VHF channels 16 and 71	90-212-2420494 90-212-2420374	90-212-2421607
Istanbul Pilot Station (40°59'36.0"N. 29°01'00.0"E.)—South entrance to Istanbul Bogazi			
Istanbut Pilot	VHF channels 16 and 71	90-216-5530533	—
Gelibolu Pilot Station (40°24'30.0"N. 26°40'57.0"E.)—North entrance to Canakkale Bogazi			
Gelibolu Pilot	VHF channels 16 and 71	90-286-5661612	90-286-5661611
Gelibolu Pilot Station (40°02'34.2"N. 26°11'25.2"E.)—South entrance to Canakkale Bogazi			
Mehmetcik Pilot	VHF channels 16 and 71	90-286-8620006	90-286-8620138

Two private companies provide pilotage services in Izmir Korfezi. Contact information can be found in the table titled **Izmir Korfezi—Pilot Contact Information**. The pilot boards in position 40°44.7'N, 29°21.2'E.

Gemlik (40°26'N., 29°09'E.)

Pilotage is compulsory for foreign vessels over 500 gross tons and is ordered through the agent. Pilots board W of the anchorage area in position 48°26'N, 29°06'E.

Pilots can be contacted, as follows:

1. Call sign: Gemlik Pilot
2. VHF: VHF channels 16 and 71
3. Telephone: 90-224-5248831
   90-224-5247720
4. Facsimile: 90-224-5248830

Icdas (40°27'N., 27°08'E.)

Pilotage is compulsory. Pilots should be contacted 1 to 2 hours prior to arrival on VHF channel 10 or 16. The pilot boards off the pier/breakwater in position 40°27'45.6'N, 27°08'04.2'E.

Martas (40°58'N., 27°56'E.)

Pilotage is compulsory for foreign vessels over 50 gross tons. The pilot boards 1 mile from the port.

Pilots can be contacted, as follows:

1. Call sign: Martas Pilot
2. VHF: VHF channels 6 and 16
3. Telephone: 90-282-6131879
   90-532-4354888 (mobile)

Saraylar (40°39'N., 27°40'E.)

Pilotage is ordered through the agent. Pilots should be contacted 1 hour prior to arrival on VHF channel 14 or 16. The pilot boards 1 mile N of the harbor entrance.

Pilots can be contacted, as follows:

1. VHF: VHF channels 14 and 16
2. Telephone: 90-266-8877335
3. Facsimile: 90-266-8877334

Tekirdag (40°58'N., 27°30'E.)

Pilotage is compulsory for all foreign vessels of 150 gross tons and over entering or leaving the harbor, anchoring, and berthing. Pilots can be contacted on VHF channels 1, 12, 16, 68 and 74.

Tuzla (40°51'N., 29°16'E.)

Pilotage is compulsory for all foreign vessels of 500 gross tons and over. The pilot should be requested through the agent 24 hours prior to arrival. The pilot boards, as follows:

a. 49°50'15.0"N, 29°15'22.8"E.
b. 49°50'09.0"N, 29°13'14.4"E. (dangerous cargo)

Pilots can be contacted, as follows:

1. Call sign: Tuzla Pilots
2. VHF: VHF channel 12
3. Telephone: 90-216-4460081
   90-216-4463015
4. Facsimile: 90-216-4460683
   90-216-4463015
5. E-mail: gisas@tnn.net

BLACK SEA PORTS

Bartin Limani (41°41'N., 32°13'E.)

Pilotage is compulsory. Pilots board in the outer anchorage area and can be contacted, as follows:

1. VHF: VHF channel 16
2. Telephone: 90-378-2385851
3. Facsimile: 90-378-2385851

Eregli (41°17'N., 31°24'E.)

Pilotage is compulsory for foreign vessels of 150 gross tons and over when entering the harbor, anchoring, berthing, and leaving the harbor. The pilot boards in position 41°16'53.4"N, 31°22'34.2"E.

Vessels waiting for a pilot should anchor about 1 mile W of North Breakwater Light.

The pilots can be contacted (call sign: Eregli Port Radio) on VHF channel 16.

Espiye Terminal (40°57'N., 38°42'E.)

Pilotage is compulsory for foreign vessels of 150 gross tons and over. Pilots should be requested through the vessel's agent 24 hours in advance. The pilot boards 1 mile N of the mooring buoys.

Pilots can be contacted, as follows:

1. VHF: VHF channels 14 and 16
2. Telephone: 90-454-2161490
   90-533-7340005 (mobile)
3. Facsimile: 90-454-2121734
4. E-mail: kaptanokankaya@hotmail.com

Giresun (40°55'N., 38°23'E.)

Pilotage is compulsory for foreign vessels of 150 gross tons and over. The vessel's ETA should be sent to the pilot via e-mail 48 hours in advance. Pilots should be contacted 1 hour prior to arrival on VHF channel 16 and can be contacted, as follows:

1. VHF: VHF channels 14 and 16
2. Telephone: 90-454-2161490
   90-533-7340005 (mobile)
3. Facsimile: 90-454-2121734
4. E-mail: kaptanokankaya@hotmail.com

Hopa (41°25'N., 41°25'E.)

Pilotage is compulsory for all foreign vessels and is available 24 hours. The pilot boards 1 mile off the main breakwater.

The pilot vessel can be contacted on VHF channels 12 and 16.

Inebolu (41°59'N., 27°08'E.)

Pilotage is compulsory for all vessels over 300 gross tons.

Karadeniz LPG Terminal (41°01'N., 38°49'E.)

Pilotage is compulsory for foreign vessels of 150 gross tons and over. The pilot should be requested via the agent 24 hours prior to arrival.

Pilots board near the N boundary of the anchorage area, an area bounded by lines joining the following positions:

a. 41°02.0'N, 38°49.8'E.
b. 41°02.0'N, 38°57.1'E.

c. 41°01.3'N, 38°57.1'E.
d. 41°01.3'N, 38°49.8'E.

Pilots can be contacted, as follows:

1. VHF: VHF channels 14 and 16
2. Telephone: 90-454-2161490
   90-533-7340005 (mobile)
3. Facsimile: 90-454-2121734
4. E-mail: kaptanokankaya@hotmail.com

Ordu (41°00'N., 37°53'E.)

Pilotage is compulsory for foreign vessels of 150 gross tons and over. The vessel's ETA should be sent to the pilot via e-mail 48 hours in advance. Pilots should be contacted 1 hour prior to arrival on VHF channel 16 and can be contacted, as follows:

1. VHF: VHF channels 14 and 16
2. Telephone: 90-454-2161490
   90-533-7340005 (mobile)
3. Facsimile: 90-454-2121734
4. E-mail: kaptanokankaya@hotmail.com

Trabzon (41°00'N., 39°45'E.)

Pilotage is compulsory for all foreign vessels and is arranged through the agent.

Unye (41°07'N., 37°21'E.)

Pilotage is compulsory for foreign vessels of 150 gross tons and over. The vessel's ETA should be sent to the pilot via e-mail 48 hours and 24 hours in advance. The pilot boards about 0.5 mile NE of the breakwater light.

Zonguldak (41°27'N., 31°47'E.)

Pilotage is compulsory and is provided by the coal company. Pilots board off the port entrance.

Pollution

MARPOL Special Area

MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted. Several areas off the coasts of Turkey have been designated as MARPOL Special Areas, as follows:

1. The Mediterranean Sea.
2. The Black Sea.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Special regulations exist for foreign warships entering Turkish waters. These vessels should contact the proper authorities before entering Turkish waters.

Radio communications within Turkish waters are prohibited for foreign warships as well as other foreign vessels. However, if no other means of communication exist, the harbor authority can allow transmissions of short duration relating to the voyage or events on board.

Transmissions to calibrate the apparatus can only be authorized from appropriate coastal stations. Private messages cannot be transmitted. Vessels must abide by the arrangements of the coastal stations for hours and service in order to avoid interference.

In territorial waters vessels can, during their stay in the harbor, communicate only with the nearest Turkish coastal station. However, these vessels must adhere to the arrangements of that coastal station with regard to hours and service. Vessels of the same company can communicate amongst themselves service messages without passing them through coastal stations.

Normal international courtesies, such as flying the Turkish flag at the foremast, should be carefully adhered to by vessels while in the waters and ports of Turkey.

Vessels are warned against entering Turkish territorial waters except for the purpose of calling at a port, when they should keep close to the prescribed navigational route.

Anchoring off, approaching near, and landing on the coast of Uzun Ada (38°30'N., 26°43'E.) are prohibited.

Landing is prohibited on the island of Saros Adalari (40°37'N., 26°44'E.) and along the Turkish coast between the mouths of the Kavaksuyu River (40°36.2'N., 26°49.8'E.) and the Guneyli River (40°30.7'N., 26°42.7'E.).

Landing on the islands of Bozca Ada, Tavsan Adalari, and Imbroz Adasi is subject to special authorization.

International Ship and Port Facility (ISPS) Code

Information on Turkish ports that comply with the ISPS Code, as well as contact information for Port Facility Security Officers at individual ports, can be found at the following web site:

Turkey—ISPS-compliant Ports
http://www.denizcilik.gov.tr/isps/Safe_Ports.htm

Naval Prohibited Areas and Maritime Special Security Areas

Vessels are prohibited from entering Naval Prohibited Areas and Naval Special Security Areas. Maritime Special Security Areas may be entered by obtaining permission from the authorities responsible for them.

These areas are listed in Appendix II.

Search and Rescue

The Undersecretariat for Maritime Affairs, Prime Ministry at Ankara, in conjunction with regional Turkish Coast Guard Centers, is responsible for search and rescue operations in Turkish waters and can be contacted, as follows:

1. Telephone: 90-312-2319105
   90-312-2324783
2. Facsimile: 90-312-2320823
3. E-mail: trmrcc@denizcilik.gov.tr

A network of coast radio stations maintain a continuous listening watch on international distress frequencies.

Ship Reporting System

The Turkish Straits Vessel Traffic Service (TSVTS) and Reporting System (TUBRAP) has been establish in Istanbul Bogazi (The Bosporus) and Canakkale Bogazi (The Dardanelles). For further information, see **Vessel Traffic Service**.

Signals

Prior to transiting Istanbul Bogazi (The Bosporus) and Canakkale Bogazi (The Dardanelles), vessels that are ready for sanitary inspections shall display the following signals:

1. From 0800 to 1800 local—A yellow flag.
2. From 1800 to 0600 local—One red light over one white light.

Vessels entering Turkish ports from the Black Sea or the Aegean Sea must display a yellow flag until the Turkish Sanitary Authority boat has come alongside and the samitary inspection of the vesel has been completed.

Submarine Operating Areas

Turkish submarines operating on the surface display an all round amber light showing 90 flashes per minute.

Mediterranean Sea

Vessels are cautioned that submerged submarines may be operating in the areas described below.

Area A64.—Area bounded by lines joining the following positions:

a. 35°47.5'N, 29°34.5'E.
b. 35°47.5'N, 30°09.5'E.
c. 35°32.5'N, 30°09.5'E.
d. 35°32.5'N, 29°34.5'E.

Area A65.—Area bounded by lines joining the following positions:

a. 35°59'N, 30°15'E.
b. 35°59'N, 30°50'E.
c. 35°45'N, 30°50'E.
d. 35°14'N, 30°41'E.

Area A66.—Area bounded by lines joining the following positions:

a. 36°29'N, 30°41'E.
b. 36°29'N, 31°06'E.
c. 36°14'N, 31°06'E.
d. 36°14'N, 30°41'E.

Area A66-I.—Area bounded by lines joining the following positions:

a. 36°24'00"N, 30°56'30"E.
b. 36°27'00"N, 31°06'00"E.
c. 36°14'00"N, 31°06'00"E.
d. 36°14'00"N, 30°57'30"E.

Area A67.—Area bounded by lines joining the following positions:

a. 36°47'N, 31°05'E.
b. 36°37'N, 31°33'E.
c. 36°32'N, 31°02'E.
d. 36°26'N, 31°30'E.

Area A68.—Area bounded by lines joining the following positions:

a. 36°19'N, 31°13'E.
b. 36°19'N, 31°50'E.
c. 36°01'N, 31°50'E.
d. 36°01'N, 31°13'E.

Area A69.—Area bounded by lines joining the following positions:

a. 35°56.0'N, 32°30.0'E.
b. 35°45.0'N, 33°06.0'E.
c. 35°37.5'N, 33°06.0'E.
d. 35°37.5'N, 32°30.0'E.

Area A70.—Area bounded by lines joining the following positions:

a. 36°24'00"N, 34°29'30"E.
b. 36°24'00"N, 35°05'30"E.
c. 36°11'15"N, 35°05'30"E.
d. 36°11'15"N, 34°29'30"E.

Area A71.—Area bounded by lines joining the following positions:

a. 36°19'N, 35°08'E.
b. 36°19'N, 35°32'E.
c. 36°04'N, 35°32'E.
d. 36°04'N, 35°08'E.

Area A72.—Area bounded by lines joining the following positions:

a. 36°37.0'N, 34°31.0'E.
b. 36°24.0'N, 34°36.0'E.
c. 36°19.5'N, 34°11.5'E.
d. 36°19.5'N, 34°11.5'E.
e. 36°19.5'N, 34°11.5'E.

Area C.—Area bounded by lines joining the following positions:

a. 31°19.0'N, 34°00.0'E.
b. 31°19.0'N, 34°10.0'E.
c. 31°57.0'N, 33°15.0'E.
d. 31°59.5'N, 34°00.5'E.
e. 31°50.0'N, 34°55.0'E.

Area D (Shefayyim).—Area bounded by lines joining the following positions (permanent firing practice area):

a. 32°12.8'N, 34°41.5'E.
b. 32°19.7'N, 34°43.8'E.
c. 32°21.2'N, 34°41.7'E.
d. 32°12.4'N, 34°38.8'E.

Sea of Marmara

Vessels are cautioned that submerged submarines may be operating in the areas described below.

Area M21.—Area bounded by lines joining the following positions:

a. 40°44'13"N, 29°34'04"E.
b. 40°43'30"N, 29°39'57"E.
c. 40°42'48"N, 29°39'57"E.
d. 40°41'59"N, 29°34'24"E.

Area M24.—Area bounded by lines joining the following positions:

a. 40°49'12"N, 28°51'54"E.
b. 40°49'12"N, 29°06'36"E.
c. 40°41'12"N, 29°06'36"E.
d. 40°41'12"N, 26°51'54"E.

Area M26.—Area bounded by lines joining the following positions:

a. 40°29'12"N, 28°47'06"E.
b. 40°26'24"N, 29°01'48"E.
c. 40°22'40"N, 29°01'48"E.
d. 40°24'48"N, 28°47'06"E.

Area M28.—Area bounded by lines joining the following positions:

a. 40°47'48"N, 28°39'24"E.
b. 40°49'12"N, 28°51'50"E.
c. 40°36'24"N, 28°51'50"E.

d. 40°36'24"N, 28°39'24"E.

Area M29.—Area bounded by lines joining the following positions:

a. 40°46'30"N, 28°26'00"E.
b. 40°47'48"N, 28°39'24"E.
c. 40°36'24"N, 28°39'24"E.
d. 40°36'24"N, 28°26'00"E.

Area M30.—Area bounded by lines joining the following positions:

a. 40°44'00"N, 28°00'00"E.
b. 40°44'00"N, 28°26'00"E.
c. 40°36'24"N, 28°26'00"E.
d. 40°36'24"N, 28°00'00"E.

Area M31.—Area bounded by the coast and lines joining the following positions:

a. 41°03.5'N, 28°05.0'E. (coast)
b. 40°55.0'N, 28°05.0'E.
c. 40°55.0'N, 28°30.0'E.
d. 41°00.4'N, 28°30.0'E. (coast)

Area M32.—Area bounded by lines joining the following positions:

a. 40°27'30"N, 27°21'12"E.
b. 40°25'54"N, 27°44'42"E.
c. 40°19'30"N, 27°47'24"E.
d. 40°21'12"N, 27°22'00"E.

Black Sea

Submarines frequently exercise in the area between Akcakoca (41°05'N., 31°07'E.) and Girece Burnu (41°50'N., 32°35'E.).

Tides

There is no tidal rise along the S coast of Turkey; however S and W winds can raise the sea level by as much as 0.6m, while N and E winds can lower the sea level by a similar amount.

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time (CHARLIE (-3)) is observed from the the end March until the last Sunday in October. The exact changeover date should be obtained from local authorities.

Traffic Separation Schemes

An IMO-adopted Traffic Separation Scheme is located between Canakkale Bogazi (The Dardanelles) and Istanbul Bogazi (The Bosporus), including Marmara Denizi (The Sea of Marmara).

U.S. Embassy

The U.S. Embassy is situated at 110 Ataturk Boulevard, Kavaklidere, 06100 Ankara.

The mailing address is PSC 93, Box 5000, APO AE (09823).

U. S. Embassy Turkey Home Page
http://turkey.usembassy.gov

Vessel Traffic Service

The Turkish Straits Vessel Traffic Service (TSVTS) and Reporting System (TUBRAP) covers Istanbul Bogazi (The Bosporus), Marmara Denizi (The Sea of Marmara), and Canakkale Bogazi (The Dardanelles).

Vessels transiting the TSVTS and Reporting System are divided into two categories, as follows:

1. **Active Participant Vessels.—**All vessels carrying dangerous cargo and all vessels with an loa of 20m and over.
2. **Passive Participant Vessels.—**All vessels with an loa of less than 20m and local traffic vessels navigating within the VTS area.

Passive Participant Vessels do not need to report; however, they must maintain a continuous listening watch on the relevant sector VHF channel and follow any instructions provided by the VTS Center.

All vessels navigating or at anchor in the VTS area should also maintain a continuous listening watch on the relevant sector VHF channel.

Communication with the TSVTS shall be in English; however, Turkish vessels and vessels under pilotage may communicated in Turkish.

Weather and general announcements will be broadcast on VHF channel 67. Emergency communications will be undertaken on VHF channel 6.

VTS Centers.—Two VTS Centers have been established to serve the TSVTS, as follows:

1. **Canakkale Bogazi VTS Center—**Covers Canakkale Bogazi (The Dardanelles), its S approach from the Aegean Sea, and its N approach from Marmara Denizi and can be contacted, as follows:

a. Telephone: 90-286-2134800 (switchboard)
b. Facsimile: 90-286-2131240
90-286-2131241
90-286-2133077

The N limits of Canakkale Bogazi VTS comprise a line joining the following positions:

a. 40°42'18.0"N, 27°18'30.0"E. (Hoskoy Birnu)
b. 40°48'00.0"N, 27°38'00.0"E.
c. 40°51'36.0"N, 28°10'00.0"E.
d. 40°41'00.0"N, 28°10'00.0"E.
e. 40°41'42.0"N, 27°38'30.0"E.
f. 40°39'00.0"N, 27°29'24.0"E. (Hayirsiz Ad)
g. 40°28'36.0"N, 27°17'00.0"E. (Karaburun Light)

The S limits of Canakkale Bogazi VTS comprise a line joining the following positions:

a. 39°44'00.0"N, 26°09'12.0"E.
b. 39°44'00.0"N, 25°55'00.0"E.
c. 39°52'36.0"N, 25°47'00.0"E.
d. 40°06'00.0"N, 25°47'00.0"E.
e. 40°09'00.0"N, 26°00'54.0"E.
f. 40°09'00.0"N, 26°14'12.0"E.

Canakkale Bogazi VTS is further subdivided into the following sectors:

a. Sector Gelibolu.
b. Sector Nara.
c. Sector Kumkale.

The limits, call sign, and working frequency of each sector are given in Appendix I.

2. **Istanbul Bogazi VTS Center—**Covers Istanbul Bogazi (The Bosporus), its S approach from Marmara Denizi, and its N approach from the Black Sea and can be contacted, as follows:

a. Telephone: 90-212-3234800 (switchboard)
b. Facsimile: 90-212-3234806
90-212-3234807
90-212-3234808

The N limits of Istanbul Bogazi VTS comprise a line joining the following positions:

a. 41°10'30.0"N, 29°35'00.0"E.
b. 41°32'30.0"N, 29°35'00.0"E.
c. 41°32'30.0"N, 28°45'00.0"E.
d. 41°19'00.0"N, 28°45'00.0"E.

The S limits of Istanbul Bogazi VTS comprise a line joining the following positions:

a. 40°52'30.0"N, 29°13'48.0"E.
b. 40°48'30.0"N, 29°09'00.0"E.
c. 40°39'54.0"N, 29°09'00.0"E.
d. 40°41'00.0"N, 28°10'00.0"E.
e. 40°51'36.0"N, 28°10'00.0"E.
f. 40°55'06.0"N, 28°43'24.0"E.
g. 40°58'12.0"N, 28°43'24.0"E.

Istanbul Bogazi VTS is further subdivided into the following sectors:

a. Sector Turkeli.
b. Sector Kavak.
c. Sector Kandilli.
d. Sector Kadikoy.
e. Sector Marmara.

The limits, call sign, and working frequency of each sector are given in Appendix I.

Procedures.—TUBREP consists of four reports, as follows:

1. **Sailing Plan 1 (SP1)—**This report is sent, as follows:

a. Masters, owners, or agents of vessels carrying dangerous cargo or vessels of 500 gross tons and over should submit a written SP1 to the relevant VTS Center at least 24 hours prior to entry into the Turkish Straits.

b. Masters, owners, or agents of vessels between 150m and 200m long and/or vessels with a draft between 10m and 15m should submit a written SP1 to the relevant VTS Center at least 24 hours prior to entry into the Turkish Straits.

c. Masters, owners, or agents of vessels between 200m and 300m long and/or vessels with a draft over 15m should submit a written SP1 to the relevant VTS Center at least 48 hours prior to entry into the Turkish Straits.

d. Owners or operators of vessels over 300m long, vessels propelled by nuclear power, and vessels carrying nuclear cargo or nuclear waste must provide information regarding their characteristics and cargo during the planning stages of their voyage. The TSVTS, based upon this data, shall inform the relevant vessel's owner, operator, or master of any requirements or recommendations necessary to ensure safe passage through the Turkish Straits. A written SP1 must be submitted at least 72 hours prior to entry into the Turkish Straits.

e. Vessels carrying dangerous cargo and/or vessels of 500 gross tons and over leaving ports in Marmara Denizi should submit an SP1 to the relevant VTS Center at least 6 hours prior to departure.

The SP1 shall contain the following information:

Designator	Information required
A	Vessel's name, call sign, flag, IMO number, and MMSI number.
B	Date and time (UTC).
C	Reporting position (latitude/longitude).
F	Continuous maneuvering speed (in knots and tenths of knots).
G	Port of departure.
H	Date and time of entry (UTC) into Canakkale Bogazi or Istanbul Bogazi.
I	Port of destination.
J	Request for pilot (yes/no) for Istanbul Bogazi, Marmara Denizi, or Canakkale Bogazi.
O	Draft (forward and aft) and maximum air draft (at the entrance to the strait).
P	Cargo type, quantity, and description of dangerous, noxious, or polluting cargo (UN Number, name, class, quantity, and IMDG/IGC/IBC/GC/INF Codes).
Q	Any defects, damage, deficiencies, or other limitations.
T	Vessel's agent or representative (including facsimile number) and name and surname of master.
U	Type of vessel, loa and beam (in meters), gross tonnage, net tonnage, double or single hull tanker, and year of construction.
W	Number of crew and passengers.
X	P and I information (club name, policy number, and validity), bunkers on board (FO/LO/DO), and last PSC date.

2. **Sailing Plan 2 (SP2)—**With the exception of warships, state-owned vessels not used for commercial purposes, and local traffic vessels, vessels declared technically suitable on the SP1 and vessels with an loa of 20m and over shall send an SP2 to the relevant VTS Center by VHF, 2 hours prior to arrival at the straits or when at a distance of 20 miles from the entrance of the straits.

The SP2 shall contain the following information:

Designator	Information required
A	Vessel's name, call sign, flag, IMO number, and MMSI number.
F	Maximum maneuvering speed.
G	Port of departure
H	Date and time of entry into the Turkish Straits.

Designator	Information required
I	Port of destination.
J	Request for pilot (yes/no) for Istanbul Bogazi, Marmara Denizi, or Canakkale Bogazi.
P	If any dangerous cargo on board.
Q	Any defects, damage, deficiencies, or other limitations.
T	Vessel's agent or representative (for vessels not obliged to send an SP1).
X	If ready for Turkish Straits passage.

3. **Position Report—**Vessels of 20m loa and over intending to enter the Turkish Straits should report to the relevant VTS entry sector (Turkeli, Kadikoy, Gelibolu, or Kumkale, as appropriate) by VHF, stating the vessel's name and position, when reaching a point 5 miles off the entrance to the Turkish Straits.

4. **Call Point Report—**Active Participant Vessels make this report, as follows:

a. Passing through Istanbul Bogazi (The Bosporus) and/or Canakkale Bogazi (The Dardanelles)—Report vessel name and position at the entrance and exit of each sector to the relevant VTS Center.

b. To VTS Center Gelibolu on VHF channel 11 when passing the Reporting Line connecting position 40°36'40.8"N, 27°06'48.0"E and position 40°26'45.0"N, 27°06'48.0"E.

c. Not passing through Istanbul Bogazi (The Bosporus) and/or Canakkale Bogazi (The Dardanelles) but are passing through the VTS areas in the Black Sea or the Aegean Sea—Report vessel name and position at the entrance and exit of each sector to the relevant VTS Center.

5. **Mamara Report (MARRAP).—**Active Participant Vessels intending to pass through the TSVTS area and navigating between ports in Marmara Denizi (The Sea of Marmara) shall submit a MARRAP to the relevant VTS Center when entering and leaving Sector Gelibolu/Sector Marmara and Sector Marmara/Sector Gelibolu.

Vessels departing from a port in Marmara Denizi (The Sea of Marmara) and intending to pass through Istanbul Bogazi (The Bosporus) and/or Canakkale Bogazi (The Dardanelles) shall submit a MARRAP to the relevant VTS Center when entering their area.

The MARRAP shall contain the following information:

Designator	Information required
A	Vessel's name.
D	Position.
G	Port of departure.
I	Port of destination.
P	If any dangerous cargo on board.

All vessels navigating within the TSS through Marmara Denizi (The Sea of Marmara) should report immediately to the relevant VTS Center any emergencies, deviations from the TSS, and expected delays to the ETA of over 2 hours.

6. **Vessels slowing down.—**Vessels slowing down within the Turkish Straits should give immediate notice to the relevant VTS Center. The VTS Center can provide information, recommendations, and instructions after evaluating the traffic situation.

7. **Vessels anchoring or leaving an anchorage.—**Anchored vessels should report to the relevant VTS Center, stating their anchorage position and time.

Vessels should maintain a continuous listening watch on the relevant VTS Center sector channel while at anchor.

Vessels should inform the relevant VTS Center 1 hour prior to weighing anchor.

Upon weighing anchor, vessels should report their time of weighing anchor, arrival port, and ETA at the entrance to the Turkish Straits to the relevant VTS Center and to receive traffic information.

8. **Vessels berthing or unberthing.—**Vessels should report the time of berthing to the relevant VTS Center while alongside at any port in the Turkish Straits.

Upon unberthing, vessels should report their time of unberthing, arrival port, and ETA at the entrance to the Turkish Straits to the relevant VTS Center and to receive traffic information.

Vessels are not required to maintain any listening watches when berthed.

Information Services.—The TSVTS provides the following information:

1. Maritime traffic information.
2. Information about the position of a vessel in relation to other vessels.
3. Information about the positions of other vessels by means of distances from own vessel, as well as course and speed over the ground.
4. Information about intended movements of other vessels.
5. Notices to Mariners.
6. Meteorological information and current situation.
7. Information about the reported status of aids to navigation.
8. Any other information as deemed necessary.

Navigational Assistance Services.—Navigational assistance will be provided when:

1. Severe meteorological situations have been observed.
2. Deficiencies or breakdowns have occurred during the passage of the participating vessels.
3. When requested by the vessel's master or when deemed necessary by the TSVTS.

With regard to the safety of navigation, the TSVTS will assist vessels in providing the following information:

1. Position information in order to ensure safe navigation of vessels navigating within the TSS.
2. Information about movements of other vessels in the vicinity.
3. Warnings concerning dangerous situations that may develop.

The beginning and end of navigational assistance must be clearly agreed and recorded by the vessel's master and the TSVTS.

Traffic Organization Service.—The TSVTS will organize

the following:

1. Handling of vessel Sailing Plans and entry permissions and the time and date to Istanbul Bogazi (The Bosporus) and/or Canakkale Bogazi (The Dardanelles).
2. Handling of any changes to the Sailing Plan.
3. Providing all necessary operational information related to traffic organization to the vessels before entering the Turkish Straits
4. Providing operational information to all vessels in the Turkish Straits according to TSTVS regulations.

The SP1 and SP2 constitute the primary sources for the traffic organization service to be provided by the TSVTS. Sending timely and accurate reports will increase the efficiency of the traffic organization.

AIS.—All AIS equipment must be maintained in full working order while navigating within the TSVTS area.

Appendix I—Turkish Strait VTS and Reporting System—Sector Information

Turkish Straits Vessel Traffic Service and Reporting System—Sector Information				
VTS Center	**Sector**	**Limits**	**Call sign**	**VHF channel**
Canakkale Bogazi VTS	Gelibolu	North limit—the N limit of Canakkale Bogazi VTS. South limit—a line joining the following positions: a. 40°21'33.6"N, 26°37'39.0"E. b. 40°20'09.0"N, 26°39'45.0"E.	Sector Gelibolu	11
	Nara	North limit—the S limit of Sector Gelibolu. South limit—a line joining the following positions: a. 40°06'48.0"N, 26°20'12.0"E. b. 40°05'42.0"N, 26°21'45.0"E.	Sector Nara	12
	Kumkale	North limit—the S limit of Sector Nara. South limit—the S limit of Canakkale Bogazi VTS.	Sector Kumkale	13
Istanbul Bogazi VTS	Turkeli	North limit—the N limit of Istanbul Bogazi VTS. South limit—a line joining Fili Burnu Light (41°12' 24.0"N., 29°07'07.8"E.) and Cali Burnu Light (41° 12'25.8"N., 29°06'22.2"E.).	Sector Turkeli	11
	Kavak	North limit—the S limit of Sector Turkeli. South limit—the Fatih Sultan Mehmet Bridge.	Sector Kavak	12
	Kandilli	North limit—the Fatih Sultan Mehmet Bridge. South limit—a line joining the N end of Haydarpasa Breakwater (41°00'36.0"N., 29°00'06.0"E.) and a position on shore (41°00'36.0"N., 28°59'13.8"E.), including Haydarpasa Port and Kadikoy Breakwater.	Sector Kandilli	13
	Kadikoy	North limit—the S limit of Sector Kandilli. South limit—a line joining the following positions: a. 40°52'30.0"N, 29°13'48.0"E. b. 40°48'30.0"N, 29°09'00.0"E. c. 40°50'18.0"N, 28°52'00.0"E. d. 40°55'06.0"N, 28°43'24.0"E. e. 40°58'12.0"N, 28°43'40.0"E.	Sector Kadikoy	14
	Marmara	North and E limits—a line joining the following positions: a. 40°55'06.0"N, 28°43'24.0"E. b. 40°50'18.0"N, 28°52'00.0"E. c. 40°58'30.0"N, 29°09'00.0"E. d. 40°39'54.0"N, 29°09'00.0"E. West limit—a line joining the following positions: a. 40°41'00.0"N, 28°10'00.0"E. b. 40°51'36.0"N, 28°10'00.0"E.	Sector Marmara	10

Appendix II—Naval Prohibited Areas and Maritime Special Security Areas

BLACK SEA

Samsun Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:

a. 41°18'39.0"N, 36°20'31.8"E. (coast)
b. 41°18'36.6"N, 36°20'38.4"E.
c. 41°18'25.8"N, 36°20'31.8"E.
d. 41°18'28.2"N, 36°20'24.6"E. (coast)

AMASRA Maritime Special Security Area.—An area bounded by the coast and lines joining the following positions:

a. 41°44'26.4"N, 32°23'13.2"E. (coast)
b. 41°44'28.8"N, 32°23'22.8"E.
c. 41°44'28.2"N, 32°23'27.6"E.
d. 41°44'21.0"N, 32°23'33.6"E. (coast)

Eregli Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:

a. 41°17'19.2"N, 31°23'46.2"E. (coast)
b. 41°16'53.4"N, 31°24'05.4"E. (end of existing mole)
c. 41°17'21.0"N, 31°24'24.0"E. (coast)

Ackakoca Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:

a. 41°05'55.0"N, 31°13'06.0"E. (coast)
b. 41°07'46.3"N, 31°13'01.8"E.
c. 41°09'00.8"N, 31°11'35.6"E.
d. 41°10'17.1"N, 31°13'25.3"E.
e. 41°10'33.9"N, 31°13'01.3"E.
f. 41°09'20.5"N, 31°11'13.1"E.
g. 41°12'47.7"N, 31°08'39.7"E.
h. 41°12'35.6"N, 31°08'07.2"E.
i. 41°09'48.5"N, 31°10'11.5"E.
j. 41°10'06.8"N, 31°06'14.4"E.
k. 41°09'41.7"N, 31°06'02.0"E.
l. 41°09'21.3"N, 31°10'26.5"E.
m. 41°07'36.4"N, 31°12'27.6"E.
n. 41°05'49.8"N, 31°12'30.3"E. (coast)

ISTANBUL BOGAZI (THE BOSPORUS)

Turkeli Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:

a. 41°08'46.8"N, 29°04'22.8"E. (coast)
b. 41°08'48.0"N, 29°04'12.6"E.
c. 41°09'45.0"N, 29°04'18.6"E.
d. 41°10'02.4"N, 29°04'26.4"E.
e. 41°10'12.0"N, 29°05'00.0"E.
f. 41°10'14.4"N, 29°05'03.0"E.
g. 41°10'24.6"N, 29°05'12.6"E.
h. 41°10'44.4"N, 29°05'10.8"E.
i. 41°10'49.2"N, 29°05'15.0"E.
j. 41°10'57.0"N, 29°05'26.4"E.
k. 41°11'00.0"N, 29°06'09.0"E.
l. 41°11'01.8"N, 29°06'16.8"E.
m. 41°11'22.2"N, 29°06'49.2"E.
n. 41°12'06.0"N, 29°07'03.0"E.
o. 41°12'04.2"N, 29°07'07.8"E.
p. 41°12'33.6"N, 29°07'48.0"E.
q. 41°13'34.2"N, 29°09'46.8"E.
r. 41°14'33.6"N, 29°10'25.2"E.
s. 41°14'15.0"N, 29°10'22.2"E.
t. 41°14'13.8"N, 29°12'47.4"E.
u. 41°13'21.0"N, 29°12'51.0"E. (coast)

Kanhcinar Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:

a. 41°11'23.4"N, 29°04'49.2"E. (coast)
b. 41°11'21.6"N, 29°05'00.0"E.
c. 41°11'21.0"N, 29°05'01.2"E.
d. 41°12'00.0"N, 29°05'40.8"E.
e. 41°12'01.8"N, 29°05'46.8"E.
f. 41°12'24.6"N, 29°06'27.6"E.
g. 41°12'27.6"N, 29°06'23.4"E.
h. 41°12'56.4"N, 29°06'53.4"E.
i. 41°13'13.2"N, 29°06'31.2"E.
j. 41°14'07.8"N, 29°07'13.8"E.
k. 41°14'49.8"N, 29°05'39.6"E.
l. 41°14'46.2"N, 29°05'40.2"E. (coast)

MARMARA DENIZI (SEA OF MARMARA)

Fernerbahce D/G Station Naval Prohibited Area.—An area bounded by lines joining the following positions:

a. 40°58'04.2"N, 29°01'55.8"E.
b. 40°57'58.8"N, 29°01'58.8"E.
c. 40°57'51.0"N, 29°01'57.0"E.
d. 40°56'51.0"N, 29°01'22.8"E.
e. 40°58'14.4"N, 29°01'22.8"E.
f. 40°58'14.4"N, 29°01'47.4"E.

Istanbul Shipyard Naval Special Security Area.—An area bounded by the coast and lines joining the following positions:

a. 40°52'06"N, 29°15'16"E. (coast)
b. 40°51'33"N, 29°14'56"E.
c. 40°51'15"N, 29°15'16"E.
d. 40°51'06"N, 29°15'55"E.
e. 40°51'18"N, 29°16'14"E.
f. 40°52'25"N, 29°16'04"E. (coast)
g. 40°52'12"N, 29°15'27"E. (coast)

Tuzla Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:

a. 40°49'05.4"N, 29°16'10.2"E. (coast)
b. 40°49'12.0"N, 29°16'01.8"E.
c. 40°49'12.0"N, 29°15'48.6"E.
d. 40°48'55.8"N, 29°15'30.0"E.
e. 40°48'57.6"N, 29°15'17.4"E.
f. 40°48'51.0"N, 29°15'17.4"E.
g. 40°48'36.0"N, 29°15'27.6"E.
h. 40°48'29.4"N, 29°15'31.2"E.
i. 40°48'22.2"N, 29°15'25.8"E.
j. 40°48'18.6"N, 29°15'24.6"E.
k. 40°48'10.2"N, 29°15'24.6"E.
l. 40°48'18.0"N, 29°15'51.0"E.
m. 40°48'37.2"N, 29°15'57.6"E.
n. 40°48'39.6"N, 29°15'53.4"E.
o. 40°48'43.2"N, 29°15'58.8"E.

p. 40°48'46.2"N, 29°16'08.4"E. (coast)

Izmit Bay—Tupras Refinery Naval Special Security Area.—An area bounded by the coast and lines joining the following positions:
a. 40°45'40.5"N, 29°45'07.6"E. (coast)
b. 40°45'35.0"N, 29°44'54.0"E.
c. 40°45'19.5"N, 29°44'53.3"E.
d. 40°45'14.0"N, 29°45'08.5"E.
e. 40°45'27.0"N, 29°45'25.9"E. (coast)

Izmit Bay—Izmit Refinery (TUPRAS) Maritime Special Security Area.—An area bounded by the coast and lines joining the following positions:
a. 40°44'32"N, 29°47'07"E. (coast)
b. 40°44'22"N, 29°46'44"E.
c. 40°44'21"N, 29°45'26"E.
d. 40°44'30"N, 29°45'06"E.
e. 40°44'50"N, 29°45'06"E.
f. 40°45'02"N, 29°45'14"E.
g. 40°45'01"N, 29°45'40"E. (coast)

Izmit Bay—Basiskele Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 40°43'01.2"N, 29°55'34.2"E. (coast)
b. 40°43'13.2"N, 29°55'27.6"E.
c. 40°43'31.8"N, 29°56'06.0"E.
d. 40°43'16.2"N, 29°56'15.6"E. (coast)

Izmit Bay—Golcuk Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 40°43'42"N, 29°47'59"E. (coast)
b. 40°44'19"N, 29°48'31"E.
c. 40°44'27"N, 29°49'22"E.
d. 40°44'13"N, 29°49'55"E.
e. 40°43'20"N, 29°49'54"E. (coast)

Izmit Bay—Konca Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 40°42'34"N, 29°42'29"E. (coast)
b. 40°42'49"N, 29°42'29"E.
c. 40°42'58"N, 29°42'54"E.
d. 40°42'56"N, 29°43'52"E.
e. 40°42'47"N, 29°43'52"E. (coast)

Izmit Bay—Dil Point Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 40°44'39"N, 29°30'50"E. (coast)
b. 40°44'37"N, 29°31'45"E.
c. 40°44'12"N, 29°31'45"E.
d. 40°44'23"N, 29°30'45"E. (coast)

Yalova Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 40°39'58.8"N, 29°18'05.4"E. (coast)
b. 40°40'03.0"N, 29°18'04.8"E.
c. 40°40'03.6"N, 29°18'10.8"E.
d. 40°40'00.6"N, 29°18'12.0"E. (coast)

Imrah Island Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 40°28'00"N, 28°27'00"E. (coast)
b. 40°37'00"N, 28°27'00"E.
c. 40°37'00"N, 28°37'00"E.
d. 40°28'00"N, 28°37'00"E. (coast)

Erdek Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 40°23'58"N, 27°49'00"E. (coast)
b. 40°23'04"N, 27°49'00"E.
c. 40°23'04"N, 27°48'04"E. (coast)

Botas Maritime Special Security Area.—An area bounded by the coast and lines joining the following positions:
a. 40°59'13.8"N, 26°58'49.2"E. (coast)
b. 40°59'18.0"N, 26°59'19.2"E.
c. 40°59'31.2"N, 26°59'30.0"E.
d. 40°59'42.0"N, 26°59'31.2"E.
e. 40°59'52.2"N, 26°59'25.2"E.
f. 41°00'15.0"N, 26°59'00.0"E. (coast)

Orencik Rock Maritime Special Security Area.—An area bounded by the coast and lines joining the following positions:
a. 40°58'03.0"N, 27°52'52.7"E. (coast)
b. 40°57'47.1"N, 27°52'52.1"E.
c. 40°57'42.4"N, 27°53'24.1"E.
d. 40°57'52.4"N, 27°54'05.3"E.
e. 40°57'10.8"N, 27°54'05.5"E. (coast)

Silivri Maritime Special Security Area.—An area bounded by the coast and lines joining the following positions:
a. 41°04'30"N, 28°11'06"E. (coast)
b. 41°02'54"N, 28°10'48"E.
c. 41°03'00"N, 28°11'18"E.
d. 41°04'24"N, 28°11'45"E. (coast)

CANAKKALE BOGAZI (THE DARDANELLES)

Umurbey Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 40°15'19"N, 26°33'16"E. (coast)
b. 40°15'58"N, 26°33'13"E.
c. 40°16'07"N, 26°33'33"E.
d. 40°15'58"N, 26°33'59"E. (coast)

Nara Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 40°09'25.8"N, 26°24'34.8'E. (coast)
b. 40°09'24.0"N, 26°24'30.6"E.
c. 40°09'49.8"N, 26°24'06.6"E.
d. 40°10'34.2"N, 26°24'03.0"E.
e. 40°10'54.6"N, 26°24'12.6"E.
f. 40°11'18.0"N, 26°24'15.0"E.
g. 40°11'34.8"N, 26°24'16.8"E.
h. 40°11'48.6"N, 26°23'57.6"E.
i. 40°11'54.0"N, 26°24'01.8"E.
j. 40°12'09.0"N, 26°24'54.0"E.
k. 40°12'03.0"N, 26°25'12.0"E.
l. 40°11'54.0"N, 26°25'24.6"E.
m. 40°11'52.2"N, 26°25'22.2"E. (coast)

Kumkale Naval Prohibited Area.—An area bounded by

the coast and lines joining the following positions:
a. 40°00'20"N, 26°11'38"E. (coast)
b. 40°00'27"N, 26°10'48"E.
c. 40°01'00"N, 26°12'12"E.
d. 40°00'58"N, 26°12'21"E.
e. 40°00'36"N, 26°12'22"E.
f. 40°00'36"N, 26°11'11"E. (coast)

AEGEAN SEA

Candarli Bay—Aliaga Special Security Area.—An area bounded by the coast and lines joining the following positions:
a. 38°49'57"N, 26°56'12"E. (coast)
b. 38°50'04"N, 26°56'06"E.
c. 38°50'16"N, 26°56'02"E.
d. 38°50'24"N, 26°56'24"E.
e. 38°50'25"N, 26°56'52"E.
f. 38°50'18"N, 26°56'57"E.
g. 38°50'18"N, 26°57'09"E.
h. 38°50'13"N, 26°57'16"E.
i. 38°49'52"N, 26°57'17"E.
j. 38°49'41"N, 26°57'09"E.
k. 38°49'21"N, 26°57'04"E.
l. 38°49'00"N, 26°56'52"E.
m. 38°48'53"N, 26°56'53"E.
n. 38°48'46"N, 26°57'14"E.
o. 38°48'49"N, 26°57'27"E.
p. 38°48'40"N, 26°57'43"E.
q. 38°48'17"N, 26°57'46"E. (coast)

Izmir—Naldoken SG Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 38°28'06.0"N, 27°09'27.6"E. (coast)
b. 38°28'05.4"N, 27°09'25.2"E.
c. 38°28'02.4"N, 27°09'24.0"E.
d. 38°28'02.4"N, 27°09'21.6"E.
e. 38°28'06.0"N, 27°09'21.0"E. (coast)

Gerence Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 38°28'48.0"N, 26°24'18.0"E. (coast)
b. 38°29'48.0"N, 26°20'00.0"E.
c. 38°23'42.0"N, 26°15'49.8"E.
d. 38°23'42.0"N, 26°24'00.0"E.
e. 38°26'37.8"N, 26°27'36.0"E.
f. 38°28'16.8"N, 26°27'00.0"E. (coast)

Ucbumu Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 38°28'24.0"N, 26°17'01.8"E. (coast)
b. 38°22'33.6"N, 26°16'49,2"E.
c. 38°22'37.2"N, 26°16'49.8"E.
d. 38°22'52.2"N, 26°17'07.2"E.
e. 38°22'37.8"N, 26°17'25.8"E.
f. 38°22'34.2"N, 26°17'26.4"E.
g. 38°22'22.8"N, 26°17'12.6"E. (coast)

Akbuk Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 37°22'20"N, 27°19'21"E. (coast)
b. 37°22'07"N, 27°19'34"E.
c. 37°21'44"N, 27°19'34"E.
d. 37°21'43"N, 27°19'13"E. (coast)

GULF OF IZMIR

Leventler Harbor Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 38°39'54.0"N, 26°44'31.8"E. (coast)
b. 38°40'06.0"N, 26°44'18.0"E.
c. 38°40'12.0"N, 26°44'00.0"E.
d. 38°39'30.0"N, 26°43'07.8"E.
e. 38°39'12.0"N, 26°43'06.0"E.
f. 38°36'49.8"N, 26°45'19.2"E.
g. 38°36'39.0"N, 26°46'30.0"E.
h. 38°36'54.0"N, 26°47'13.8"E. (coast)

Uzunada Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 38°27'24.0"N, 26°42'48.6"E. (coast)
b. 38°27'19.2"N, 26°43'30.0"E.
c. 38°27'19.8"N, 26°44'34.2"E.
d. 38°27'54.0"N, 26°45'21.0"E.
e. 38°28'12.0"N, 26°45'31.2"E.
f. 38°29'03.6"N, 26°45'31.2"E.
g. 38°29'58.8"N, 26°44'58.2"E.
h. 38°31'24.6"N, 26°44'34.8"E.
i. 38°31'57.0"N, 26°44'31.8"E.
j. 38°32'29.4"N, 26°43'54.6"E.
k. 38°33'09.6"N, 26°42'47.4"E.
l. 38°33'19.2"N, 26°41'24.6"E.
m. 38°31'56.4"N, 26°41'07.8"E.
n. 38°29'46.8"N, 26°40'53.4"E.
o. 38°28'31.2"N, 26°41'10.2"E. (coast)

Mentes Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 38°24'22"N, 26°41'11"E. (coast)
b. 38°24'19"N, 26°41'01"E.
c. 38°24'32"N, 26°40'50"E.
d. 38°25'01"N, 26°40'49"E.
e. 38°26'21"N, 26°42'24"E.
f. 38°26'25"N, 26°43'00"E.
g. 38°26'24"N, 26°43'29"E.
h. 38°26'23"N, 26°43'42"E.
i. 38°26'03"N, 26°44'13"E.
j. 38°25'31"N, 26°44'39"E.
k. 38°24'49"N, 26°44'28"E.
l. 38°24'46"N, 26°44'17"E. (coast)

Naldoken Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 38°27'55.8"N, 27°08'22.8"E. (coast)
b. 38°27'46.8"N, 27°08'24.0"E.
c. 38°27'43.2"N, 27°08'21.0"E.
d. 38°27'37.2"N, 27°08'07.2"E.
e. 38°27'33.0"N, 27°08'04.8"E.
f. 38°27'28.8"N, 27°07'52.8"E.
g. 38°27'31.8"N, 27°07'34.8"E. (coast)

Yenikale Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:

a. 38°24'53.4"N, 27°00'58.2"E. (coast)
b. 38°24'55.2"N, 27°00'49.8"E.
c. 38°25'01.8"N, 27°00'57.0"E.
d. 38°25'09.0"N, 27°00'55.2"E.
e. 38°25'16.8"N, 27°01'01.2"E.
f. 38°25'13.2"N, 27°01'10.8"E.
g. 38°25'03.0"N, 27°01'24.0"E.
h. 38°24'56.4"N, 27°01'16.8"E. (coast)

MEDITERRANEAN SEA

Mamaris Karaagac Harbor—Aksaz Naval Prohibited Area.—The coast between the N side of the line joining Turnah Point (36°47'24"N., 28°24'24"E.) and Gokyar Poiont (36°48'48"N., 28°27'42"E.).

Antalya Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 36°49'42"N, 30°36'08"E. (coast)
b. 36°49'34"N, 30°36'27"E.
c. 36°49'50"N, 30°36'44"E. (mole)
d. 36°49'53"N, 30°36'33"E. (end of quay)
e. 36°49'55"N, 30°36'22"E. (coast)

Mersin Military Harbor Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 36°48'21"N, 34°39'11"E. (corner of quay)
b. 36°48'20"N, 34°39'20"E. (corner of quay)
c. 36°48'30"N, 34°39'19"E.
d. 36°48'30"N, 34°39'32"E.

Gulf of Iskenderun—Sugozu (ISKEN) Naval Special Security Area.—An area bounded by the coast and lines joining the following positions:
a. 36°50'23.4"N, 35°53'25.2"E. (coast)
b. 36°50'20.0"N, 35°53'25.2"E.
c. 36°50'16.2"N, 35°53'42.6"E.
d. 36°50'05.4"N, 35°53'40.8"E.
e. 36°49'59.4"N, 35°53'52.8"E.
f. 36°49'55.2"N, 35°53'57.0"E.
g. 36°49'51.0"N, 35°53'58.8"E.
h. 36°49'47.4"N, 35°53'58.8"E.
i. 36°49'43.8"N, 35°53'57.6"E.
j. 36°49'41.4"N, 35°53'55.8"E.
k. 36°49'39.0"N, 35°53'52.2"E.
l. 36°49'24.0"N, 35°53'42.0"E.
m. 36°49'36.6"N, 35°53'36.6"E.
n. 36°49'46.2"N, 35°53'16.2"E.
o. 36°49'43.2"N, 35°52'58.8"E.
p. 36°49'43.2"N, 35°52'54.6"E.
q. 36°49'37.8"N, 35°52'40.0"E.
r. 36°49'40.2"N, 35°52'30.0"E.
s. 36°49'39.6"N, 35°52'28.2"E. (coast)

Gulf of Iskenderun—Botas (Ceyhan) Naval Special Security Area.—An area bounded by the coast and lines joining the following positions:
a. 36°52'03"N, 35°54'53"E. (coast)
b. 36°51'39"N, 35°55'20"E.
c. 36°50'50"N, 35°54'40"E.
d. 36°50'06"N, 35°55'13"E.
e. 36°49'59"N, 35°56'22"E.
f. 36°51'30"N, 35°58'30"E.
g. 36°53'24"N, 35°56'42"E. (coast)

Gulf of Iskenderun—Botas (Dortyol) Naval Special Security Area.—An area bounded by the coast and lines joining the following positions:
a. 36°52'12.1"N, 36°08'00.5"E. (coast)
b. 36°51'34.8"N, 36°07'06.4"E.
c. 36°50'45.2"N, 36°07'57.8"E.
d. 36°51'23.1"N, 36°08'53.1"E. (coast)

Gulf of Iskenderun—ISDEMIR Naval Special Security Area.—An area bounded by the coast and lines joining the following positions:
a. 36°45'13.9"N, 36°11'31.1"E. (coast)
b. 36°45'11.4"N, 36°11'21.9"E.
c. 36°44'39.9"N, 36°11'20.7"E.
d. 36°44'04.1"N, 36°11'30.4"E.
e. 36°43'50.6"N, 36°11'07.9"E.
f. 36°43'23.9"N, 36°10'52.0"E.
g. 36°43'09.8"N, 36°11'51.9"E. (coast)

Gulf of Iskenderun—Iskenderun Maritime Special Security Area.—An area bounded by the coast and lines joining the following positions:
a. 36°35'14.8"N, 36°08'30.7"E. (coast)
b. 36°35'17.6"N, 36°08'28.7"E.
c. 36°35'24.6"N, 36°08'40.9"E.
d. 36°35'23.2"N, 36°08'42.2"E. (coast)

Iskenderun Sanseki Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 36°39'28"N, 36°12'49"E. (coast)
b. 36°39'26"N, 36°12'26"E.
c. 36°39'30"N, 36°12'17"E.
d. 36°39'37"N, 36°12'19"E.
e. 36°39'43"N, 36°12'55"E. (coast)

Iskederun Ulucinar Naval Prohibited Area.—An area bounded by the coast and lines joining the following positions:
a. 36°24'53"N, 35°53'09"E. (coast)
b. 36°25'04"N, 35°53'09"E.
c. 36°25'08"N, 35°52'52"E.
d. 36°25'05"N, 35°52'45"E.
e. 36°24'44"N, 35°52'29"E.
f. 36°24'41"N, 35°52'32"E. (coast)

TURKS AND CAICOS ISLANDS

General	**633**
Buoyage System	**633**
Currency	**633**
Government	**633**
Holidays	**634**
Industries	**634**
Languages	**634**
Navigational Information	**634**
Pilotage	**634**
Regulations	**634**
Search and Rescue	**634**
Signals	**634**
Time Zone	**635**
U.S. Embassy	**635**

General

The Turks and Caicos Islands, lying E of the Bahamas, consist of two small island groups with a total of over 40 islands and cays, of which only eight are inhabited.

The islands consist of low flat limestone, with extensive marshes and mangrove swamps.

The climate is tropical marine moderated by the trade winds, and is normally sunny and dry. Tropical storms and hurricanes are sometimes experienced.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Aids to navigation in the Turks and Caicos Islands have occasionally been reported to be unreliable.

Currency

The official unit of currency is the U.S. dollar.

Government

Flag of the Turks and Caicos Islands

The Turks and Caicos Islands is a self-governing dependent overseas territory of the United Kingdom, with Queen Elizabeth II as its chief of state.

The Turks and Caicos Islands is governed by a Governor appointed by the Queen. The Premier is appointed by the Governor. The 21-member unicameral House of Assembly consists of six appointed members and 15 directly-elected members who serve 4-year terms. In October 2009, the Assembly was dissolved by the Governor under orders from the United Kingdom Foreign Minister; this order may remain in effect for up to 2 years.

The legal system is based on English and Welsh common

law, with some aspects of the judicial systems of Jamaica and the Bahamas.

The capital is Grand Turk (Cockburn Town).

Holidays

The following holidays are observed:

January 1	New Year's Day
Second Monday in March	Commonwealth Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
End of May	National Heroes' Day
Second Saturday in June	Queen's Birthday
August 30	Constitution Day
September 30	National Youth Day
October 17	Columbus Day
December 10	Human Rights Day
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are tourism, fishing, and offshore financial services.

The main exports are lobster, dried and fresh conch, and conch shells. The main export-trading partners are the United States and the United Kingdom.

The main imports are food and beverages, tobacco, clothing, manufactured goods, and construction materials. The main import-trading partners are the United States and the United Kingdom.

Languages

English is the official language.

Navigational Information

The maritime territorial claims of the Turks and Caicos Islands are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	200 miles.

* Claims straight baselines.

Pilotage

Pilotage is not compulsory in the Turks and Caicos Islands, but local pilots are available, if needed, at Grand Turk, South Caicos, and Providenciales. Vessels should make pilotage arrangements through their agent.

Regulations

Advance Notice

Vessels bound for any port in the Turks and Caicos Islands should send their ETA, as well as the following information, to the appropriate harbormaster on VHF channel 16 at least 24 hours prior to arrival:

1. Vessel's name.
2. Call sign.
3. Nationality.
4. Length.
5. Draft.
6. Gross tonnage.
7. Net registered tonnage.

Anchorage Restrictions

Vessels are warned that most of the traditional anchorages in the Turks and Caicos Islands are located within National Marine Parks and are subject to restrictions. All vessels arriving from foreign ports should contact the appropriate harbormaster on VHF channel 16 for instructions and information prior to anchoring.

Search and Rescue

The Turks and Caicos Islands Rescue Association is responsible for coordinating search and rescue operations. MRCC Grand Turk can be contacted by telephone, as follows:

a. 1-649-9462299
b. 1-649-9462399
c. 1-649-9462499

Signals

Visual storms signals indicating a tropical storm is expected to strike the islands within 12 hours are shown in the accompanying table titled **Turks and Caicos Islands—Storm Warning Signals**.

Turks and Caicos Islands—Storm Warning Signals

Day signal	Night signal	Meaning
One square red flag, with a centered black square	Two red lights, vertically disposed.	Storm warning. Winds of 48 to 63 knots expected.

Turks and Caicos Islands—Storm Warning Signals		
Day signal	**Night signal**	**Meaning**
Two square red flags, with a centered black square, vertically disposed	One white light between two red lights, vertically disposed.	Hurricane warning. Winds over 63 knots expected.

Time Zone

The Time Zone description is ROMEO (+5). Daylight Savings Time (QUEBEC (+4)) is observed from the second Sunday in March until the first Sunday in November.

U.S. Embassy

The Turks and Caicos Islands is a dependent territory of the United Kingdom. There is no diplomatic representation.

UKRAINE

General	**637**
Buoyage System	**637**
Cautions	**637**
Currency	**637**
Government	**638**
Holidays	**638**
Ice	**638**
Industries	**638**
Languages	**638**
Navigational Information	**638**
Pilotage	**639**
Pollution	**640**
Regulations	**640**
Restricted Areas	**640**
Search and Rescue	**645**
Signals	**646**
Time Zone	**646**
Traffic Separation Schemes	**646**
U.S. Embassy	**646**
Vessel Traffic Service	**646**
Appendix I—Illichivsk Vessel Traffic Service	**647**
Appendix II—Port Yuzhne Vessel Traffic Service	**649**
Appendix III—Ochakiv Vessel Traffic Service, Russkaya Kosa Vessel Traffic Service, and Shirokaya Balka Vessel Traffic Service	**651**
Appendix IV—Sevastopol Vessel Traffic Service	**653**
Appendix V—Feodosiya Vessel Traffic Service	**655**
Appendix VI—Kerch Strait Vessel Traffic Service	**657**
Appendix VII—Mariupol Vessel Traffic Service	**659**
Appendix VIII—Ukraine-River Danube (Ust-Dunaysk) Regional Vessel Traffic Service	**661**

General

Ukraine is located on the N coast of the Black Sea. It is bordered by Poland, Slovakia, Hungary, Romania, and Moldova to the W; by Belarus to the N; and by Russia to the N and E.

The climate is continental temperate, except for a Mediterranean climate along the S coast of Crimea. The highest amount of precipitation occurs in the W and N parts of the country; lesser amounts fall in the E and SE.

Winters vary from cool along the Black Sea coast to cold further inland. Summers are warm across the greater part of the country, but are hot in the S.

Most of Ukraine consists for fertile plains, known as steppes, and plateaus. Mountains are found only in the W (the Carpathian Mountains) and in the extreme S on the Crimean Peninsula.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

It has been reported (2003) that navigational aids in Ukrainian waters may be different from those charted and described in navigational publications. Mariners should use extreme caution when attempting to identify navigational aids.

In areas where sea ice forms during the winter, buoys may be removed.

Cautions

High speed craft operate off the coast of Ukraine. Vessels are advised to maintain a good lookout.

Currency

The official unit of currency is the hryvnia, consisting of 100 kopiykas.

Government

Flag of Ukraine

Ukraine is a republic. The country is divided into 24 provinces, one autonomous republic, and two municipalities with the same status as a province.

Ukraine is governed by a directly-elected President serving a 5-year term. The unicameral Supreme Council is composed of 450 members serving 5-year terms; seats are allocated on a proportional basis to those parties that gain 3 per cent or more of the national electoral vote.

The legal system is based on civil law, with judicial review of legislative acts.

The capital is Kyiv (Kiev).

Holidays

The following holidays are observed:

January 1	New Year's Day
January 7	Orthodox Christmas
March 8	International Women's Day
Good Friday	Variable
Orthodox Easter	Variable
May 1-2	International Labor Day
May 9	Victory Day (World War II)
Holy Trinity	Variable
June 28	Constitution Day
August 24	Independence Day

Note.—When a Ukrainian holiday falls on Saturday OR Sunday, it is usually observed on Monday. When a Ukrainian holiday falls on Saturday AND on Sunday, it is usually observed on Monday and Tuesday.

Ice

Ice may form during prolonged periods of frost which occur in the winter in the N parts of the Black Sea and the Sea of Azov. The severity of the winter, and therefore the extent and thickness of the ice cover, varies in different years but even in the most severe winter, only a relatively small part of the entire Black Sea is affected by ice.

Navigation is usually only affected in the NW part of the Black Sea, Kerchenskiy Proliv (Kerch Strait), and the Sea of Azov. February is normally the month of greatest ice cover in these areas.

In average winters, ice is found in a coastal belt and in bays and estuaries from Mys Tarkhankut (45°21'N., 32°30'E.) N across the head of the Black Sea and down its W side to the S of the delta of the Danube River. In extremely severe winters, pack ice may be found in the open sea N of the parallel of Mys Tarkhankut.

The coast from Mys Tarkhankut to Kerchenskiy Proliv (Kerch Strait) is generally free of ice except during very severe winters, when thin coastal ice may be formed.

In the Sea of Azov, between mid-December and late February, navigation is often hindered by ice and in many cases can only be maintained with the help of icebreakers. Navigation is likely to be the most difficult of the N shore, in the entrance to the Gulf of Taganrog, and with prolonged N or NE winds, in the approaches to Kerchenskiy Proliv (Kerch Strait).

Industries

The main industries are agriculture, coal, electric power, ferrous and non-ferrous metals, machinery and transport equipment, chemicals, and food processing (especially sugar).

The main exports are ferrous and non-ferrous metals, fuel and petroleum products, chemicals, machinery and transport equipment, and food products. The main export-trading partners are Russia, Turkey, and Italy.

The main imports are energy, machinery and transport equipment, and chemicals. The main import-trading partners are Russia, Germany, Poland, China, and Turkmenistan.

Languages

Ukrainian is the official language.

Navigational Information

Enroute Volume

BA NP 24, Black Sea and Sea of Azov Pilot (British Admiralty publication)

Maritime Claims

The maritime territorial claims of Ukraine are, as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines. In a joint statement with Russia, declared that the Sea of Azov and Kerchenskiy Proliv (Kerch Strait) are historic internal waters of the two states.

Maritime Boundary Disputes

The maritime boundary with Russia through the Sea of Azov and Kerchenskiy Proliv (Kerch Strait) remains unresolved despite a 2003 framework agreement and ongoing discussions.

Pilotage

Pilotage is compulsory for entry to and departure from all Ukrainian ports, as well as for mooring and casting off, regardless of vessel type or size.

Pilots should be ordered, via the ship's agent, 12 hours in advance and confirmed 4 hours prior to arrival, except as stated otherwise by local port authorities.

Berdyansk (46°45'N., 36°46'E.)

Harbor pilotage is compulsory for all vessels of 500 gross tons except for passenger vessels which regularly use the port. Vessels are also subject to the pilotage regulations for Kerch Strait and the Sea of Azov.

Harbor pilots board, as follows:

1. Vessels with a draft of 6m and over—in the vicinity of Lighted Buoy No. 2.
2. Vessels with a draft of less than 6m—in the vicinity of Lighted Buoy No. 10.

Feodosiya (45°02'N., 35°26'E.)

Pilotage is compulsory for all vessels of 500 gross tons and over and is available 24 hours. Vessels should request pilotage, via their agent, 24 hours and 4 hours prior to arrival at the pilot boarding position.

The pilot boards in the vicinity of Fairway Lighted Buoy. In bad weather, the pilot boarding position will be agreed with the pilot.

Illichivsk (46°19'N., 30°41'E.)

Pilotage is compulsory for all vessels of 500 gross tons and over and is available 24 hours. Vessels should request pilotage, via their agent, 24 hours and 4 hours prior to arrival at Fairway Lighted Buoy.

The pilot boards in the vicinity of Fairway Lighted Buoy. In bad weather, the pilot boarding position will be agreed with the pilot.

Kerch Strait and Sea of Azov (45°56'N., 36°44'E.)

Pilotage, which is available 24 hours, is compulsory, as follows:

1. All foreign vessels.
2. All vessels in an emergency condition.
3. Oil tankers and vessels carrying dangerous cargo.
4. Nuclear-powered vessels.

Pilotage is Kerch Strait is also compulsory for LPG vessels with a draft of over 4.5m or a length of 120m and over.

Pilotage in the Sea of Azov is also compulsory for all vessels during the ice navigation season.

Vessels bound for Mariupol or Berdyansk should request pilotage from Kerch Strait VTS when submitting their initial report (see Appendix VI).

Pilots board, as follows:

1. Northbound vessels—near Lighted Buoy No. 1/Lighted Buoy No. 2.
2. Southbound vessels—near Varzovskiy Lighted Buoy.

The pilot can be contacted (call sign: Kerch Pilot Station) on VHF channels 16 and 65.

Mariupol (47°03'N., 37°30'E.)

Pilotage is compulsory for all foreign vessels and is available 24 hours. Vessels should request pilotage, via their agent, 24 hours in advance, with confirmations sent 24 hours and 6 hours prior to arrival at the pilot boarding position. Departing vessels should request pilotage 8 hours prior to departure, with a confirmation sent 2 hours in advance.

The pilot boards in the vicinity of Lighted Buoy No. 1/Lighted Buoy No. 2. In bad weather, the pilot boarding position will be agreed with the pilot.

Kherson (46°37'N., 32°36'E.)

Pilotage is compulsory for all vessels and is available 24 hours. Vessels should request pilotage, via their agent, 24 hours in advance, and confirming 8 hours and 2 hours prior to arrival at the pilot boarding position.

The pilot boards, as follows:

1. Position 46°33.5'N., 31°01.0'E. (sea pilots)
2. Position 46°35.0'N., 31°20.0'E. (off Mys Adzhyyask)

Mykolayiv (46°56'N., 31°59'E.)

Pilotage is compulsory and is available 24 hours. Vessels should request pilotage not later than 2 hours prior to arrival at the pilot boarding position.

The pilot boards, as follows.

1. Sea pilots—In the roadstead of Port Yuzhny.
2. Harbor pilots—Near Lighted Buoy No. 128.

Ochakiv (46°36'N., 31°33'E.)

Pilotage is compulsory for all vessels and is available 24 hours. Vessels should request pilotage, via their agent, 24 hours in advance, and confirming 6 hours and 2 hours prior to arrival at the pilot boarding position.

The pilot boards in position 46°33.5'N, 31°01.0'E.

Odesa (46°30'N., 30°45'E.)

For information on sea pilotage, see Illichivsk.

The harbor pilot boards either 2 miles E of Vorontsovskiy Light or in the anchorage.

Port Yuzhne (Yuzhnyy) (46°36'N., 31°01'E.)

Pilotage is compulsory for all vessels of 500 gross tons and over and is available 24 hours. Vessels should request pilotage, via their agent, 24 hours and 12 hours prior to arrival at the pilot boarding position.

The pilot boards, as follows:

1. Harbor pilot—in position 46°31.0'N, 30°57.2'E.
2. Delta pilot (for vessels bound for Ochakiv, Mykolayiv, Oktyabrsk, Dnipro-Buzkyy, and Kherson)—in position 46°33.5'N, 31°01.0'E.
3. Off Mys Adzhyyask in position 46°35.0'N, 31°20.0'E.
4. In bad weather—by agreement with the pilot.

Sevastopol (45°02'N., 35°26'E.)

Pilotage is compulsory for all vessels of 500 gross tons and over and is available 24 hours. Vessels should request pilotage, via their agent, 24 hours and 4 hours prior to arrival at the pilot boarding position.

The pilot boards, as follows:

1. Position 44°37'07.8"N, 33°24'04.8"E.
2. Position 44°37'30.6"N, 33°27'43.8"E.

Ust-Dunaysk (45°28'N., 29°42'E.)

Pilotage is compulsory for all vessels of 500 gross tons and over and is available 24 hours. Vessel should request inbound pilotage 24 hours in advance, with a confirmation sent 6 hours prior to arrival. Vessels should request outbound pilotage 8 hours in advance, with a confirmation sent 2 hours prior to departure.

Pilotage requests should contain the following information:

1. Length overall.
2. Beam.
3. Moulded depth.
4. Full maneuvering speed.
5. Present maximum draft fore and aft.

The pilot boards, as follows:

1. Ust-Dunaysk—1.4 miles ENE of Ust-Dunaysk Lighted Buoy.
2. Danube ports (south approach)—in position 45°18'39.0"N, 29°49'17.4"E (Bystoye Channel).
3. Izmayil, Reni, Kiliya, and Vylkove—in their respective roadsteads.
4. Izmayil Catal—116 km point.
5. Izmayil port area—96 km point or 87 km point, depending on the direction of navigation.

Yalta (44°29'N., 34°10'E.)

Pilotage is compulsory for all vessels and is available 24 hours. The pilot boards 2 miles SE of Yalta Light.

The vessel's ETA at the pilot boarding position should be confirmed when crossing the parallel of Mys Aytodor or the meridian of Mys Nykitin, stating the following information:

1. Vessel name, flag, and call sign.
2. Length overall, maximum width, and draft fore and aft.
3. Number of passengers.
4. Last port and destination port
5. Type of cargo and nature of consignees.
6. Tug, fresh water, and provisioning requirements.

Pollution

The Black Sea and the Sea of Azov are Special Areas under the terms of *The International Convention for the Prevention of pollution from Ships 1973*, as modified by the Protocol of 1978 (MARPOL 73/78). All discharge of oil at sea is prohibited and special regulation apply to the discharge of garbage.

MARPOL Special Area

The Black Sea has been designated as a MARPOL Special Area. MARPOL Special Areas are sea areas where special mandatory methods for the prevention of oil pollution in the sea have been adopted.

Further information can be found in **North Atlantic Ocean—Pollution—MARPOL Special Areas**.

Regulations

Vessels should send their ETA via their agent 12 days, 96 hours, and 12 hours in advance. Oil, gas, and chemical tankers should however, confirm their ETA 14 days, 72 hours, and 12 hours before arrival.

The following Ukrainian ports are open to international trade:

1. Berdyans'k (46°45'N., 36°46'E.).
2. Bilhorod-Dnistrovs'kyy (46°11'N., 30°22'E.).
3. Chernomorsk (45°33'N., 32°49'E.).
4. Feodosiya (44°02'N., 35°23'E.).
5. Illichivs'k (46°19'N., 30°40'E.).
6. Kerch (45°22'N., 36°29'E.).
7. Kherson (46°38'N., 32°37'E.).
8. Mykolayiv (46°57'N., 31°58'E.).
9. Odesa (46°30'N., 30°45'E.).
10. Port Dnipro-Bux'kyy (46°46'N., 31°57'E.).
11. Port Mriupol (47°03'N., 37°30'E.).
12. Port Yuzhnyy (46°36'N., 31°01'E.).
13. Sevastopol (44°36'N., 33°32'E.).
14. Skadovsk (46°07'N., 32°55'E.).
15. Yalta (44°30'N., 34°10'E.).

Restricted Areas

Regulated Areas include all areas where navigation, fishing, or anchoring is prohibited or restricted. Regulated Areas also include areas designated as temporarily dangerous for navigation; as these prohibitions are for an indefinite period they are described below as prohibited areas.

Areas periodically declared dangerous for navigation which may also include various firing danger and exercise areas, lie partly or wholly outside Russian territorial waters. The times which these areas are dangerous to navigation are broadcast as PRIPS and NAVIPS. The warnings are broadcast 3 to 5 days prior to the start of the dangerous operations and repeated each day until their completion.

Caution.—Many Regulated Navigation Areas are not charted. Information on those areas described as having unknown boundaries should be obtained from local authorities.

Areas Prohibited for Navigation

East of Mys Fiolent

Area 104—Area bounded by the shoreline and lines joining the following positions:

a. 44°30.0'N, 33°31.0'E. (shore)
b. 44°29.4'N, 33°31.0'E.
c. 44°29.4'N, 33°31.9'E.
d. 44°29.8'N, 33°31.9'E. (shore)

Sevastopol Outer Roadstead

Area 108—Area bounded by lines joining the following positions:

a. 44°40'51"N, 33°32'02"E.
b. 44°41'00"N, 33°32'02"E.
c. 44°41'00"N, 33°32'28"E.
d. 44°40'51"N, 33°32'28"E.

Feodosiyska Zatoka

Area No. 114—Area bounded by the shoreline and lines joining the following positions:

a. 45°02.5'N, 35°48.6'E. (shore)
b. 45°01.0'N, 35°47.0'E.
c. 45°04.6'N, 35°34.0'E.
d. 45°04.4'N, 35°26.0'E.
e. 45°06.3'N, 35°27.9'E. (shore)

Mys Chauda to Mys Kyz-Aul

Area No. 115—Area bounded by the shoreline and lines joining the following positions:

a. 45°03.5'N, 36°22.5'E. (shore)
b. 44°52.1'N, 36°22.5'E.
c. 44°49.6'N, 35°50.5'E.
d. 44°57.5'N, 35°33.5'E.
e. 45°04.5'N, 35°33.5'E.
f. 45°00.0'N, 35°50.5'E. (shore)

Osero Sans'ke to Mys Kostyantynivs'kyy

Area No. 123—Area bounded by the shoreline and lines joining the following positions:

a. 45°06.3'N, 33°32.7'E. (shore)
b. 45°06.3'N, 33°24.0'E.
c. 45°03.3'N, 33°17.5'E.
d. 44°40.8'N, 33°17.5'E.
e. 44°40.0'N, 33°19.8'E.
f. 44°38.6'N, 33°27.8'E.
g. 44°37.9'N, 33°30.8'E. (shore)

South of Bukhta Gollandiya

Area No. 124—Area bounded by lines joining the following positions:

a. 44°37'03"N, 33°33'33"E.
b. 44°37'10"N, 33°33'31"E.
c. 44°37'05"N, 33°34'00"E.
d. 44°37'03"N, 33°34'00"E.

East of the Entrance to Kilen Bukkhta

Area No. 125—Area of unknown boundaries in the vicinity of position 44°37'N, 33°34'E.

Note.—This area is located close S of Area No. 124.

Bukhta Matushenko/Kostyantynivs'ka Bukhta and Approaches

Area No. 129—Area bounded by the shoreline and lines joining the following approximate positions:

a. 44°37'40"N, 33°31'33"E. (shore)
b. 44°37'38"N, 33°31'27"E.
c. 44°37'37"N, 33°31'12"E.
d. 44°37'33"N, 33°31'06"E.
e. 44°37'25"N, 33°30'37"E.
f. 44°37'28"N, 33°34'44"E. (shore)

Mys Nikita

Area No. 132—Area bounded by the shoreline and lines joining the following approximate positions:

a. 44°30.5'N, 34°15.1'E. (shore)
b. 44°30.4'N, 34°15.4'E.
c. 44°30.2'N, 34°15.1'E.
d. 44°30.1'N, 34°14.7'E.
e. 44°30.3'N, 34°14.7'E. (shore)

East of Mys Sarych

Area No. 135—Area bounded by the shoreline and lines joining the following approximate positions:

a. 44°23.3'N, 33°44.5'E. (shore)
b. 44°22.6'N, 33°44.5'E.
c. 44°22.6'N, 33°46.5'E.
d. 44°23.2'N, 33°46.5'E. (shore)

West of Mys Troitsky

Area No. 136—Area bounded by the shoreline and lines joining the following positions:

a. 44°24'17"N, 33°50'24"E. (shore)
b. 44°22'35"N, 33°50'24"E.
c. 44°22'35"N, 33°53'18"E.
d. 44°24'11"N, 33°53'18"E. (shore)

West of Mys Ay-Todor

Area No. 137—Area of unknown boundaries in the vicinity of position 44°25'N, 34°06'E.

Odesa

Area No. 184—Area bounded by the Old Sea Wall and lines joining the following positions:

a. 46°29'52.5"N, 30°44'41.0"E. (Old Sea Wall)
b. 46°29'55.0"N, 30°45'06.0"E.
c. 46°29'53.5"N, 30°45'21.0"E.
d. 46°29'39.5"N, 30°45'26.0"E. (Old Sea Wall)

Mys Kikineyz

Area No. 197—Area bounded by the shoreline and lines joining the following approximate positions:

a. 44°23.5'N, 33°58.1'E. (shore)
b. 44°23.1'N, 33°58.3'E.
c. 44°23.3'N, 33°59.4'E.
d. 44°24.0'N, 33°59.1'E. (shore)

Areas Prohibited for Stopping, Anchoring, Fishing, Underwater and Dredging Operations, Navigating with a Trailing Anchor, and Underwater Explosions

Dnestrovsko-Tsaregradskoye Girlo

Area No. 602—Area of unknown boundaries in the SE entrance to in the vicinity of position 46°05'N, 30°28'E.

Dnistrovskyy Lyman

Area No. 603—Area of unknown boundaries in the vicinity of position 46°12'N, 30°23'E.

Odesa

Area No. 605—Area of unknown boundaries in the vicinity of position 46°29.6'N, 30°45.6'E.

Mykolayiv

Area No. 609—Area bounded, as follows:

1. Southwest boundary—A line joining the shoreline in position 46°58'36"N, 31°56'06"E and the shoreline in position 46°57'55"N, 31°56'48"E.
2. Northeast boundary—A line joining the shoreline in position 46°58'51"N, 31°56'20"E and the shoreline in position 46°58'07"N, 31°57'06"E.

Area No. 610—Area bounded, as follows:

1. Southwest boundary—A line joining the shoreline in position 46°59'12"N, 31°57'48"E and the shoreline in position 46°59'02"N, 31°58'18"E.
2. Northeast boundary—A line joining the shoreline and the following positions:
   a. 46°59'57"N, 31°57'26"E. (shore)
   b. 46°59'20"N, 31°58'49"E.
   c. 46°59'11"N, 31°58'48"E. (shore)

Area No. 611—Area bounded, as follows:

a. West boundary—A line joining the shoreline in position 46°58.81'N, 31°59.73"E and the shoreline in position 46°58.70"N, 31°59.68'E.

b. East boundary—A line joining the shoreline in position 46°58.78'N, 31°59.84'E and the shoreline in position 46°59.68'N, 31°59.78'E.

Ruskaya Kosa

Area No. 612—Area bounded by the shoreline and lines joining the following positions:

a. 46°44'52"N, 31°56'06"E. (shore)
b. 46°44'47"N, 31°55'57"E.
c. 46°44'00"N, 31°55'57'E.
d. 46°44'00"N, 31°56'36"E.
e. 46°44'44"N, 31°56'36"E. (shore)

West of Mys Khersoneskyi

Area No. 613—Area bounded by the shore and lines joining the following aaproximate positions:

a. 44°35.0'N, 33°13.0'E. (shore)
b. 44°39.5'N, 33°13.0'E.
c. 44°58.0'N, 32°44.0'E.
d. 44°52.5'N, 32°30.0'E.
e. 44°44.0'N, 32°30.0'E.
f. 44°19.0'N, 33°15.0'E.
g. 44°19.0'N, 33°27.0'E.
h. 44°16.5'N, 33°47.0'E.
i. 44°17.0'N, 33°51.0'E.
j. 44°20.0'N, 33°51.5'E.
k. 44°23.6'N, 33°46.0'E. (shore)

Kherson

Area No. 614—Area bounded, as follows

a. 46°37.17'N, 32°36.63'E. (shore)

b. 46°36.89'N, 32°36.92'E. (shore) and continuing NE along the shoreline to

c. 46°36.98'N, 32°37.05'E. (shore)
d. 46°37.07'N, 32°37.16'E.

e. 46°37.42'N, 32°36.99'E. (shore) and continuing WSW along the shoreline to

f. 46°37.42'N, 32°36.88'E. (shore)

g. 46°37.32'N, 32°36.74'E. (shore) and continuing SW along the shoreline to position a above

Area No. 615—Area bounded, as follows:

a. 46°37.67'N, 32°37.43'E. (shore)

b. 46°37.51'N, 32°37.70'E. (shore) and continuing NE along the shoreline to

c. 46°37.54'N, 32°37.73'E. (shore)

d. 46°37.56'N, 32°37.79'E. (shore) and continuing NE along the shoreline to

e. 46°37.65'N, 32°37.92'E. (shore)

f. 46°37.80'N, 32°37.67'E. (shore) and continuing SW along the shoreline to position a above

Area No. 616—Area bounded, as follows:

1. Southwest boundary—A line joining the shoreline in position 46°38.05'N, 32°38.03'E and the shoreline in position 46°37.90'N, 32°38.23'E.

2. Northeast boundary—A line joining the shoreline in position 46°38.14'N, 32°38.16E and the shoreline in position 46°38.02'N, 32°38.40'E.

Tendrivska Kosa

Area No. 617—Area of unknown boundaries in the vicinity of position 46°22'N, 31°32'E.

Kozacha Bukhta

Area No. 623—Area bounded by lines joining the following approximate positions:

a. 44°35'00"N, 34°24'14"E.
b. 44°35'03"N, 34°24'14"E.
c. 44°35'03"N, 34°24'20"E.
d. 44°35'00"N, 34°24'20"E.

Sevastopolskaya Bukhta

Area No. 625—Area bounded by lines joining the following positions:

a. 44°37'36.8"N, 33°31'42.4"E.
b. 44°37'32.3"N, 33°31'57.6"E.
c. 44°37'26.3"N, 33°32'06.6"E.
d. 44°37'09.0"N, 33°31'47.0"E.
e. 44°37'05.3"N, 33°31'54.6"E.
f. 44°27'04.7"N, 33°32'09.6"E.
g. 44°37'03.6"N, 33°32'12.8"E.
h. 44°37'10.2"N, 33°32'18.6"E.
i. 45°37'15.0"N, 33°32'16.4"E.
j. 45°37'24.7"N, 33°32'27.3"E.
k. 45°37'24.1"N, 33°32'46.6"E.
l. 45°37'16.1"N, 33°32'30.6"E.
m. 45°37'12.5"N, 33°32'21.6"E.
n. 45°37'08.3"N, 33°32'21.9"E.
o. 45°37'08.3"N, 33°32'33.6"E.
p. 45°37'05.8"N, 33°32'42.6"E.
q. 45°36'58.3"N, 33°32'36.6"E.
r. 45°36'58.1"N, 33°31'57.3"E.
s. 45°37'00.5"N, 33°31'36.8"E.
t. 45°37'06.9"N, 33°31'33.6"E.
u. 45°37'10.8"N, 33°31'30.1"E.
v. 45°37'26.3"N, 33°31'49.6"E.
w. 45°37'27.3"N, 33°31'39.6"E.
x. 45°37'37.7"N, 33°31'34.2"E.

Area No. 627—Area bounded by lines joining the following approximate positions:

1. West boundary—A line joining the shoreline in position 44°37'18"N, 33°33'57"E.; position 44°37'15"N, 33°33'39"E.; and the shoreline in position 44°36'56"N, 33°33'24"E.

2. East boundary—A line joining the shoreline in position 44°36'57"N, 33°34'07"E and the shoreline in position 44°37'14"N, 33°34'12"E.

Feodosiyska Zakota

Area No. 630—Area bounded by lines joining the following positions:

a. 45°02.0'N, 35°29.6'E.
b. 45°03.1'N, 35°27.4'E.
c. 45°03.7'N, 35°28.7'E.

Area No. 635—Area bounded by lines joining the following positions:

a. 45°01.0'N, 35°32.9'E.
b. 45°03.8'N, 35°31.7'E.
c. 45°03.8'N, 35°32.9'E.

Mys Khersoneskyy to Mys Fiolent

Area No. 632—Area bounded by lines joining the following approximate positions:

a. 44°29.0'N, 33°29.8'E.
b. 44°27.6'N, 33°27.4'E.
c. 44°33,8'N, 33°19.8'E.
d. 44°35.4'N, 33°22.0'E.

Mys Khersoneskyy to Mys Sarych

Area No. 634—Area bounded by the shoreline and lines joining the following positions:

a. 44°35.6'N, 33°23.7'E. (shore)
b. 44°39.7'N, 33°23.7'E.
c. 44°42.2'N, 33°18.9'E.
d. 44°40.6'N, 33°08.1'E.
e. 44°34.7'N, 33°06.3'E.
f. 44°27.2'N, 33°10.0'E.
g. 44°18.0'N, 33°27.2'E.
h. 44°16.6'N, 33°47.5'E.
i. 44°16.5'N, 33°50.8'E.
j. 44°19.5'N, 33°51.2'E.
k. 44°26.3'N, 33°46.5'E. (shore)

Mys Bashennyy to Mys Peshchernyy

Area No. 636—Area bounded by the shoreline and lines joining the following positions:

a. 44°47.8'N, 34°41.8'E. (shore)
b. 44°37.5'N, 34°48.2'E.
c. 44°37.3'N, 34°56.8'E.
d. 44°49.0'N, 34°54.8'E. (shore)

Area No. 640—Area bounded by the shoreline and lines joining the following positions:

a. 44°49.3'N, 35°07.7'E. (shore)
b. 44°41.0'N, 35°09.8'E.
c. 44°41.0'N, 35°20.4'E.
d. 44°43.2'N, 35°25.0'E.
e. 44°48.9'N, 35°21.3'E.
f. 44°48.9'N, 35°46.8'E.
g. 44°49.9'N, 35°46.8'E.
h. 44°59.9'N, 35°27.0'E.
i. 45°01.5'N, 35°29.0'E.
j. 45°02.0'N, 35°27.8'E.
k. 45°00.8'N, 35°25.3'E. (shore)

Sudakskaya Bukhta

Area No. 637—Area of unknown boundaries in the vicinity of position 44°50'N, 34°58'E.

East of Mys Chauda

Area No. 644—Area bounded by the shoreline and lines joining the following positions:

a. 45°00.6'N, 35°52.6'E. (shore)
b. 44°57.5'N, 35°52.6'E.
c. 44°57.5'N, 35°55.6'E.
d. 45°01.3'N, 35°55.6'E. (shore)

Skaly Korabl Kamen

Area No. 645—Area bounded by the shoreline and lines joining the following positions:

a. 45°00.7'N, 36°07.6'E.
b. 44°58.2'N, 36°07.6'E.
c. 44°58.2'N, 36°11.2'E.
d. 45°00.7'N, 36°11.2'E.

Tendrivska Kosa

Area No. 660—Area of unknown boundaries in the vicinity of position 46°20'N, 31°33'E.

Northwest of Tarkhankutskyy Pivostriv

Area No. 663—Area bounded by the shoreline and lines joining the following positions:

a. 45°25.3'N, 32°00.0'E. (shore)
b. 45°33.5'N, 32°17.9'E.
c. 45°30.3'N, 32°14.7'E.
d. 45°23.7'N, 32°29.2'E. (shore)

Southwest of Mys Velkyy Fontan

Area No. 665—A circular area with a radius of 0.25 mile and centered on position 46°21'02"N, 30°42'44"E.

Feodosiyska Zakota

Area No. 667—Area of unknown boundaries in the vicinity of position 45°04'N, 35°24'E.

North and Northwest of Mys Tarkhankut

Area No. 668—Area bounded by the shoreline and lines joining the following positions:

a. 45°25.9'N, 32°31.7'E. (shore)
b. 45°23.6'N, 32°12.0'E.
c. 45°22.0'N, 32°12.2'E.
d. 45°23.3'N, 32°28.9'E. (shore)

Kosa Arabatska Strilka

Area No. 693—Area bounded by the shoreline and lines joining the following positions:

a. 45°50.3'N, 34°55.7'E. (shore)
b. 45°50.5'N, 34°56.7'E.
c. 45°49.6'N, 34°57.7'E.
d. 45°49.2'N, 34°56.5'E. (shore)

Kosa Biryuchyy Ostriv

Area No. 694—Area bounded by the shoreline and lines joining the following positions:

a. 46°08.0'N, 35°01.0'E. (shore)
b. 46°08.0'N, 35°00.0'E.
c. 46°04.8'N, 34°58.0'E.
d. 46°03.0'N, 35°00.0'E.
e. 46°03.0'N, 35°05.5'E.
f. 46°10.0'N, 35°15.0'E.
g. 46°13.8'N, 35°15.0'E. (shore)

Obytichna Kosa

Area No. 695—Area bounded by the shoreline and lines joining the following positions:

a. 46°32.6'N, 36°09.0'E. (shore)
b. 46°32.8'N, 36°08.0'E.
c. 46°29.8'N, 36°08.0'E. (shore)

Areas Prohibited for Anchoring and Fishing

Balaklavaskaya Bukhta

Area No. 633—Area bounded by lines joining the following

positions:
a. 44°27.7'N, 33°34.5'E.
b. 44°27.7'N, 33°35.8'E.
c. 44°26.7'N, 33°35.8'E.
d. 44°26.7'N, 33°34.5'E.

North of Sevastopol
Area No. 672—Area bounded by lines joining the following positions:
a. 44°39'29"N, 33°25'19"E.
b. 44°38'47"N, 33°25'19"E.
c. 44°38'11"N, 33°29'19"E.
d. 44°39'29"N, 33°29'19"E.

Areas Temporarily Dangerous to Navigation

East of Tendrivskyy Severnyy
Area No. 705—Area bounded by the shoreline and lines joining the following positions:
a. 46°22.1'N, 31°31.0'E. (shore)
b. 46°25.0'N, 31°31.9'E.
c. 46°25.0'N, 31°35.9'E.
d. 46°19.0'N, 31°35.9'E.
e. 46°19.0'N, 31°32.0'E. (shore)

West of Tendrivskyy Severnyy
Area No. 706—Area bounded by lines joining the following approximate positions:
a. 46°09.5'N, 31°15.0'E.
b. 46°14.5'N, 31°07.0'E.
c. 46°18.9'N, 31°13.5'E.
d. 46°12.5'N, 31°20.0'E.

Northwest of Tarkhankutskyy Pivostriv
Area No. 707—Area bounded by lines joining the following positions:
a. 45°33.5'N, 32°17.9'E.
b. 45°40.3'N, 32°08.1'E.
c. 45°43.7'N, 31°51.6'E.
d. 45°41.9'N, 31°39.0'E.
e. 45°40.2'N, 31°39.0'E.
f. 45°41.8'N, 32°51.3'E.
g. 45°30.3'N, 32°14.7'E.

West of Mys Khersoneskyy
Area No. 710—Area bounded by lines joining the following positions:
a. 44°42.2'N, 33°19.0'E.
b. 44°58.0'N, 32°44.7'E.
c. 45°07.5'N, 32°42.0'E.
d. 45°08.8'N, 32°30.0'E.
e. 44°44.2'N, 32°30.0'E.
f. 44°18.0'N, 33°15.0'E.
g. 44°18.0'N, 33°27.2'E.
h. 44°27.2'N, 33°10.8'E.
i. 44°34.5'N, 33°06.5'E.
j. 44°40.5'N, 33°08.0'E.

West of Mys Lukull
Area No. 711—Area bounded by lines joining the following approximate positions:
a. 44°44.5'N, 33°06.0'E.
b. 44°53.0'N, 32°55.0'E.
c. 44°51.5'N, 33°11.0'E.
d. 44°45.0'N, 33°11.0'E.

West of Tarkhankutskyy Pivostriv
Area No. 723—Area bounded by lines joining the following positions:
a. 45°23.6'N, 32°12.0'E.
b. 45°21.3'N, 31°51.7'E.
c. 45°15.7'N, 31°39.3'E.
d. 45°14.5'N, 31°40.3'E.
e. 45°19.7'N, 31°51.8'E.
f. 45°22.0'N, 32°12.2'E.

Southwest of Sevastopol
Area No. 724—Area bounded by lines joining the following approximate positions:
a. 44°02.0'N, 32°49.0'E.
b. 44°14.5'N, 32°09.0'E.
c. 44°39.5'N, 32°52.0'E.
d. 44°27.5'N, 33°08.0'E.
Area No. 725—Area bounded by lines joining the following positions:
a. 44°33.0'N, 32°24.9'E.
b. 44°29.9'N, 33°15.9'E.
c. 44°28.3'N, 33°17.9'E.
d. 44°33.5'N, 33°24.2'E.

South and SW of Sevastopol
Area No. 727—Area bounded by lines joining the following approximate positions:
a. 44°04.5'N, 33°09.0'E.
b. 44°13.5'N, 33°09.0'E.
c. 44°13.5'N, 33°25.0'E.
d. 44°09.5'N, 33°30.0'E.
e. 44°04.5'N, 33°30.0'E.
Area No. 729—Area bounded by lines joining the following approximate positions:
a. 44°00.5'N, 33°30.0'E.
b. 44°00.5'N, 34°00.0'E.
c. 43°40.0'N, 34°00.0'E.
d. 43°40.0'N, 33°30.0'E.

South of Mys Mehanom
Area No. 730—Area bounded by lines joining the following approximate positions:
a. 44°23.5'N, 35°01.5'E.
b. 44°25.0'N, 34°46.5'E.
c. 44°33.0'N, 34°42.5'E.
d. 44°40.5'N, 35°09.0'E.
e. 44°30.0'N, 35°06.0'E.

Southeast of Mys Mehanom
Area No. 731—Area bounded by lines joining the following approximate positions:
a. 44°29.5'N, 35°34.5'E.
b. 44°29.5'N, 35°14.0'E.
c. 44°41.5'N, 35°40.5'E.
d. 44°44.0'N, 35°14.5'E.
e. 44°40.0'N, 35°44.5'E.

f. 44°32.5'N, 35°44.5'E.

Southwest of Mys Mehanom

Area No. 732—Area bounded by lines joining the following positions:

a. 44°42.0'N, 34°53.4'E.
b. 44°46.3'N, 34°53.5'E.
c. 44°46.8'N, 35°00.4'E.
d. 44°43.0'N, 35°01.9'E.

Areas Used Periodically for Fleet Exercises

South of Mys Uret

Area No. 700—Area bounded by lines joining the following positions:

a. 45°12.5'N, 32°37.8'E.
b. 45°15.0'N, 32°39.4'E.
c. 45°13.2'N, 32°45.7'E.
d. 45°11.6'N, 32°44.9'E.

Northwest of Tarkhankutskyy Pivostriv

Area No. 701—Area bounded by lines joining the following positions:

a. 46°02.0'N, 32°17.9'E.
b. 45°56.0'N, 32°30.9'E.
c. 45°46.0'N, 32°21.9'E.
d. 46°00.0'N, 31°54.9'E.

Kinburnska Kosa

Area No. 704—Area bounded by lines joining the following positions:

a. 46°31.40'N, 31°33.75'E.
b. 46°30.80'N, 31°33.20'E.
c. 46°30.00'N, 31°34.50'E.
d. 46°30.70'N, 31°35.30'E.

Tendrivska Kosa

Area No. 705—Area bounded by the shoreline and lines joining the following positions:

a. 46°22.1'N, 31°32.0'E. (shore)
b. 46°25.0'N, 31°31.9'E.
c. 46°25.0'N, 31°35.9'E.
d. 46°48.0'N, 31°35.9'E.
e. 46°52.5'N, 31°32.0'E. (shore)

Bilosarays'ka Zakota (Sea of Azov)

Area No. 761—Area bounded by the shoreline and lines joining the following positions:

a. 46°49.0'N, 36°55.0'E. (shore)
b. 46°37.0'N, 36°49.7'E.
c. 46°36.5'N, 36°53.5'E.
d. 46°48.0'N, 37°13.3'E.
e. 46°49.8'N, 37°15.0'E.
f. 46°52.5'N, 37°02.8'E. (shore)

Southeast of Mys Khersoneskyy

Area No. 784—Area bounded by lines joining the following positions:

a. 44°33.2'N, 32°24.6'E.
b. 44°32.9'N, 32°24.3'E.
c. 44°32.6'N, 32°25.1'E.
d. 44°32.7'N, 32°25.2'E.

Explosives Dumping Areas

Kazachya Bukhta

Area No. 81—Area bounded by the shoreline and lines joining the following positions:

a. 44°35'25"N, 33°24'10"E. (shore)
b. 44°35'25"N, 33°24'55"E.
c. 44°35'15"N, 33°24'55"E. (shore)

West of Mys Khersoneskyy

Area No. 82—Area bounded by lines joining the following positions:

a. 44°37.2'N, 32°20.0'E.
b. 44°31.1'N, 32°20.0'E.
c. 44°31.1'N, 32°29.0'E.
d. 44°37.2'N, 32°29.0'E.

Southsouthwest of Mys Khersoneskyy

Area No. 83—Area bounded by lines joining the following positions:

a. 44°23.0'N, 33°09.2'E.
b. 44°20.6'N, 33°09.2'E.
c. 44°20.6'N, 33°15.8'E.
d. 44°23.0'N, 33°15.8'E.

South of Mys Chauda

Area No. 84—Area bounded by lines joining the following positions:

a. 45°39.7'N, 35°52.0'E.
b. 45°34.7'N, 35°52.0'E.
c. 45°34.7'N, 36°00.0'E.
d. 45°39.7'N, 36°00.0'E.

Area No. 85—A circular area with a radius of 1 mile and centered on position 44°42.0'N, 35°58.8'E.

South of Mys Opuk

Area No. 86—Area bounded by lines joining the following positions:

a. 45°42.8'N, 36°04.0'E.
b. 45°32.8'N, 36°04.0'E.
c. 45°32.8'N, 36°18.0'E.
d. 45°42.8'N, 36°18.0'E.

Northwest of Ostrov Zmiyinyy

Area No. 95—A circular area with a radius of 4 miles and centered on position 45°20.4'N, 29°59.4'E.

North of Mys Khersoneskyy

Area No. 96—A circular area with a radius of 0.3 mile and centered on position 44°36'41.2"N, 33°22'31.0"E.

Search and Rescue

The State Department of Maritime and Inland Water Transport is responsible for coordinating search and rescue operations.

The Maritime Rescue Coordination Center (MRCC) and the Maritime Rescue Coordination Subcenters (MRSC) can be contacted, as follows:

1. MRCC Odesa
   a. Telephone: 380-48-7776609
   b. Facsimile: 380-48-7776610
   c. E-mail: mrcc@morcom.org.ua
2. MRSC Mariupol
   a. Telephone: 380-629-408680
   b. Facsimile: 380-629-408680
   c. E-mail: mrcc@marport.net
3. MRSC Kerch
   a. Telephone: 380-656-166254
   b. Facsimile: 380-656-166254
   c. E-mail: info@portkerch.com
4. MRSC Sevastopol
   a. Telephone: 380-692-471915
   b. Facsimile: 380-692-471915
   c. E-mail: mrcsc_sev@ifo.com.ua

A network of coast radio stations maintains a continuous listening watch on international distress frequencies for distress traffic.

Signals

The following signals may be made by Ukrainian border patrol vessels to stop merchant vessels in Ukrainian territorial waters, inland waters, or the special economic zone:

1. Daylight:
   a. International Code flag L displayed on the mast or broadcast on an international safety channel.
   b. International Code flags SN displayed on the mast or broadcast on an international safety channel.
2. Night:
   a. Two green lights vertically disposed.
   b. Either International Code flag L or International Code flags SN broadcast on an international safety channel.

Time Zone

The Time Zone description is BRAVO (-2). Daylight Savings Time (CHARLIE (-3)) is observed from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in Ukraine are, as follows:

1. In the Approaches to the Ports of Odessa and Il'ichevsk. (IMO adopted)

Note.—This TSS has been extended by Ukraine to include the approaches to Yuzhnyy, but the extension has not yet been adopted by the IMO.

2. Between the Ports of Odessa and Il'ichevsk. (IMO adopted)
3. Between Sevastopol and Yalta. (Government of Ukraine)
4. Sevastopol Harbor Approach. (IMO adopted)
5. From Cape Khersones to Cape Aitodor. (IMO adopted)
6. In the Southern Approaches to Kerch Strait. (Kercehnskiy Proliv). (IMO adopted)
7. In the Northern Approaches to Kerch Strait. (Kercehnskiy Proliv). (Governments of Ukraine and Russia)
8. Approaches to Bersyans'k and Mariupol'. (Government of Ukraine)

U.S. Embassy

The U.S. Embassy is situated at 10 Yurii Kotsiubynsky Street, Kyiv, 01901.

The mailing addresses are, as follows:

1. Ukraine address—
   10 Yurii Kotsiubynsky Street
   Kyiv 01901
2. U. S. address—
   5850 Kiev Place
   Washington DC (20521-5850)

U. S. Embassy Ukraine Home Page
http://ukraine.usembassy.gov

Vessel Traffic Service

Vessel Traffic Services are in operation, as follows:

1. Illichivsk (46°19'N., 30°41'E.)—Further information can be found in Appendix I.
2. Port Yuzhne (46°36'N., 31°01'E.)—Further information can be found in Appendix II.
3. Ochakiv (46°36'N., 31°33'E.), Russkaya Kosa (46°40'N., 31°55'E.), and Shirokaya Balka (46°35'N., 32°10'E.)—Further information can be found in Appendix III.
4. Sevastopol (44°37'N., 33°32'E.)—Further information can be found in Appendix IV.
5. Feodosiya (45°02'N., 35°26'E.)—Further information can be found in Appendix V.
6. Kerch Strait (45°56'N., 36°44'E.)—Further information can be found in Appendix VI.
7. Mariupol (47°03'N., 37°30'E.)—Further information can be found in Appendix VII.
8. Ukraine-River Danube (Ust-Dunaysk), consisting of Vylkove (45°20'N., 29°50'E.), Izmayil (45°19'N., 28°52'E.), and Reni (45°28'N., 28°16'E.)—Further information can be found in Appendix VIII.

Appendix I—Illichivsk Vessel Traffic Service

The Illichivsk VTS operational area covers the northwestern Black Sea and the approaches to **Illichivsk** (46°19'N., 30°41'E.). The coverage area of Illichivsk Traffic Control extends 14 miles from the port but excludes the areas covered by Illichivsk Port Control, Odesa Traffic Control, and Port Yuzhne Traffic Control.

Participation in the VTS is mandatory for all vessels.

The VTS provides the following services:

1. Automatic surveillance and tracking of vessels arriving and transiting the Illichivsk VTS operational area.
2. Automatic determination of arrival time at the appropriate port.
3. Automatic continuous tracking and monitoring of position, course, and speed for all vessels in the VTS operational area.
4. Instantaneous information and recommendations concerning the safety of navigation.
5. Compilation of a data base for vessel information, navigation rules, traffic flow, and navigation reports.
6. Additional information upon request.

The VTS can be contacted 24 hours, as follows:

1. Call sign: Illichivsk Traffic Control
2. VHF: VHF channels 10, 16, and 67
3. Telephone: 380-8-487-170861
4. E-mail: duty_ilichevsk@delta-pilot.ua

Vessels should send an initial report to the VTS via their agent 24 hours prior to arrival. The following information should be included in the report:

1. Vessel name (including any previous name), flag, port of registry, and ETA.
2. Vessel's dwt, gross tons, nrt, loa, breadth overall, moulded depth, and arrival draft (forward and aft).
3. Type of cargo (including presence of dangerous cargo on board).
4. Any deficiencies or restrictions.

Vessels should establish contact on VHF channel 10 with the VTS 30 minutes prior to entering the VTS operational area. The following information should be given:

1. Vessel name (including any previous name).
2. Type of vessel and condition (loaded or otherwise).
3. Name of agent and owner.
4. IMO number and MMSI.
5. Flag and port of registry.
6. Gross tons, dwt, and nrt.
7. Moulded depth, breadth overall, and loa.
8. Draft (forward and aft).
9. Last port, destination, and ETA at destination.
10. Number of passengers (ferries and passenger vessels).
11. Dangerous cargo on board.
12. State of vessel's radar and any defects affecting the safety of navigation.
13. Other information as requested by the VTS.

Permission to enter the VTS operational area should also be obtained at this time.

Vessels should maintain a continuous listening watch on VHF channels 10 and 16 when within the Illichivsk VTS operational area. Vessels should monitor the VHF broadcasts and follow the instructions, recommendations, and warnings concerning the safety of life, navigation, property, and the environment.

Radar navigation assistance is compulsory, as follows:

1. In all states of visibility for passenger vessels, fuel oil tankers, chemical tankers, and vessels carrying dangerous cargo (including tankers with non-decontaminated tanks).
2. When ordered by the master.

Note.—Information on Port Yuzhne can be found in Appendix II.

The coverage area of Odesa Port Control extends 8 miles from the port. Odesa Port Control (call sign: Odesa Port Control) can be contacted 24 hours on VHF channel 14.

Appendix II—Port Yuzhne Vessel Traffic Service

The Port Yuzhne VTS operational area covers the approaches to **Port Yuzhne** (46°36'N., 31°01'E.) and the pilot boarding positions for Ochakiv, Mykolayiv, Ohtyabrsk, Dnipro-Buzkyy, and Kherson. The VTS sector zone includes the water area of Adzhalykskiy Lyman and the area bounded by the following:

1. The shoreline.
2. Longitude 30°55.0'E.
3. Longitude 31°15.0'E.
4. An arc, with a radius of 12 miles, centered on position 46°36'01.2"N, 31°01'25.2"E.

Participation in the VTS is mandatory for all vessels.

The VTS provides the following services:

1. Automatic surveillance and tracking of vessels arriving and transiting the Port Yuzhne VTS operational area.
2. Automatic determination of arrival time at the appropriate port.
3. Automatic continuous tracking and monitoring of position, course, and speed for all vessels in the VTS operational area.
4. Instantaneous information and recommendations concerning the safety of navigation.
5. Compilation of a data base for vessel information, navigation rules, traffic flow, and navigation reports.
6. Additional information upon request.

The VTS can be contacted 24 hours, as follows:

1. Call sign: Yuzhne Traffic Control
2. VHF: VHF channels 11, 16, and 67
3. Telephone: 380-8-48-7507052
4. E-mail: duty_yuzhny@delta-pilot.ua

Vessels should send an initial report to the VTS via their agent 24 hours prior to arrival. The following information should be included in the report:

1. Vessel name, call sign, flag, and IMO number.
2. Vessel type, dwt, gross tons, loa, breadth overall, and moulded depth.
3. Draft (forward and aft)
4. Vessel owner and agent.
5. Last port of call and destination.
6. Maneuverability restrictions and any defects precluding safe navigation.

Vessels should establish contact on VHF channel 11 with Yuzhne Port Control 30 minutes prior to entering the VTS sector zone. The following information should be given:

1. Vessel name (including any previous name).
2. Type of vessel and condition (loaded or otherwise).
3. Name of agent and owner.
4. IMO number and MMSI.
5. Flag and port of registry.
6. Gross tons, dwt, and nrt.
7. Moulded depth, breadth overall, and loa.
8. Draft (forward and aft).
9. Last port, destination, and ETA at destination.
10. Number of passengers (ferries and passenger vessels).
11. Dangerous cargo on board.
12. State of vessel's radar and any defects affecting the safety of navigation.
13. Other information as requested by the VTS.

Permission to enter the VTS operational area should also be obtained at this time.

Vessels should maintain a continuous listening watch on VHF channels 11 and 16 when within the Illichivsk VTS operational area. Vessels should monitor the VHF broadcasts and follow the instructions, recommendations, and warnings concerning the safety of life, navigation, property, and the environment.

Radar navigation assistance is compulsory, as follows:

1. In all states of visibility for passenger vessels, fuel oil tankers, chemical tankers, and vessels carrying dangerous cargo (including tankers with non-decontaminated tanks).
2. When visibility is less than 2 miles.
3. When ordered by the master.

Appendix III—Ochakiv Vessel Traffic Service, Russkaya Kosa Vessel Traffic Service, and Shirokaya Balka Vessel Traffic Service

The VTS operational area covers the Bugsko-Dneprovskp-Limanskiy Kanal and the Khersonskiy Morskoy Kanal. The operational area is divided into three VTS zones, as follows:

1. Ochakiv Vessel Traffic Service—
   a. West boundary—Longitude 31°15'00"E.
   b. South boundary—Latitude 46°30'00"N.
   c. East boundary—Longitude of Buoy No. 37 (46°35'31.2"N., 31°41'00.0"E.).
2. Russkaya Kosa Vessel Traffic Service—
   a. West boundary—Longitude of Buoy No. 37 (46°35'31.2"N., 31°41'00.0"E.).
   b. North boundary—Port of Mykolayiv.
   c. East boundary—Shoreline at longitude 31°51'00"E; then N to Lighted Buoy No. 9/Lighted Buoy No. 10 (46°34.9”N., 31°51.5'E.); then E to approximate position 46°34.9'N, 32'01.0””E; then N to the shoreline.
3. Shirokaya Balka Vessel Traffic Service—
   a. West boundary—Shoreline at longitude 31°51'00"E; then N to Lighted Buoy No. 9/Lighted Buoy No. 10 (46°34.9”N., 31°51.5'E.); then E to approximate position 46°34.9'N, 32'01.0””E; then N to the shoreline.
   b. East boundary—Port of Kherson at Lighted Buoy No. 119/Lighted Buoy No. 120 (46°35'58.2"N., 32°35'38.4"E.).

Participation in the VTS is mandatory for all vessels.

The VTS provides the following services:

1. Automatic surveillance and tracking of vessels arriving and transiting the VTS operational area.
2. Automatic determination of arrival time at the appropriate port.
3. Automatic continuous tracking and monitoring of position, course, and speed for all vessels in the VTS operational area.
4. Instantaneous information and recommendations concerning the safety of navigation.
5. Compilation of a data base for vessel information, navigation rules, traffic flow, and navigation reports.
6. Additional information upon request.

The VTS centers can be contacted 24 hours. The contact information is listed in the table titled **VTS Centers—Contact Information**.

Vessels should establish contact on VHF channel 73 with Ochakiv VTS 30 minutes prior to entering the VTS operational area. The following information should be given:

1. Vessel name (including any previous name).
2. Type of vessel and condition (loaded or otherwise).
3. Name of agent and owner.
4. IMO number and MMSI.
5. Flag and port of registry.
6. Gross tons, dwt, and nrt.
7. Moulded depth, breadth overall, and loa.
8. Draft (forward and aft).
9. Last port, destination, and ETA at destination.
10. Number of passengers (ferries and passenger vessels).
11. Dangerous cargo on board.
12. State of vessel’s radar and any defects affecting the safety of navigation.
13. Other information as requested by the VTS.

Permission to enter the VTS operational area should also be obtained at this time.

Vessels should maintain a continuous listening watch on the appropriate VHF channels when within the VTS operational area. Vessels should monitor the VHF broadcasts and follow the instructions, recommendations, and warnings concerning the safety of life, navigation, property, and the environment.

VTS Centers—Contact Information

	Ochakiv VTS	Russkaya Kosa VTS	Shirokaya Balka VTS
Call sign	Ochakiv Traffic Control	Russkaya Kosa Traffic Control	Shirokaya Balka Traffic Control
VHF channels	16, 67, and 73	16, 69, and 74	11, 16, and 71
Telephone	380-8-515-430205	380-8-512-501142 380-8-512-501143	380-8-554-722230

Appendix IV—Sevastopol Vessel Traffic Service

The Sevastopol VTS operational area covers the inner waters and sea area bounded by the following:

1. North boundary—Latitude 44°50.4'N.
2. West and S boundary—Limits of Ukrainian territorial waters.
3. E boundary—Longitude 33°44.4'E.

The area also includes the approaches to the port of Sevastopol, as well as the sea routes, Traffic Separation Scheme No. 9, recommended routes, and anchorages.

Participation in the VTS is mandatory for all vessels of 30m loa and greater.

The VTS provides the following services:

1. Automatic surveillance and tracking of vessels arriving and transiting the Sevastopol VTS operational area.
2. Automatic determination of arrival time at the appropriate port.
3. Automatic continuous tracking and monitoring of position, course, and speed for all vessels in the VTS operational area.
4. Instantaneous information and recommendations concerning the safety of navigation.
5. Compilation of a data base for vessel information, navigation rules, traffic flow, and navigation reports.
6. Additional information upon request.

The VTS can be contacted 24 hours, as follows:

1. Call sign: Sevastopol Traffic Control
2. VHF: VHF channels 12, 14, 16, and 74
3. Telephone: 380-8-692-537119
4. Facsimile: 380-8-692-537119
5. E-mail: srvts-info@ukr.net

Vessels should send an initial report to the VTS via their agent 24 hours prior to arrival.

Vessels should establish contact on VHF channel 14 with the VTS 30 minutes prior to entering the VTS operational area. The following information should be given:

1. Vessel name (including any previous name).
2. Type of vessel and condition (loaded or otherwise).
3. Name of agent and owner.
4. IMO number and MMSI.
5. Flag and port of registry.
6. Gross tons, dwt, and nrt.
7. Moulded depth, breadth overall, and loa.
8. Draft (forward and aft).
9. Last port, destination, and ETA at destination.
10. Number of passengers (ferries and passenger vessels).
11. Dangerous cargo on board.
12. State of vessel's radar and any defects affecting the safety of navigation.
13. Other information as requested by the VTS.

Permission to enter the VTS operational area should also be obtained at this time.

Vessels should maintain a continuous listening watch on VHF channels 14 and 16 when within the VTS operational area. Vessels should monitor the VHF broadcasts and follow the instructions, recommendations, and warnings concerning the safety of life, navigation, property, and the environment.

Appendix V—Feodosiya Vessel Traffic Service

The Feodosiya VTS operational area covers the northeastern Black Sea approaches to **Feodosiya** (45°02'N., 35°26'E.).

Participation in the VTS is mandatory for all vessels.

The VTS provides the following services:

1. Automatic surveillance and tracking of vessels arriving and transiting the Illichivsk VTS operational area.
2. Automatic determination of arrival time at the appropriate port.
3. Automatic continuous tracking and monitoring of position, course, and speed for all vessels in the VTS operational area.
4. Instantaneous information and recommendations concerning the safety of navigation.
5. Compilation of a data base for vessel information, navigation rules, traffic flow, and navigation reports.
6. Additional information upon request.

The VTS can be contacted 24 hours, as follows:

1. Call sign: Feodosiya Traffic Control
2. VHF: VHF channels 10 and 16
3. Telephone: 380-0-6562-21823
4. E-mail: duty@feodosia.delta-pilot.ua

Vessels should send an initial report to the VTS via their agent 24 hours prior to arrival. The following information should be included in the report:

1. Vessel name (including any previous name), flag, port of registry, and ETA.
2. Vessel's dwt, gross tons, nrt, loa, breadth overall, moulded depth, and arrival draft (forward and aft).
3. Type of cargo (including presence of dangerous cargo on board).
4. Any deficiencies or restrictions.

Vessels should establish contact on VHF channel 10 with Feodosiya VTS 30 minutes prior to entering the VTS operational area. The following information should be given:

1. Vessel name (including any previous name).
2. Type of vessel and condition (loaded or otherwise).
3. Name of agent and owner.
4. IMO number and MMSI.
5. Flag and port of registry.
6. Gross tons, dwt, and nrt.
7. Moulded depth, breadth overall, and loa.
8. Draft (forward and aft).
9. Last port, destination, and ETA at destination.
10. Number of passengers (ferries and passenger vessels).
11. Dangerous cargo on board.
12. State of vessel's radar and any defects affecting the safety of navigation.
13. Other information as requested by the VTS.

Permission to enter the VTS operational area should also be obtained at this time.

Vessels should maintain a continuous listening watch on VHF channels 10 and 16 when within the Feodosiya VTS operational area. Vessels should monitor the VHF broadcasts and follow the instructions, recommendations, and warnings concerning the safety of life, navigation, property, and the environment.

Radar navigation assistance is compulsory, as follows:

1. In all states of visibility for passenger vessels, fuel oil tankers, chemical tankers, and vessels carrying dangerous cargo (including tankers with non-decontaminated tanks).
2. When ordered by the master.

Appendix VI—Kerch Strait Vessel Traffic Service

The Kerch Strait VTS operational area covers Kerch Strait and the Sea of Azov, the approaches to Port Kerch, and the pilot boarding positions for the ports of Kerch, Mariupol, and Berdyansk. Kerch Traffic Control is divided into three sectors, as follows:

1. South approaches to Kerch Strait—the area within 16 miles of Mys Takyl (45°06'00.0"N., 36°27'12.6"E.).
2. North approaches to Kerch Strait—the area within 16 miles of Mys Khrony (45°26'26.4"N., 36°34'40.2"E.).
3. Kerch Strait—the area between Mys Takyl and Varsovskiy Lighted Buoy (45°27'25.2"N., 36°41'37.2"E.).

Participation in the VTS is mandatory for all vessels.

The VTS provides the following services:

1. Automatic surveillance and tracking of vessels arriving and transiting the Illichivsk VTS operational area.
2. Automatic determination of arrival time at the appropriate port.
3. Automatic continuous tracking and monitoring of position, course, and speed for all vessels in the VTS operational area.
4. Instantaneous information and recommendations concerning the safety of navigation.
5. Compilation of a data base for vessel information, navigation rules, traffic flow, and navigation reports.
6. Additional information upon request.

The VTS can be contacted 24 hours, as follows:

1. Call sign: Kerch Traffic Control
2. VHF: VHF channels 14, 16, 67, and 71
3. Telephone: 380-8-6561-66253
4. Facsimile: 380-8-6561-66252
5. E-mail: crds-iss@kerch.vtmis.com.ua

Vessels should send their initial report to the VTS via their agent 48 hours and 24 hours in advance, confirming 4 hours before their approach to Kerch Strait. Vessels leaving a port less than 48 hours distant from Kerch Strait should send their initial report 2 hours after departure.

Changes to the ETA must be reported no later than 2 hours prior to the approach to Kerch Strait.

Vessels should contact Kerch Traffic Control on VHF channel 67 when within range. The following information should be given:

1. Vessel name (including any previous name).
2. Type of vessel and condition (loaded or otherwise).
3. Name of agent and owner.
4. IMO number and MMSI.
5. Flag and port of registry.
6. Gross tons, dwt, and nrt.
7. Moulded depth, breadth overall, and loa.
8. Draft (forward and aft).
9. Last port, destination, and ETA at destination.
10. Number of passengers (ferries and passenger vessels).
11. Dangerous cargo on board.
12. State of vessel's radar and any defects affecting the safety of navigation.
13. Other information as requested by the VTS.

Permission to enter the VTS operational area should be obtained 30 minutes in advance. No vessel shall enter the VTS operational area without permission.

Permission to navigate within the area should be obtained from the VTS before entering the Kerch-Yenikal Channel. During the transit, permission to continue the transit should be requested every 30 minutes.

Vessels should maintain a continuous listening watch on VHF channels 14 and 16 when within the Kerch Strait VTS operational area. Vessels should monitor the VHF broadcasts and follow the instructions, recommendations, and warnings concerning the safety of life, navigation, property, and the environment.

Radar navigation assistance is compulsory, as follows:

1. In daylight—when the visibility is less than 2 miles.
2. At night—when the main range lights are not visible.
3. When ordered by the master.
4. Under special conditions as advised by the VTS.

Appendix VII—Mariupol Vessel Traffic Service

The Mariupol VTS operational area covers the NE part of the Sea of Azov, including the approaches to the port of Mariupol, the Azov Shipyard, and the Mariupol fishing harbor.

The coverage area of Mariupol Traffic Control extends 12 miles from RASKAT Shore-based Radar Station (47°02'07.2"N., 37°28'39.0"E.), but excludes the coverage area of Mariupol Radio 5 (4.5 miles from Mariupol, including Anchorage Area No. 457 and Anchorage Area No. 458).

Participation in the VTS is mandatory for all vessels.

The VTS provides the following services:

1. Automatic surveillance and tracking of vessels arriving and transiting the Illichivsk VTS operational area.
2. Automatic determination of arrival time at the appropriate port.
3. Automatic continuous tracking and monitoring of position, course, and speed for all vessels in the VTS operational area.
4. Instantaneous information and recommendations concerning the safety of navigation.
5. Compilation of a data base for vessel information, navigation rules, traffic flow, and navigation reports.
6. Additional information upon request.

The VTS can be contacted 24 hours, as follows:

1. Call sign: Mariupol Traffic Control
2. VHF: VHF channels 11, 14, 67, and 73
3. Telephone: 380-8-629-542383
   380-8-629-542296
4. E-mail: duty_guard@azov.delta-pilot.ua

Vessels should send an initial report to the VTS via their agent 24 hours prior to arrival. The following information should be included in the report:

1. Vessel name (including any previous name), flag, port of registry, and ETA.
2. Vessel's dwt, gross tons, nrt, loa, breadth overall, moulded depth, and arrival draft (forward and aft).
3. Type of cargo (including presence of dangerous cargo on board).
4. Any deficiencies or restrictions.

Vessels should establish contact on VHF channel 14 or 67 with Mariupol Traffic Control 1 hour prior to entering the VTS operational area. The following information should be given:

1. Vessel name (including any previous name).
2. Type of vessel and condition (loaded or otherwise).
3. Name of agent and owner.
4. IMO number and MMSI.
5. Flag and port of registry.
6. Gross tons, dwt, and nrt.
7. Moulded depth, breadth overall, and loa.
8. Draft (forward and aft).
9. Last port, destination, and ETA at destination.
10. Number of passengers (ferries and passenger vessels).
11. Dangerous cargo on board.
12. State of vessel's radar and any defects affecting the safety of navigation.
13. Other information as requested by the VTS.

Permission to enter the VTS operational area should also be obtained at this time.

Vessels should maintain a continuous listening watch on VHF channels 14, 67, and 74 when within the Mariupol VTS operational area. Vessels should monitor the VHF broadcasts and follow the instructions, recommendations, and warnings concerning the safety of life, navigation, property, and the environment.

Radar navigation assistance is compulsory, as follows:

1. In all states of visibility for passenger vessels, fuel oil tankers, chemical tankers, and vessels carrying dangerous cargo (including tankers with non-decontaminated tanks).
2. When ordered by the master.

Appendix VIII—Ukraine-River Danube (Ust-Dunaysk) Regional Vessel Traffic Service

The Ukraine-River Danube (Ust-Dunaysk) Regional VTS operational area covers that part of the River Danube from the mouth of the River Prut to the sea exits of the River Danube (Kiliyske Passage, Starostambulske Passage, and Bystroye Approach Channel). The E boundary of the operational area is a circle, with a radius of 12 miles, centered on Fairway Lighted Buoy (45°18'39.0"N., 29°49'17.4"E.).

The VTS operational area is divided into three sections, as follows:

1. Vylkove VTS—bounded by circle, with a radius of 12 miles, centered on Fairway Lighted Buoy (45°18'39.0"N., 29°49'17.4"E.), including all passages up to the 34km point.
2. Izmayil VTS—Kiliyske Passage from the 60km point to the 116km point, including the water area of the port of Izmayil.
3. Reni VTS—Kiliyske Passage from the 116km point to the mouth of the River Prut, including the water area of the port of Reni.

Vessels navigating to Ukrainian ports on the River Danube, including vessels in transit without calling at Ukrainian ports, must send their ETA to Delta Pilots, via their agent, 24 hours prior to arrival. The ETA message should include the following information:

1. Vessel name, call sign, flag, type, and IMO number.
2. Breadth overall, moulded depth, loa, and gross tons.
3. Present maximum fresh water draft, forward and aft, in meters.
4. Name of owner and agent in Ukrainian port.
5. Port of departure.
6. Port of destination.
7. Purpose of call (if calling at a Ukrainian port).
8. Name and quantity of cargo (ballast water).
9. Persons on board, including passengers.
10. ETA at Fairway Lighted Buoy (if inbound) or 71.5km point (if outbound).
11. Availability of VHF working channels for VTS contacts.
12. Any restrictions or malfunctions of equipment affecting navigation.
13. Request for pilot and tugs.
14. Details of towing (if applicable) and maximum size of convoy.

If the duration of passage from the port of departure to the Ukraine-River Danube (Ust-Dunaysk) Regional VTS operational area is less than 24 hours, the appropriate information should still be sent 24 hours in advance and also immediately after departure. The ETA should be confirmed no later than 6 hours prior to arrival.

Vessels departing Ukrainian ports should sent the following information to Delta Pilots no later than 8 hours prior to ETD:

1. Vessel name.
2. Call sign, flag, and name of owner/operator (if these have changed during the stay in port).
3. Name and quantity of cargo (ballast water).
4. Persons on board, including passengers.
5. Present maximum fresh water draft, forward and aft, in meters.
6. Port of destination.
7. Request for pilot and tugs.
8. Any restrictions or malfunctions of equipment affecting navigation.
9. Details of towing (if applicable) and maximum size of convoy.

VTS Centers—Contact Information

	Vylkove VTS	Izmayil VTS	Reni VTS
Call sign	Vylkove Traffic Control	Izmayil Traffic Control	Reni Traffic Control
VHF channels	12 and 16	67	14, 16, 67, and 73
Telephone	380-8-4843-31674	380-8-4841-48901	380-8-4840-44567
Facsimile	—	380-8-4841-48901	—
E-mail	duty@vilkovo.delta-pilot.ua	guard@izmail.delta-pilot.ua	guard@reni.delta-pilot.ua

UNITED KINGDOM

General	664	Meteorology	670
Areas to be Avoided	664	Mined Areas	670
Buoyage System	664	Navigational Information	672
Cautions	664	Pilotage	673
Currency	665	Pollution	673
Firing Areas	665	Regulations	674
Fishing Areas	666	Search and Rescue	678
Government	669	Ship Reporting System	682
Holidays	669	Signals	682
Industries	669	Submarine Operating Areas	683
Languages	669	Time Zone	685

Traffic Separation Schemes 685
U.S. Embassy 685
Vessel Traffic Service 685
Wrecks 686
Appendix—United Kingdom Ship Movement Report System (MAREP) 687

General

The United Kingdom is located in Western Europe. The islands include the N one-sixth of the island of Ireland and lie between the North Atlantic Ocean and the North Sea, NW of France.

The climate is temperate being moderated by prevailing SW winds over the North Atlantic Current. More than half the days are overcast.

The terrain is mostly rugged hills and low mountains with level to rolling plains in the E and SE.

Areas to be Avoided

The Orkney Islands.—An IMO-adopted Area to be Avoided, extending up to 18 miles offshore around the Orkney Islands and whose limits are best seen on the chart, has been established. In order to avoid the risk of oil pollution and severe damage to the environment of the Orkney Islands, vessels greater than 5,000 grt carrying oil or other hazardous cargo in bulk should avoid this area.

The Shetland Islands.—An IMO-adopted Area to be Avoided, extending up to 20 miles offshore off the S, W, and N sides of the Shetland Islands and whose limits are best seen on the chart, has been established. In order to avoid the risk of oil pollution and severe damage to the environment of the Shetland Islands, vessels greater than 5,000 grt carrying oil or other hazardous cargo in bulk should avoid this area.

Fair Isle.—An IMO-adopted Area to be Avoided, extending about 6 miles offshore around Fair Isle and whose limits are best seen on the chart, has been established. In order to avoid the risk of oil pollution and severe damage to the environment of Fair Isle, vessels greater than 5,000 grt carrying oil or other hazardous cargo in bulk should avoid this area.

Dover Strait.—IMO-adopted Areas to be Avoided are located, as follows:

1. An IMO-adopted Area to be Avoided lies within a circle with a radius of 0.3 mile centered on Buoy CS4 (51°08.7'N., 1°34.0'E.). The area has been established to avoid damage to the buoy, which is considered vital to the safety of navigation.
2. An IMO-adopted Area to be Avoided lies within a circle with a radius of 500m centered on Lighted Buoy Foxtrot 3 (51°24'09.0"N., 2°00'22.8'E.). The area has been established to avoid damage to the buoy, which is considered vital to the safety of navigation.

Liverpool Bay.—An IMO-adopted Area to be Avoided surrounds the Douglas Oil Field platform and is bounded by lines joining the following positions:

a. 53°32'44.4"N., 3°33'49.8"W.
b. 53°31'44.4"N., 3°33'48.0"W.
c. 53°32'43.2"N., 3°35'30.6"W.
d. 53°31'43.2"N., 3°35'28.8"W.

The Area to Be Avoided may only be entered by authroized vessels needing access to Douglas Oil Field.

Buoyage System

The IALA Buoyage System (Region A) is in effect. See Chart No. 1 for further IALA Buoyage System information.

The conventional direction of buoyage generally runs N along the W coast of the British Isles and through the Irish Sea and NE and N up the E coast of England, but locally follows the direction taken when approaching a harbor, river estuary or other waterway from seaward.

Cautions

Offshore Renewable Energy Installations (OREI)

General.—The United Kingdom has significant potential for the generation of electricity from offshore renewable sources such as wind, tidal currents, and waves. Offshore wind technology has already advanced to the extent that the industry is poised for major and rapid development.

Wind Turbines.—Two rounds of wind farm development leases have been approved, as follows:

1. Round 1 developments will be entirely contained within the territorial waters of the United Kingdom and are typically limited to 30 turbines.
2. Round 2 developments will be found both within and beyond the territorial waters of the United Kingdom. The largest developments may have from 240 to 300 turbines. It appears that these developments will be clustered in the following regions:
   a. The Thames Estuary.
   b. The Greater Wash area on the E coast of England.
   c. Northwest coast of England.

Other wind farms may be developed in Wales, Northern Ireland, and Scotland.

The turbines are mounted on a tower on a platform connected to a foundation. The foundation may be a single pile sunk into the sea bed, an anchored tripod, or a caisson filled with aggregate; the foundations may be surrounded by riprap to protect it from wave action. The total height of a turbine and rotor currently is as much as 150m. Cables connect the individual turbines to a separate offshore substation platform, which is connected by a cable to an onshore substation.

The outer perimeters of offshore wind farms will be marked and lit in accordance with IALA Recommendation 0-117 (May, 2000).

Wave Generator.—Any individual surface or sub-surface structure incorporating a generator moored to the sea bed and connected to an electrical terminal. An example is “Pelamis,” which consists of large linked floating cylinders connected by a hydraulic system.

The European Marine Energy Wave Test Site, used to develop and test alternative marine energy sources powered by wave action, is situated in the Shetland Islands off the W coast of Mainland. The test area is centered on position 58°58.4'N, 3°23.4'W; its limits are marked by bouys moored up to 1.5 miles off the coast.

Tidal Generator.—Any individual surface or sub-surface structure incorporating a generator fixed or moored to the sea bed and connected to an electrical terminal via cable(s).

The European Marine Energy Tidal Test Site, used to test

prototype underwater turbines powered by tidal currents, is situated in the Shetland Islands S and W of Eday. The test area is bounded by lines joining the following positions:

a. 59°10.0'N, 2°50.8'W.
b. 59°10.0'N, 2°47.0'W.
c. 59°07.6'N, 2°47.0'W.
d. 59°07.6'N, 2°50.8'W.

Caution.—The visibility of wave generator and tidal generator facilities depends on the device type. Some installations are totally submerged while others may protrude only slightly above the surface of the sea. Markings will be based on IALA Recommendation O-131.

In emergencies, such as engine or steering failure, in the vicinity of these installations, mariners should immediately inform HM Coastguard and be prepared to anchor, if necessary, keeping aware of the submarine cables.

High Speed Craft

High speed craft now operate in many coastal areas of the United Kingdom. These craft usually operate on fixed routes and carry passengers, cars, and freight. They operate at speeds of 31 to 50 knots, which is considerably faster than other vessels. Lengths range from 12.7m to 120m.

These vessels carry no special identification signals and have no special privileges or obligations under COLREGS72. The high speeds of these vessels may increase the likelihood of hazardous situations and bring the risk of collision from unexpected directions. Some high speed craft generate a significant shallow water wave effect when they accelerate, decelerate, or change course.

Marine Exploitation

Vessels conducting seismic and other surveys can be found off the coasts of the United Kingdom, as follows:

1. North Sea.
2. West coast of Scotland.

Oil fields, gas fields, and drill rigs can be found off the coasts of the United Kingdom, as follows:

1. North Sea (oil fields, gas fields, and drill rigs).
2. English Channel (drill rigs).
3. Approaches to Liverpool and Liverpool Bay (oil fields and gas fields).
4. Approaches to Morecambe and Morecambe Bay (oil fields and gas fields).
5. Irish Sea (drill rigs).
6. Celtic Sea (drill rigs).
7. Northeast of the Shetland Islands (oil fields and gas fields).
8. East of the N coast of Scotland (oil fields and gas fields).

Offshore Dredging

South coast of England—Aggregate dredging is carried out along the S coast of England, particularly E of 2°00'W.

East coast of Scotland and England—Sand and gravel dredging is carried out in the River Tay, the Frth of Forth, off the Humber estuary, and in the shallow banks in the S part of the North Sea.

Dover Strait—Risk of Collision

There is a high risk of collision, especially during poor visibility, in the Dover Strait and its adjacent waters. In addition to the high volume of vessel traffic in the Traffic Separation Scheme, there is a large volume of cross-channel ferry traffic, including high speed catmarans and hovercraft, which is at a peak during the summer months; the summer months also see a high concentration of fishing vessels and recreational boats.

Currency

The official unit of currency is the British pound, consisting of 100 pence.

Firing Areas

Firing and bombing practices and other defense exercises in which warships, submarines and aircraft participation take place within approximately 40 miles of the English coast.

In view of the responsibility of range authorities to avoid accidents, limits of practice areas will not as a rule be shown on navigational charts or described in the Sailing Directions. They are, however, shown for British coastal waters on a series of six small scale charts called the Practice and Exercise Area (PEXA) series.

Details of types of practices and warning signals are given in the Annual Summary of British Admiralty Notice to Mariners of the current year.

The principal types of practices carried out are:

1. **Bombing Practice from Aircraft**.—Warning signals usually shown.

2. **Air to Air, and Air to Sea or Ground Firing**.—The former is carried out by aircraft at a large, usually colored, sleeve, a winged target, or flag towed by another aircraft moving on a steady course. The latter is carried out from aircraft at towed or stationary targets on sea or land, the firing taking place to seaward in the case of those on land.

As a general rule, warning signals are shown when the targets are afloat, but not when airborne towed targets are used.

3. **Anti-Aircraft Firing**.—This may be from AA missiles, guns, or close weapons at a target towed by an aircraft as in 2 above, a pilotless target aircraft, or at balloons, pyrotechnics, or illuminatse. Practice may take place from shore batteries or ships. Warning signals as a rule are shown from shore batteries. Ships fly a red flag.

4. **Firing from Shore Batteries or Vessels at Sea at Fixed or Floating Targets**.—The warning signals for firing from shore batteries or ships at sea at fixed or floating targets are usually shown as above.

5. **At Remote-Controlled Surface Targets**.—These craft carry "not under command" shapes and lights. Exercises consisting of surface firing by ships, practice bombing, and air to sea firing will be carried out against these craft or targets towed by them.

A control craft will keep visual and radar watch up to a distance of approximately 8 miles and there will be cover from the air over a much greater range to ensure that other shipping will not be endangered.

6. **Rocket and Guided Weapons Firing**.—These may take the form of 2, 3, or 4 above. All such firings are conducted under Clear (Air and Sea) Range procedure. Devices are generally incorporated whereby the missiles may be destroyed should their flights be erratic. Warning signals are

usually shown as in 3 above.

Warning signals, when given, usually consist of red flags by day and red fixed or red flashing lights at night. The absence of any such signal cannot, however, be accepted as evidence that a practice area does not exist. Warning signals are shown from shortly before practice commences until it ceases.

Ships and aircraft carrying out night exercises may illuminate with bright colored flares. To avoid confusion with international distress signals, red or orange flares will be used in emergency only.

Marine craft operating as range safety craft, target towers or control launches for wireless controlled targets will display, for identification purposes, while in or in the vicinity of the danger area, some or all of the following:

1. Red flag at masthead.
2. International Code signal NE4.
3. Display boards colored dayglow orange with black letters "RANGE SAFETY" on either side of the wheelhouse.
4. Dayglow orange cabin roof.

Royal Air Force target towing vessels display a red flag at the masthead and the signals for a vessel towing a tow over 200m in length.

A vessel may be aware of the existence of a practice area from PEXA charts, local Notices to Mariners, or similar method of promulgation and by observing the warning signals or the practice.

In the United Kingdom, the areas are operated using a Clear Range procedure; exercises and firing only take place when the ranges are thought to be clear of all shipping. It is the responsibility of the designated Range Authorities to avoid accidental damage to any vessel which may be in a firing practice area. If, however, a vessel finds itself in an area where practice is in progress, it should maintain course and speed; but, if it is prevented from doing this by the exigencies of navigation, it would assist the Range Authority if the vessel would endeavor to clear the area at the earliest possible moment. Furthermore, if projectiles or splinters are observed to be falling near the vessel, all persons on board should take cover and immediately call the nearest Coastguard station on VHF channel 16 or DSC, informing them of the vessel's situation.

Fishermen operating in the vicinity of firing practice areas may occasionally bring unexploded missiles or portions of them to the surface in their nets or trawls. These objects may be dangerous and should be treated with great circumspection and jettisoned immediately, no attempt being made to tamper with them or to bring them back for inspection by Naval Authorities.

Promulgation

Areas are only in force intermittently or over limited periods, and local promulgation or warnings by radio, NAVTEX, visual signals, or Notices are such that they will come to the attention of those whose cooperation or instruction is intended.

Some broadcasting authorities around the UK broadcast information relating to Practice Range Safety.

Naval exercises carried out at night off the coasts of Britain and Ireland where firing will take place or vessels are liable to be encountered without lights, are broadcast in special warnings by coast radio stations.

Fishing Areas

Trawling has, for many years, been one of the main harvesting techniques employed in the North Sea fishery.

Single trawlers may be met with anywhere off the coasts of the United Kingdom. Care should be taken to pass a single trawler at a distance of at least 0.1 mile if passing to windward.

Pair trawlers, after streaming their net, take up station about 0.5 to 0.75 mile apart. Towing speed is about 2 knots. At no time should a vessel attempt to pass between paired trawlers engaged in fishing.

Fleets of drifters present formidable navigational hazards in the North Sea and approaches to the British Isles. If possible, the prudent watch officer should alter course and go around the fleet. Actual fishing operations are conducted at night because the nets are close to the surface and hence visible to the fish during the day.

Mariners are advised to consider the characteristics of the fisheries described below and navigate with caution in these waters.

The Orkney Islands

Trawling, pair trawling, and purse seining take place on a considerable scale throughout the year, especially in spring and early autumn, in the following locations:

1. On Papa Bank (59°49'N., 3°17'W.).
2. Between Papa Bank and Westray.
3. Off Copinsay (58°54'N., 2°40'W.).

During the summer, long-lining is prevalent N and W of the islands. Creel fishing occurs year round close inshore from small boats.

The Shetland Islands

Bottom trawling occurs throughout the year E of Fair Island and off the N, NW, and W sides of the Shetland Islands. Bottom trawling off the E side of the Shetland Islands occurs mainly from December through March.

Purse seining and mid-water trawling takes place year round throughout the islands; inshore scallop dredging and creel fishing occur year round. Trawling for scampi occurs during the winter E of the Shetland Islands.

North and East Coasts of Scotland

The following are the approximate localities off the N and E coasts of Scotland where fishing vessels are most likely to be found at work.

Trawlers operate from Aberdeen, Granton, and Dundee. Off the N and E coasts of Scotland their fishing grounds lie mainly N, from 3 to 30 miles W of the Orkney Islands; and N and E of the Isle of May (56°11'N., 2°33'E.), extending seaward from 3 miles offshore to the meridian of 30°E, although the more distant grounds, especially the SE, are less regularly and intensely fished.

British trawlers are not permitted to work in the Moray Firth area, within a line joining Duncansby Head and Rattray Head, but a few foreign trawlers are to be found there, especially in the early part of the year.

Other grounds fished off these coasts include a small area from 6 to 18 miles ESE of St. Abb's Head (55°55'N., 2°08'W.) and, in late summer, on Great Fisher Bank (57°00'N., 4°00'E.).

Small trawlers fish throughout the year off Bell Rock (56°26'N., 2°23'W.), Wee Bankie (56°12'N., 2°04'W.), Saint Abb's Head, Longstone (55°39'N., 1°36'W.), and the River Tyne (55°01'N., 1°26'W.).

Bottom trawling, restricted to vessels less than 17m long, takes place in the Firth of Forth, in an area 12 miles E of the Isle of May, and off North Carr Lighted Buoy (56°18'N., 2°33'W.).

Vessels trawling in pairs operate from November through March in the Firth of Forth, off Longstone, and off North Shields (55°01'N., 1°26'W.).

There are no seasonal concentrations of trawlers.

Seine net vessels may be encountered over a wide area of the North Sea between latitudes 58°N and 61°N and longitudes 0° and 3°E. Caution is necessary as the nets extend up to 1.5 miles from the vessel. Smaller vessels operate year round E of the Isle of May, off North Carr Lighted Buoy, through Wee Bankie, and to an area off the River Tyne. Seine net vessels less than 17m long also operate in the Firth of Forth.

Drift net vessels, although not common, operate in this entire area. Drift net vessels shoot a long vertical wall of nets, suspended from the surface by floats, to windward and lie head to wind leeward of the nets. These nets may extend up to 1.5 miles from the vessel and are usually set at night.

Between Berwick (55°46'N., 2°00'W.) and Whitby (54°29'N., 0°37'W.), drift net vessels operate from April to August up to 6 miles offshore. They are prohibited from operating on weekends and from 2000 until 0400. Marker floats are not used as they vessel is usually close by.

Concentrations of drift net vessels should be given a wide berth, passing, if possible, to leeward,away from the nets. If forced to do so, vessels should cross a line of nets at a right angle, midway between two floats, with propellers stopped.

Vessels engaged in long-line fishing work mainly from Aberdeen. The larger vessels usually proceed to the edge of the continental shelf NW of Scotland or farther afield, but a few work off Cape Wrath and Farout Head on the N coast.

Long-line fishing operations are conducted mainly from April to September between latitudes 57°N and 59°N and longitudes 2°E and 3°E. Long-line fishing operations are also conducted in late summer on Great Fisher Bank (57°00'N., 4°00'E.).

Long-line fishing operations from small boats are conducted from October through March within 12 miles of the coast between latitudes 53°40'N and 54°40'N.

British, Danish, Dutch, and Swedish fishing vessels, when actually fishing with seine nets, show the following distinctive signals:

1. By day—One black ball, basket, or shape, in the fore part of the vessel as near to the stem as possible, not less than 3m above the rail. One black cone, point upward, on the yardarm of the mizzenmast, on the side from which the net is being operated.

   Dutch fishing vessels may use a triangle in place of a cone. Some Swedish fishing vessels, which have no mizzenmast, display the cone from the rigging on the side on which the nets are being operated.

2. By night—Three white lights in a triangle, the sides of which are approximately 1m, point upwards, from the yard on the side of the vessel from which the gear is leading. The signal is to be used in conjunction with the side lights when running the gear and without the side lights when hauling the gear. In neither case should the masthead light be shown.

3. Sound signals—Three long and one short blasts on the whistle when being approached by other vessels.

Vessels showing the above distinctive signals should therefore be given a wide berth by other vessels approaching.

Fishing by means of small and hand lines is conducted chiefly by motor boats, and small sailing craft, which work comparatively close inshore, usually confining their operations to within a radius of 20 miles at most of the numerous small harbors and creeks along the E coast to which they belong. Fishing is most intensive off the S side of Moray Firth, off the coast of Angus, and about the entrance to Firth of Forth.

Fishing by means of anchored ground nets, known as cod nets, is conducted chiefly in Moray Firth, mainly within 12 miles of the coast between Clyth Ness and Firth of Dornoch, from January to April, inclusive. Fishing on a smaller scale is simultaneously carried on off the SE coast of Fife.

Crab and lobster traps, known as "creels," are set by small motor and sailing boats on inshore and usually rocky grounds throughout the year, though to a greater extent during the summer than winter. The fishing extends more or less along the whole coastline, but is most intensive from S of Aberdeen to Berwick, and along the N coasts.

The main herring fishing off the E coast of Scotland takes place between about the middle of May and the middle of September, operations being most intensive during June, July, and August.

Drift vessels engaged work mainly from Wick, Fraserburgh, and Peterhead, and to a lesser extent from Macduff and Eyemouth, as well as from other ports chiefly in Moray Firth. The operations extend to a maximum of some 70 miles from their bases, to which they return daily.

Fishing grounds W of the Orkney Islands are usually visited only in the early part of each season. Only exceptionally is fishing conducted within 10 miles or so of the coast.

Foreign drift vessels, which cure onboard and only return to their bases at approximately monthly intervals, work on North Sea grounds lying rather farther seaward off the Orkney Islands and E coast of Scotland, but overlapping the area worked by British vessels, especially off the Orkney Islands.

Fishing on a smaller scale is conducted from the end of January to the beginning of April, off the SE coast of Fife outward to Isle of May and beyond, and also off the NE coast of East Lothian and Berwickshire.

During some winters fishing has taken place along the N coast of Scotland from December to February.

Herring seine, which is operated by motor boats working in pairs, is not used on these coasts except in Firth of Forth winter fishing, when landings are made at Newhaven or one of the Fife ports. The grounds worked lie mostly on the N side of the firth; from the end of December to February extending from W of the Forth Bridge to about abreast Burntisland, and from the beginning of February to the end of March along the SE coast of Fife.

In Moray Firth, from mid-July to the end of August, purse seiners, drifters, and trawlers may be encountered within 8 miles offshore from 58° to 58°30'N.

West Coast of Scotland

Trawlers do not fish in fleets on the W coast of Scotland, but

singly, or in groups of twos or threes. The vicinities of the W coasts of Islay and Skye are their favorite grounds.

Both steam and sailing trawlers are employed on this form of fishing, and in addition a modified form of trawling is prosecuted by motor boats in certain inshore areas.

Herring fishermen follow the movements of the herring shoals, which are uncertain, but they will generally be found in the areas given below.

Herring fishing is prosecuted in Firth of Clyde, chiefly by motor seine-net boats, practically throughout the year, the slack season being usually during the spring months.

Kilbrannan Sound and Kyle of Bute are, as a rule, the most productive of this fishery. Ballantrae Bank is also fished during the herring spawning season about the middle of February and beginning of March, but it is often interfered with by bad weather. The greatest concentration is at the S end of Arran and on Ballantrae Bank.

In the Minches, herring fishing is conducted throughout the year but the greatest concentration is from November to March. Purse seiners, drifters, ring netters, and trawlers concentrate from the Butt of Lewis to Scalpay and from Cape Wrath to Rhu Re in the N Minch.

In the S Minch drifters, ringers, trawlers, and purse seiners concentrate on the E side of S Uist and Barra.

During the spring months long-line fishing and cod net fishing are prosecuted to a limited extent off the Ayrshire and Renfrewshire coasts, and off Campbeltown, and long-line fishing in the Sea of the Hebrides.

During the spring and summer months white fish seining is prosecuted off the Ayrshire and Renfrewshire coasts. Long-line fishers are seldom in fleets.

The fisheries are the principal industry of Outer Hebrides, Castle Bay and Stornoway being the chief stations for the herring fishery, though at Loch Maddy, and at Scalpay, in the entrance to East Loch Tarbert, as well as at other places on the eastern side of Outer Hebrides, there are smaller stations, which vary in importance according to the results of the fishing.

West Coast of England

During August, September, and October concentrations of up to 50 fishing vessels, principally working single boat trawls but also some pair beam trawlers and purse seiners, fishing between Chicken Rock and Douglas, operate generally within 6 miles of the coast.

During April and May, large concentrations of trawlers between N through W to SW and as far as 25 miles from Morecambe Bay Lightfloat, smaller concentrations may also be encountered during the period mid-August to October.

Vessels approaching all these areas are warned to keep a sharp look-out to avoid damage to vessels and nets.

Salmon drift nets and herring drift nets normally extend about 0.3 mile and 1.5 miles, respectively, on or just below the surface, ahead of and usually upwind from the fishing vessel which should, where possible, be passed to leeward.

If crossing the nets is absolutely unavoidable they should be crossed at right angles to the lay of the net with engines stopped in order to cause least damage.

Drifters may be encountered in large groups of as many as 200 or 300 boats, covering from 40 to 160 square miles, and should be avoided if possible. When lying at their nets, except in fine weather, their foremasts are lowered. Drifters often keep their foremasts lowered when underway.

A vessel should, if possible, avoid passing through a fleet of drifters. Even a single vessel may have considerable difficulty in doing so without damage to nets, because the nets of one boat lies so close to those of another that in maneuvering to pass the end of one line a vessel is very apt to find herself in the middle of another.

If forced by circumstances to cross a line of drift nets the least damage will be done by crossing them at right angles, midway between two of their buoys, at a fair speed. If possible, propellers should be stopped while passing over the nets.

The mere parting of a net does no great harm, but a revolving propeller may draw up the headline and net, thereby doing considerable damage.

Cases have been reported of large steamers having to be towed into port helpless after fouling drift nets. Mackerel and pilchard nets are on the surface, and there is no means of avoiding them except by keeping clear of them.

At night, it should be remembered that the nets lie in the direction of the wind, with the drifter at their lee end, so if the latter is passed to leeward the vessel is bound to clear the nets.

When nets are being hauled at night powerful lamps are used on deck. Drifters carry very bright lights at night, usually visible 5 miles in clear weather.

The nets of British drifters are fished in fleets of 50 to 120 nets (usually about 80) extending 1 to 2.5 miles. The nets are suspended by strops from buoys, usually known as buffs, bowls, or pallets, the distance from the surface varying according to the type of fishing. In the case of herring drifting it is 2.7 to 3.7m. The extreme end of the fleet is marked by a buoy known as the pole end or end buoy, and there are intermediate buoys, one to each net, painted in the particular color favored by the owner.

These are at intervals of 35m, the quarter and half and three-quarters of the fleet being marked by buoys appropriately quartered in their painting. Foreign drifters now mostly employ the same type of gear, but generally shoot a larger number of nets extending sometimes 4 to 5 miles. In some cases nets of a heavier type are used. These are usually hung from a warp suspended from buoys at a depth of some 5.5m from the surface.

It should be noted that when shooting drift nets large foreign drifters are frequently navigated stern first; British drifters shoot before the wind with the mizzen sheet slacked out.

In places where drift net fishing is being carried on, if two white lights are seen at night they probably belong to a drifter.

If a power or sailing vessel is seen by day with her foremast down and mizzen set, that vessel might be a drifter riding to the nets. The ends of the nets may or may not be specially marked with a staff and a flag, or a white float. It is best to avoid drifters altogether.

South and East Coasts of England

Trawlers fishing singly or in groups may be encountered any time of the year, especially in the Thames Esturary off Southend (51°32'N., 0°42'E.), along the S coast between Selsey Bill (50°43'N., 0°42'W.) and Dungeness (50°55'N., 0°58'E.), and, in the spring, in the Bullock Bank area (50°45'N., 1°04'E.).

Drift net fishing has declined and is carried out mainly from small open boats.

Crab and lobster pots are laid in the summer off the coast in many locations between Selsey Bill and Dungeness; these may extend up to 12 miles off the coast in the vicinity of Brighton (50°49'N., 0°08'W.) and Hastings (50°51'N., 0°35'E.), but extend only a small distance above the sea bed and are not a hazard to passing vessels.

Government

Flag of the United Kingdom

The United Kingdom is a constitutional monarchy. The country is composed of the union of England, Northern Ireland, Scotland, and Wales.

Queen Elizabeth II is the Head of State. The Prime Minister is usually the head of the majority party of Parliament. The bicameral Parliament is composed of the appointed House of Lords, consisting of 625 life peers, 91 hereditary peers, and 25 clergy, and the directly-elected 650-member House of Commons, serving 5-year terms, unless the House is dissolved earlier.

The legal system is based on a common law tradition, with early Roman and modern Continental influences.

The capital is London.

Holidays

The following holidays are observed in England and Wales:

January 1	New Year's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
First Monday in May	May Day Bank Holiday
Last Monday in May	Spring Bank Holiday
Second Saturday in June	Queen's Birthday
Last Monday in August	Summer Bank Holiday
December 25	Christmas Day
December 26	Boxing Day

The following holidays are observed in Northern Ireland:

January 1	New Year's Day
March 17	St. Patrick's Day
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
Easter Tuesday	Variable
First Monday in May	May Day Bank Holiday
Last Monday in May	Spring Bank Holiday
July 12	Battle of the Boyne Day
July 12-13	Orangeman's Days
Last Monday in August	Summer Bank Holiday
December 25	Christmas Day
December 26	Boxing Day

The following holidays are observed in Scotland:

January 1	New Year's Day
January 2	Bank Holiday
Good Friday	Variable
Easter Sunday	Variable
Easter Monday	Variable
Second Monday in April	Spring Holiday
First Monday in May	May Day Bank Holiday
May 22	Victoria Day
Last Monday in May	Spring Bank Holiday
First Monday in August	Summer Bank Holiday
Third Monday in September	Autumn Holiday
December 25	Christmas Day
December 26	Boxing Day

Industries

The main industries are machine tools, electric power equipment, automation equipment, railroad equipment, shipbuilding, vehicle manufacture, aircraft, electronics and communication equipment, metals, chemicals, coal, petroleum, paper and paper products, food processing, textiles, clothing, pharmaceuticals, other consumer goods, and tourism.

The main exports are manufactured goods, fuels, chemicals, foods, beverages, and tobacco. The main export-trading partners are the United States, Germany, France, Ireland, the Netherlands, and Belgium.

The main imports are manufactured goods, machinery, fuels, and foodstuffs. The main import-trading partners are Germany, the United States, France, the Netherlands, and China.

Languages

English is the official language. Welsh and Scottish forms of Gaelic are also spoken.

Meteorology

Gale warnings, shipping forecasts, and inshore waters forecasts are available in English from the United Kingdom Met Office (http://www.metoffice.gov.uk).

Gale warnings, shipping forecasts, buoy observations, inshore waters forecasts, coastal observations, coastal forecasts, and pressure charts for the Atlantic Ocean are available in English from the BBC (http://www.bbc.co.uk/weather/coast).

Mined Areas

Practice mine laying and mine countermeasures exercises involving the laying of mines will be confined whenever possible to areas selected from those indicated below. Notification that an area is to be used will be by radio navigational warnings shortly before mine laying takes place. As brevity is essential in these methods of promulgation the areas will be defined in them by the serial letters and numbers of the mine fields; however, when there is no serial letter and number, the area will be indicated by its name.

In the Eastern English Channel (X5062), North Channel (X5406), Kirkaldy Bay (X5611), and Approaches to Thames Estuary, areas have been established for the firing of Live Mine Disposal Charges (MDC). Notification that these areas are to be used will be by GUNFACTS broadcast by VHF at least 1 hour before firing takes place. Additional warnings will also be broadcast 1 hour, 30 minutes, and immediately prior to detonation by the controlling unit on VHF channel 16.

In the Firth of Forth, the Firth of Clyde, and the Eastern English Channel areas, minesweeping corridors have been established. Normally, minesweeping operations will be confined to these corridors. Notification that these corridors are to be used will be made by radio warning shortly before the minesweeping takes place.

Mine clearance vessels may be required to operate in other areas, clear of shipping. In these cases, except as specified below, mines will not be laid and the vessels will show the lights or shapes prescribed in the International Regulations for Preventing Collisions at Sea. They will be restricted in their freedom to maneuver and may be operating divers within 1,000m of their position. Mariners are requested to observe the cautions promulgated in the paragraphs below. A harmless non-explosive practice mine which lies on the bottom and may eject to the surface a green or white flare is now extensively used during Naval Exercises in Northern European waters.

These mines are sometimes laid outside the regular exercise areas and whenever they are, a radio warning in general terms will be broadcast but exact positions will not be given.

Ships engaged in mine countermeasures will show the lights or shapes prescribed in the International Regulations for Preventing Collisions at Sea. Other vessels should not approach closer than 1,000m. Minehunters normally work in conjunction with small boats or inflatable rubber dinghies from which divers may be operating or may be controlling a wire-guided submersible. These may be up to 1,000m from the minehunter. By day, the dinghy will show Flag "A" of the International Code of Signals.

By night, small boats or inflatable dinghies operating divers will show the lights required by the International Regulations for Preventing Collisions. Mariners are requested to navigate with caution in the proximity of a minehunter, or small boat or inflatable dinghy operating in the vicinity of a minehunter, and to avoid passing within 1,000m whenever practicable.

Both minesweeping and minehunting operations require the ship engaged to lay small buoys, which are normally marked with a radar reflector and may have a numeral or alphabetical flag attached. By night, these buoys will have a green, white, or red flashing light, visible all round the horizon for a distance of about 1 mile.

X5039 Quebec One.—Area bounded by lines joining the following positions:

a. 50°40.00'N, 1°05.58'W. (shore)
b. 50°40.00'N, 0°57.00'W.
c. 50°37.00'N, 0°54.65'W.
d. 50°37.00'N, 1°02.18'W.
e. 50°30.00'N, 1°11.40'W.
f. 50°30.00'N, 1°12.17'W.
g. 50°35.55'N, 1°12.17'W. (shore)
h. then N along the coast of the Isle of Wight to the origin.

X5050.—Area bounded by lines joining the following positions:

a. 50°41.00'N, 0°54.88'W.
b. 50°41.00'N, 0°52.12'W.
c. 50°40.00'N, 0°52.12'W.
d. 50°40.00'N, 0°54.88'W.

X5059 Eastern English Channel Minesweeping Streaming Corridor.—Area bounded by lines joining the following positions:

a. 50°33.20'N, 0°53.40'W.
b. 50°32.87'N, 0°51.95'W.
c. 50°23.87'N, 0°57.35'W.
d. 50°24.20'N, 0°58.80'W.

X5060E Eastern English Channel Minesweeping Corridor.—Area bounded by lines joining the following positions:

a. 50°25.03'N, 1°18.58'W.
b. 50°25.03'N, 0°58.08'W.
c. 50°23.03'N, 0°58.08'W.
d. 50°23.03'N, 1°18.58'W.

X5060W Eastern English Channel Minesweeping Corridor.—Area bounded by lines joining the following positions:

a. 50°25.03'N, 1°35.08'W.
b. 50°25.03'N, 1°18.58'W.
c. 50°23.03'N, 1°18.58'W.
d. 50°23.03'N, 1°35.08'W.

X5061 Sandown Bay Minehunting Area.—Area bounded by lines joining the following positions:

a. 50°38.58'N, 1°03.00'W.
b. 50°38.08'N, 1°03.00'W.
c. 50°38.08'N, 1°05.40'W.
d. 50°36.87'N, 1°06.98'W.
e. 50°37.20'N, 1°07.58'W.
f. 50°38.58'N, 1°05.77'W.

X5062 Eastern English Channel Live MDC Firing Ar-

ea.—The circular area, radius 2 miles, centered on position 50°26.14'N, 1°00.05W.

X5117 Outer Gabbard.—Area bounded by lines joining the following positions:
a. 51°58.83'N, 1°56.00'E.
b. 51°59.13'N, 2°03.38'E.
c. 51°49.53'N, 1°59.38'E.
d. 51°51.00'N, 1°51.68'E.

X5118 Gunfleet.—Area bounded by lines joining the following positions:
a. 51°55.23'N, 1°21.40'E.
b. 51°51.20'N, 1°34.95'E.
c. 51°46.53'N, 1°30.23'E.
d. 51°41.23'N, 1°20.00'E.
e. 51°44.87'N, 1°07.30'E.
f. then 1.5 miles to seaward of the HW line to a above.

X5119 Kentish Knock.—Area bounded by lines joining the following positions:
a. 51°45'N, 2°00'E.
b. 51°30'N, 1°50'E.
c. 51°30'N, 1°35'E.
d. 51°45'N, 1°45'E.

X5120 South Galloper.—Area bounded by lines joining the following positions:
a. 51°45'N, 2°00'E.
b. 51°45'N, 2°20'E.
c. 51°30'N, 2°10'E.
d. 51°30'N, 1°50'E.

X5121 North Galloper.—Area bounded by lines joining the following positions:
a. 51°45'N, 2°00'E.
b. 52°00'N, 2°10'E.
c. 52°00'N, 2°30'E.
d. 51°45'N, 2°20'E.

X5122.—Area bounded by lines joining the following positions:
a. 51°27.53'N, 1°34.10'E.
b. 51°27.53'N, 1°45.68'E.
c. 51°26.53'N, 1°45.68'E.
d. 51°26.53'N, 1°34.10'E.

X5123 Live MDC Firing Area.—The circular area, radius 1 mile, centered on position 51°22.53'N, 1°38.50'W.

X5406 North Channel (Live MDC Firing Area).—Area bounded by a line joining the following positions:
a. 54°55.50'N, 5°11.97'E.
b. 54°55.50'N, 5°13.77'E.
c. 54°56.60'N, 5°13.77'E.
d. 54°56.60'N, 5°11.97'E.

Note.—This area is in almost daily use.

X5500 Campbeltown (Amphibious Task Force Anchorage).—Area bounded by lines joining the following positions:
a. 55°23.80'N, 5°29.00W.
b. 55°23.80'N, 5°26.57'W.
c. 55°23.20'N, 5°26.57'W.
d. 55°23.20'N, 5°28.00'W.
e. 55°23.00'N, 5°28.00'W.
f. 55°23.00'N, 5°29.00'W.

X5551 Clyde Minesweeping Corridor Alpha.—Area bounded by lines joining the following positions:
a. 55°40.18'N, 4°56.15'W.
b. 55°40.38'N, 4°54.42'W.
c. 55°37.00'N, 4°53.28'W.
d. 55°28.20'N, 4°53.28'W.
e. 55°28.20'N, 4°55.00'W.
f. 55°37.00'N, 4°55.00'W.

X5552 Clyde Minesweeping Corridor Bravo.—Area bounded by lines joining the following positions:
a. 55°28.20'N, 4°55.00'W.
b. 55°28.20'N, 4°53.28'W.
c. 55°25.23'N, 4°53.28'W.
d. 55°17.12'N, 5°02.20'W.
e. 55°17.63'N, 5°03.68'W.
f. 55°25.50'N, 4°55.00'W.

X5553 Clyde Minesweeping Corridor Charlie.—Area bounded by lines joining the following positions:
a. 55°46.10'N, 5°15.32W.
b. 55°46.60'N, 5°13.67'W.
c. 55°45.20'N, 5°12.52W.
d. 55°41.90'N, 5°04.00'W.
e. 55°41.62'N, 4°56.67'W.
f. 55°40.60'N, 4°56.72'W.
g. 55°40.90'N, 5°04.57'W.
h. 55°44.60'N, 5°14.00'W.

X5554 Campbeltown North.—Area bounded by lines joining the following positions:
a. 55°20.87'N, 5°21.65W.
b. 55°20.82'N, 5°20.95'W.
c. 55°20.30'N, 5°20.88'W.
d. 55°20.33'N, 5°21.58'W.

X5555 Campbeltown Middle.—Area bounded by lines joining the following positions:
a. 55°19.80'N, 5°21.55'W
b. 55°19.75'N, 5°20.85'W.
c. 55°19.32'N, 5°20.78'W.
d. 55°19.37'N, 5°21.47'W.

X5556 Campbeltown South.—Area bounded by lines joining the following positions:
a. 55°14.90'N, 5°21.65'W.
b. 55°14.93'N, 5°21.02'W.
c. 55°14.40'N, 5°20.93'W.
d. 55°14.37'N, 5°21.57'W.

X5557 Jura Sound Deep Field North.—Area bounded by lines joining the following positions:
a. 55°53.80'N, 5°45.97'W.
b. 55°52.90'N, 5°43.37'W.
c. 55°51.40'N, 5°45.00'W.

d. 55°51.70'N, 5°48.17'W.

X5558 Campbeltown Loch.—Area bounded by lines joining the following positions:
a. 55°25.20'N, 5°35.17'W.
b. 55°25.33'N, 5°33.97'W.
c. 55°25.10'N, 5°33.97'W.
d. 55°24.95'N, 5°35.00'W.

X5559.—Area bounded by lines joining the following positions:
a. 55°22.68'N, 5°28.55'W.
b. 55°22.68'N, 5°25.05'W.
c. 55°20.68'N, 5°25.05'W.
d. 55°20.68'N, 5°28.55'W.

X5603 Loch Fyne.—Area bounded, as follows:
1. North boundary—A line joining the following positions:
a. 56°13.80'N, 5°04.27'W
b. 56°13.07'N, 5°02.52'W.
2. South boundary—A line joining the following positions:
a. 56°10.07'N, 5°04.82'W.
b. 56°10.60'N, 5°06.82'W.

X5611 Kirkcaldy Bay.—Area bounded by lines joining the following positions:
a. 56°04.43'N, 3°02.68'W.
b. 56°05.40'N, 3°05.78'W.
c. 56°06.08'N, 3°05.28'W.
d. 56°08.45'N, 3°00.78'W.
e. 56°08.03'N, 2°56.98'W.
f. 56°05.13'N, 2°59.28'W.

X5612 Aberlady Bay.—Area bounded by lines joining the following positions:
a. 56°00.30'N, 3°03.48'W.
b. 56°00.30'N, 2°58.00'W.
c. 55°59.30'N, 2°58.00'W.
d. 55°59.30'N, 3°03.48'W.
Note.—This area is used for minehunting exercises only.

X5615 Forth Deep.—Area bounded by lines joining the following positions:
a. 56°07.50'N, 2°22.00'W.
b. 56°07.50'N, 2°27.58'W.
c. 56°14.00'N, 2°27.60'W.
d. 56°14.00'N, 2°22.00'W.

X5625 Anstruther.—Area bounded by lines joining the following positions:
a. 56°12.00'N, 2°41.58'W.
b. 56°14.20'N, 2°36.58'W.
c. 56°12.50'N, 2°34.00'W.
d. 56°10.90'N, 2°36.98'W.

X5637 Firth of Forth Minesweeping Corridor.—Area bounded by lines joining the following positions:
a. 56°05.95'N, 2°50.45'W.
b. 56°07.98'N, 2°42.27'W.
c. 56°08.00'N, 2°30.00'W
d. 56°07.00'N, 2°30.00'W
e. 56°07.00'N, 2°41.88'W
f. 56°05.05'N, 2°49.72'W

X5638 Firth of Forth Northern Minesweeping Corridor.—Area bounded by lines joining the following positions:
a. 56°14.78'N, 2°33.97'W.
b. 56°14.22'N, 2°32.50'W.
c. 56°07.22'N, 2°41.37'W.
d. 56°07.78'N, 2°42.80'W.

X5639 Coulport South.—Area bounded by lines joining the following positions:
a. 56°03.92'N, 4°52.83'W.
b. 56°03.85'N, 4°52.63'W.
c. 56°03.58'N, 4°52.65'W.
d. 56°03.65'N, 4°53.00'W.
e. 56°03.78'N, 4°52.97'W.

X5640 Coulport North.—Area bounded by lines joining the following positions:
a. 56°04.25'N, 4°52.52'W.
b. 56°04.23'N, 4°52.45'W.
c. 56°04.13'N, 4°52.45'W
d. 56°04.15'N, 4°52.62'W.

Temporary Mine Countermeasures Training Areas

JUTTER (Minesweeping Corridor).—The area 0.5 mile on either side of a line joining the following positions:
a. 51°27.0'N, 1°34.1'E.
b. 51°27.0'N, 1°45.7'E.

HELDER (Knock Deep).—Area bounded by lines joining the following positions:
a. 51°33.28'N, 1°27.02'E.
b. 51°35.61'N, 1°29.37'E.
c. 51°34.57'N, 1°32.21'E.
d. 51°32.26'N, 1°29.48'E.

TEXEL (Margate Roads)—Area bounded by lines joining the following positions:
a. 51°25.21'N, 1°20.90'E.
b. 51°24.23'N, 1°20.90'E.
c. 51°24.23'N, 1°23.20'E.
d. 51°25.21'N, 1°23.20'E.

Navigational Information

Enroute Volumes

Pub. 141, Sailing Directions (Enroute) Scotland.
Pub. 142, Sailing Directions (Enroute) Ireland and the West Coast of England.
Pub. 191, Sailing Directions (Enroute) English Channel.
Pub. 192, Sailing Directions (Enroute) North Sea.

Maritime Claims

The maritime territorial claims of the United Kingdom are,

as follows:

Territorial Sea *	12 miles.
Fisheries or Economic Zone **	200 miles.
Continental Shelf	Defined by coordinates.

* Claims straight baselines.

** Also claims a 200-mile Pollution Zone and a 200-mile Renewable Energy Zone.

The Isle of Man claims a territorial sea of 12 miles and a fisheries zone of 12 miles.

The Bailiwick of Guernsey claims a territorial sea of 3 miles and a fisheries zone of 12 miles.

The Bailiwick of Jersey claims a territorial sea of 12 miles and a fisheries zone of 3 miles, with a special regime in the Bay of Granville beyond 3 miles.

Maritime Boundary Disputes

Dispute with Denmark over the Faroe Islands' continental shelf boundary outside 200 miles.

Pilotage

United Kingdom Pilotage

Each port of the United Kingdom has its own pilotage, the details of which are given in the appropriate volume of Sailing Directions (Enroute).

Most pilot stations and pilot vessels or boats are equipped with radiotelephone and maintain a continuous watch on standard call frequencies.

A vessel requiring a pilot should give an estimated time of arrival together with the gross tonnage, maximum draft, and port of destination, preferably 12 hours in advance and through a coast radio station.

Any adjustment to this time should be given at least 2 hours before arrival. If possible vessels should remain in radio contact to facilitate embarkation of the pilot. Shore pilot stations operate on VHF only.

The sound signal to be sounded by vessels requiring a pilot in thick weather is the letter G in Morse code.

When pilot vessels cruise on station, they will sound on their whistles or fog horns, the letter H in Morse code in thick weather.

United Kingdom pilot vessels usually have an orange or black hull, with the letter P or the word PILOT painted on the bow or side.

Deep Sea Pilotage

Vessels required to use the "mandatory route for tankers from North Hinder to the German Bightband vice versa" are referred to IMO Resolution A.486(xii), adopted on 19 November 1981, concerning the "Recommendation on the use of adequately qualified Deep Sea Pilots in the North Sea, English Channel, and Skagerrak."

Vessels requiring a licensed Deep Sea Pilot for the English Channel, the North Sea, or Skagerrak should send the request to one of the following stations:

1. Brixham Deep Sea Pilots.
2. Brixham (Deep Sea and Coastal Pilots Ltd, Gravesend).
3. Brixham (Torbay).
4. Dirkzwagers Coastal Pilotage, Maassluis.
5. Hammond Deep Sea Pilots.

The following pilot authorities can also provide Deep Sea Pilotage:

1. Dunkerque Deep Sea Pilots (Pilotage Hauturier).
2. German Deep Sea Pilots (Helogland, Die Elbe, or Die Weser).
3. Cherbourg Deep Sea Pilots (Pilotage Hauturier).

Since the pilots may have to travel long distances to the port of embarkation, as much notice as possible should be given to the pilotage agency. For further details, see the appropriate volume of Sailing Directions (Enroute).

Pollution

The following incidents occurring within the United Kingdom Pollution Control Zone must be immediately reported to any MCA Maritime Rescue Coordination Center:

1. Any accident or incident affecting the safety of the ship (collision; grounding; damage, malfunction, or breakdown; flooding; shifting of cargo; or any hull defect or structural failure.
2. Any incident which compromises shipping safety, including failures likely to affect the ship's maneuverability or seaworthiness.
3. Any defects affecting the propulsion system, steering gear, electrical system, navigation equipment, or communications equipment.
4. Any situation liable to lead to pollution of the waters or coastline of the United Kingdom, such as the discharge or threat of discharge of polluting products into the sea.
5. Any slick of polluting materials and containers or packages seen drifting at sea.

The report must include the following information:

1. Ship name.
2. Position.
3. Last port of call.
4. Next port of call.
5. Number of people on board.
6. Date and time of which the accident, incident, or polluting event occurred.
7. Details of the accident, incident, or polluting event.
8. Name and contact information to obtain information regarding the dangerous or polluting cargo on board the ship.

If a slick of pollution or drifting containers or packages are seen from a ship in controlled waters, the following information should be reported:

1. Details of the sighting.
2. Ship name.
3. Position.
4. Any other relevant information referred to in IMO Resolution A.851(20 adopted by the Assembly of the IMO on 27 November 1997.

Contact information can be found under Search and Rescue in the table titled **United Kingdom—MRCC Contact Information**.

Regulations

The Ministry of Defence has stated that should it become necessary to control the entrance of ships into, and the movement of ships within, certain ports under its control in the United Kingdom, the signals described below will be displayed.

These signals will be shown from some conspicuous position in or near the approaches to the ports concerned, and may be displayed also by an Examination or Traffic Control Vessel operating in the approaches. The signals and their meanings are given in the accompanying table.

The lights described above, when exhibited by Examination Vessels, will be carried in addition to their ordinary navigation lights. Masters of vessels are warned that should they approach the entrance to a port which is being controlled by the Ministry of Defense, they should not enter a declared "Dangerous Area," or close boom defenses, without permission, nor should they anchor or stop in a "Dangerous Area" or prohibited anchorage unless instructed to do so.

Masters are advised therefore to communicate with any government or port authority vessel found patrolling in the offing to ascertain the recommended approach route to the port.

Port Entry Control Signals		
Day signal	**Night signal**	**Meaning**
Three red balls, vertically disposed	Three flashing red lights, vertically disposed	Entry to port prohibited
No signal	Three green lights, vertically disposed	Entry to port permitted
One square blue flag	One green light between two red lights, vertically disposed	Movement within the port or anchorage prohibited

Examination Service

In certain circumstances it may be necessary to take special measures to examine, or to establish the identity of, individual vessels desiring to enter ports and to control their entry.

This is the function of the Examination Service, whose officers will be afloat in Examination vessels or Traffic Control vessels.

These vessels will wear the distinguishing flags of the Examination Service, which are:

1. The Examination Service special flag consisting of a blue border with red and white squared center.
2. The Blue Ensign or, occasionally, the White Ensign.

If ordered to anchor in an Examination anchorage, masters are warned that it is forbidden, except for the purposes of avoiding accident, to do any of the following without prior permission being obtained from the Examining Officer:

1. To lower any boat.
2. To communicate with the shore or with any other ship.
3. To weigh the anchors.
4. To allow any person or thing to leave the ship.

The permission of the Home Office Immigration Officer must be obtained before any passenger or member of the crew who has embarked outside the United Kingdom is allowed to land. Nothing in the above paragraphs is to be taken as overruling any regulations issued by local authorities at particular ports or by routing authorities.

European Union Expanded Inspection (EI) Notification

Under European Union (EU) Directive 2009/106/EC, the European Union has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the EU. For further information, see **North Atlantic Ocean—Regulations—European Union Expanded Inspection (EI) Notification**.

The 72-hour message should be sent to the local Maritime and Coastguard Agency (MCA) marine office for the port concerned. Further information can also be obtained from the Maritime and Coastguard Agency web site.

Maritime and Coastguard Agency Home Page
http://www.mcga.gov.uk Choose: Ships and Cargoes/Ship Surveys and Inspections/Mandatory Expanded Inspections

The 24-hour message should be sent to the port authority.

Further information may also be obtained from:

Maritime and Coastguard Agency
Spring Place
105, Commercial Road
Southampton
SO15 1EG
United Kingdom
Telephone: 44-2380-329343
Facsimile: 44-2380-329104
E-mail: psc_headquarters@mcga.gov.uk

Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR)

The NIR of the PMoU has introduced a mandatory reporting system for vessels arriving at or departing from a port or anchorage in the Paris MoU region.

The report for vessels sailing to ports in the Channel Islands should be sent to the port authorities,

The report for vessels sailing to ports in the Isle of Man should be sent, as follows:

a. 72-hour report—the Isle of Man Ship Registry.
b. 24-hour report—the port authority.

Inquiries for the Isle of Man can be directed to the Isle of Man Ship Registry, as follows:

1. Telephone: 44-1624-688500
2. Facsimile: 44-1624-688501
3. E-mail: marine.survey@gov.im

For further information, see **North Atlantic Ocean—Regulations—Paris Memorandum of Understanding on Port State Control (PMoU) New Inspection Regime (NIR).**

European Union Dangerous and Polluting Cargo Notification

Under European Union (EU) Directive 2002/59/EC, any vessel over 300 gross tons and any vessel carrying dangerous or polluting cargo bound to or leaving from EU ports should report to the relevant port authority at least 24 hours in advance.

Particularly Sensitive Sea Areas (PSSA)

The waters off the W coast of the United Kingdom, Ireland, Belgium, France, Spain, and Portugal, from the Sheltand Islands in the N to Cabo San Vicente in the S, including the English Channel, were granted (2004) the status of PSSA by the International Maritime Organization.

A PSSA is an area that requires special protection because of its vulnerability to damage caused by marine activities. Vessels operating in or near such an area should exercise the utmost care to avoid damage to the maritime environment and the marine organisms in it. No waste should be discharged overboard.

The Western Europe Tanker Reporting System (WETREP) was instituted to help protect the environment of the PSSA. Further information on WETREP can be found in the section in North Atlantic Ocean—Ship Reporting System.

Dangerous and Polluting Cargo

The Merchant Shipping (Vessel Traffic Monitoring and Reporting Requirements) Regulations 2004 implement the European Council directive 2002/59/EC relating to vessels bound for or leaving European Union (EU) ports carrying dangerous or polluting cargo.

Merchant Shipping Notice MSN 1817(M+F)—Consolidated European Reporting System (CERS)—Ship Arrival and Departure Notifications (Including Additional Requirements for Ships Carrying Dangerous or Polluting Goods {DPG})—Reporting Requirements in the Event of an Accident/Incident details the requirements applicable to ships and harbor authorities for compliance with statutory reporting arrangements prior to entry into United Kingdom ports under new EU provisions.

The regulations apply to vessels of 300 gross tons and over.

Definitions.—Dangerous cargo is defined, as follows:

1. Cargo classified as dangerous in the IMDG Code.
2. Dangerous liquid substances as listed in Chapter 17 of the IBC Code.
3. Liquefied gases as listed in Chapter 19 of the IGC Code.
4. Solids referred to in Appendix B of the IBC Code.
5. Cargo on which preconditions have been imposed in accordance with paragraph 1.1.3 of the IBC Code or paragraph 1.1.6 of the IGC Code.

Polluting cargo is defined, as follows:

1. Oil, oily mixtures, oil fuel, or crude oil as defined in Annex I to MARPOL.
2. Noxious liquid substances, as defined in Annex II to MARPOL
3. Harmful substances as defined in Annex III to MARPOL
4. Any marine pollutant as defined in the IMDG Code.

Vessels leaving UK ports.—The owner, agent, or master of a vessel leaving a UK port and bound for any other port, including another UK port must notify the port of departure of the information listed below under Required Information prior to departure.

Vessels sailing to a UK port from outside the EU.—The owner, agent, or master of a vessel leaving a port outside the EU and bound for a UK port or an anchorage in UK territorial waters must notify the port of destination of the information listed below under Required Information upon departure from the loading port or, if the location in the UK is not known, as soon as the location becomes known.

Required Information.—The required information for these notifications is, as follows:

1. Vessel name, call sign, and IMO number or MMSI number.
2. Port of destination.
3. For a vessel leaving a port in a member state—ETD from the port of departure or pilot station, as required by the competent authority, and ETA at the port of destination.
4. For a vessel coming from a port located outside the community and bound for a port in a Member State—ETA at the port of destination or pilot station, as required by the competent authority.
5. Number of persons on board.
6. The correct technical name of the dangerous or polluting cargo; the United Nations numbers where they exist; the IMO hazard class in accordance with the IMDG, IBC, and IGC codes; the class of the vessel as defined by the INF Code, where appropriate; the quantities of such cargo and their location on board; and, if carried in transport units other than tanks, their identification marks.
7. Confirmation that a list, manifest, or appropriate loading plan giving details of the dangerous or polluting cargo carried and their location on the vessel is on board.
8. Address from which detailed information on the cargo may be obtained.

Further information on CERS can be obtained, as follows:

1. Telephone: 44-1-224-597987
2. E-mail: cers@mcga.gov.uk

Pre-arrival Reporting

Merchant Shipping Notice MSN 1817(M+F)—Consolidated European Reporting System (CERS)—Ship Arrival and Departure Notifications (Including Additional Requirements for Ships Carrying Dangerous or Polluting Goods {DPG})—Reporting Requirements in the Event of an Accident/Incident details the requirements applicable to ships and harbor authorities for compliance with statutory reporting arrangements prior to entry into United Kingdom ports under new EU provisions.

The regulations apply to vessels of 300 gross tons and over.

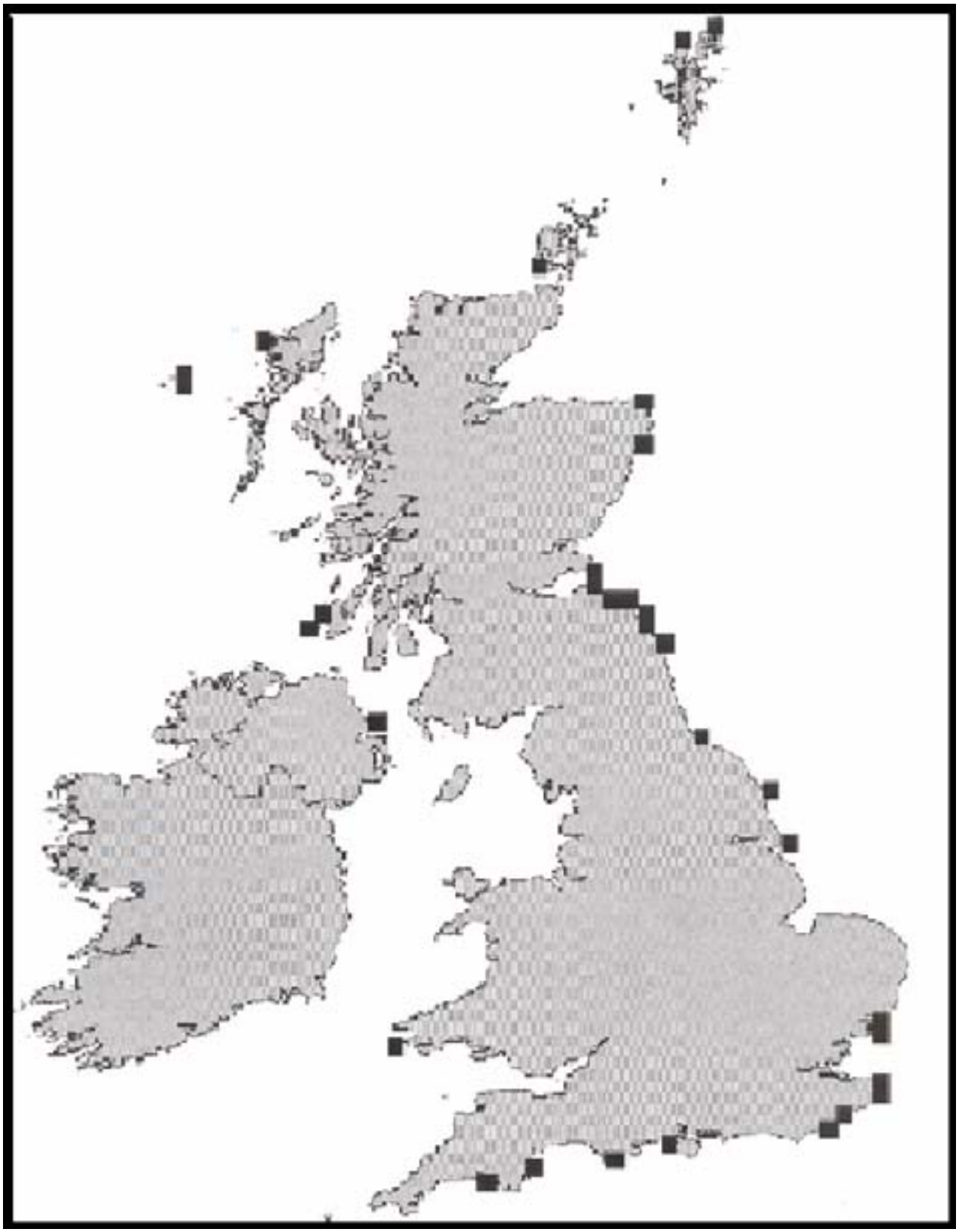
The owner, operator, agent, or master of a vessel is required to report the following information to the port authority of the destination port:

1. Vessel name, call sign, and IMO number or MMSI number.
2. Port of destination.
3. The ETA at the port of destination or pilot station, as required by the competent authority.
4. The ETD from the port of destination as referred to in paragraph 2.
5. Number of persons on board.

This information must be reported, as follows:

1. If the destination port is known, the information must be provided to CERS at least 24 hours prior to arrival.
2. If the duration of the voyage is less than 24 hours, the information must be provided to CERS no later than the time of departure from the previous port.
3. If the destination port is not known until less than 24 hours prior to arrival, the information must be provided to CERS as soon as possible after the destination port becomes known.

If the voyage information changes, the vessel shall immedi-



Marine Environmental High Risk Areas (MEHRAs)

ately notify the destination port. A change of destination must be reported to both the original destination port (cancellation message) and the revised destination port (arrival notification).

Changes in the vessel's ETA of less than 6 hours need not be notified to CERS.

Further information on CERS can be obtained, as follows:

1. Telephone: 44-1-224-597987
2. E-mail: cers@mcga.gov.uk

Rabies Control

Strict regulations are in force to prevent the spread of rabies in the United Kingdom.

Any animal on board a vessel must be kept strictly confined so that it cannot escape to shore or come in contact with another animal. If the animal escapes, the master must immediately inform the police, a Revenue and Customs officer, or an Animal Health Officer of the State Veterinary Service.

Channel Navigation and Information Service (CNIS)

The CNIS operates from Dover Strait Coast Guard and CROSSMA Griz Nez. The broadcasts include information concerning traffic, navigation, and visibility.

For further details of these regulations, see Pub. 191, Sailing Directions (Enroute) English Channel.

Marine Environmental High Risk Areas (MEHRA)

There are 32 locations around the coast of the United Kingdom that have been identified as MEHRAs. These areas have been identified after taking into account shipping risk, environmental sensitivity, and other environmental protection measures already in place at each location. Mariners are expected to take note of MEHRAs and either keep well-clear or, when this is not practical, to to exercise more caution than usual when passing in close proximity to a MEHRA.

Further informationvon MEHRAs can be obtained from the websites of the Maritime and Coastguard Agency or the Department of Transport, as listed in the table titled **Marine Environmental High Risk Areas (MEHRA)—Web Sites**.

Quarantine

A vessel is required to report the following to the Port Health Authority (PHA) not less than 4 hours and not more than 12 hours prior to arrival at a United Kingdom port from a foreign port:

1. The occurence on board the vessel of—
   a. The death of a person other then as a result of an accident.
   b. Illness where the person who is ill or has had a temperature of 38°C or greater which was accompanied by a rash, glandular swelling, or jaundice, or when such a temperature persisted for more than 48 hours.
   c. Illness where the person has or has had diarrhea severe enough to interfere with work or normal activities.
2. The presence on board of a person who is suffering from an infectious disease or who has symptoms which may indicate the presence of an infectious disease.
3. Any other circumstances on board which are likely to cause the spread of infectious disease.
4. The presence of animals or captive birds and the occurrence of mortality or sickness among such animals or birds.

The PHA can be contacted through a shipping agent or, alternatively, through a port radio station. A Medical Officer or other officer of the PHA will board and grant health clearance when any of the circumstances in 1, 2, or 3 above have occured on the vessel.

Marine Environmental High Risk Areas (MEHRA)

Name of Area	Approximate Location(s)
Bass Rock	56°05'N, 2°38'W
Berry Head	50°24'N, 3°29'W
Berwick	55°46'N, 2°00'W
Dunbar	56°00'N, 2°31'W
Dungeness	50°55'N, 0°58'E
Farne Islands	55°38'N, 1°37'W
Fethalan (mainland Shetlands)	60°38'N, 1°20'W
Flamborough Head	54°07'N, 0°05'W
Gallan Head (Isle of Lewis)	58°18.0'N, 6°48.0'W; 58°15.5'N, 6°54.0'W; and 58°14.0'N, 7°00.0'W
Harwich and Felixstowe	51°55'N, 1°16'E and 51°56'N, 1°19'E
Hastings	50°51.5'N, 0°35.0'E
Holy Island	50°41'N, 1°48'W
Islandmagee (Country Antrim)	54°50'N, 5°42'W
Isle of May	56°11'N, 2°33'W
Kinnaird Head	57°38'N, 1°53'W and 57°42'N, 2°05'W
Muckle Flugga	60°51'N, 0°55'W

Marine Environmental High Risk Areas (MEHRA)	
Name of Area	**Approximate Location(s)**
Newburgh	57°19'N, 2°00'W
North St. Kilda	57°49'N, 8°35'W
Pembrokeshire Islands	51°44'N, 5°29'W; 51°44'N, 5°17'W; and 51°42'N, 5°16'W
Plymouth	50°19'N, 4°12'W and 50°19'N, 4°05'W
Portland	50°35'N, 2°27'W
St. Abb's Head and Eyemouth	55°54'N, 2°08'W
South Foreland to Ramsgate	51°09'N, 1°23'E and 51°20'N, 1°25'E
South St. Kilda	57°49'N, 8°35'W
Spurn Bight Hastings	53°36'N, 0°08'E
Tees Holy Island	54°40'N, 1°10'W
Tor Ness (Hoy)	58°51'N, 3°23'W
Western Solent	50°42'N, 1°34'W
West Islay, Argyl, and Bute	55°47'N, 6°29'W

Marine Environmental High Risk Areas (MEHRA)—Web Sites	
Agency	**Web address**
National Archives	http://webarchive.nationalarchives.gov.uk
Department of Transport	http://www.dft.gov.uk/pgr/shippingports/shipping/elc/secmehras/pdfmehras

Search and Rescue

General

HM Coastguard (HMCG) is the authority responsible for initiating and coordinating all civil maritime search and rescue measures for vessels and persons in need of assistance in the United Kingdom Search and Rescue Region (UK SRR).

The area corresponds with the International Civil Aviation Organization (ICAO). The UK SRR approximates closely to that which can be reached by long-range aircraft capable of operating up to 1,000 miles from shore and is bounded by latitude 45° and 61°N, by longitude 30°W, and by the adjacent European SRRs.

The area is further subdivided into three maritime SRRs under the authority of a Regional Operations Manager (SAR) operating from a Maritime Rescue Coordination Center (MRCC). Each of the three SRRs has six Maritime Rescue Coordination Centers (MRCC). The UK SRR surrounds the "Shannon" area, which is the responsibility of the Republic of Ireland. Each HMCG SRR contains several MRCCs.

Search and rescue services which HMCG can call upon in the UK SRR comprise "declared" facilities which are available at short notice and which include military and some civil rotary and fixed wing aircraft and lifeboats of the Royal National Lifeboat Institution (RNLI) as well as additional facilities which include vessels which happen to be available and respond at the time.

The organization is based upon a constantly manned watch system at 18 MRCCs, which together give coverage of UK coastal waters. Additionally, London Coastguard, an operations center based near the Thames Barrier, covers the River Thames as far as Teddington. The voice call sign of an MRCC is the geographical name followed by "Coastguard." (e.g. "SWANSEA COASTGUARD")

These stations, along with contact information, are listed in the table titled **United Kingdom—MRCC Contact Information**.

United Kingdom—MRCC Contact Information			
	Telephone	**Facsimile**	**E-mail**
East of England SRR			
MRCC Humber	44-1262-672317	44-1262-400779	humbercoastguard@mcga.gov.uk
MRCC Thames	44-1255-675518	44-1255-679415	thamescoastguard@mcga.gov.uk
MRCC Solent	44-2392-552100	44-2392-554131	solentcoastguard@mcga.gov.uk
MRCC Yarmouth	44-1493-851338	44-1493-331975	yarmouthcoastguard@mcga.gov.uk

United Kingdom—MRCC Contact Information			
	Telephone	Facsimile	E-mail
London Coastguard	44-208-3127380	44-208-3098196	londoncoastguard@mcga.gov.uk
MRCC Portland	44-1305-760439	44-1305-760451	portlandcoastguard@mcga.gov.uk
MRCC Dover	44-1304-210008	44-1304-202137	wm.dover@mcga.gov.uk
Wales and West of England SRR			
MRCC Brixham	44-1803-882704	44-1803-859562	brixhamcoastguard@mcga.gov.uk
MRCC Falmouth	44-1326-317575	44-1326-315610 44-1326-318342	falmouthcoastguard@mcga.gov.uk
MRCC Holyhead	44-1407-762051	44-1407-761613	holyheadcoastguard@mcga.gov.uk
MRCC Liverpool	44-151-9313341	44-151-9313347	liverpoolcoastguard@mcga.gov.uk
MRCC Milford Haven	44-1646-690909	44-1646-697287	milfordhavencoastguard@mcga.gov.uk
MRCC Swansea	44-1792-366534	44-1792-368371	swanseacoastguard@mcga.gov.uk
Scotland and Northern Ireland SRR			
MRCC Aberdeen	44-1224-592334	44-1224-575920	aberdeencoastguard@mcga.gov.uk
MRCC Belfast	44-2891-463933	44-2891-465886	belfastcoastguard@mcga.gov.uk
MRCC Clyde	44-1475-729988	44-1475-888095	clydecoastguard@mcga.gov.uk
MRCC Forth	44-1333-450666	44-1333-450703	forthcoastguard@mcga.gov.uk
MRCC Shetland	44-1595-692976	44-1595-693634	shetlandcoastguard@mcga.gov.uk
MRCC Stornoway	44-1851-702013	44-1851-706796	stw_cg@mcga.gov.uk

Within each of the 18 districts associated with an MRCC there is an organization of Auxiliary Coastguard Rescue Teams grouped within sectors under the management of regular HM Coastguard Officers (HMCG). There are about 65 sectors, in each of which are several Auxiliary Coastguard stations. Appropriate scales of rescue equipment are maintained at all stations.

The HMCG is responsible for maintaining:

1. A continuous listening watch on VHF channel 16 with a coverage of at least 30 miles offshore of the coast of the United Kingdom.
2. An electronic radio watch on VHF DSC channel 70 covering up to 30 miles offshore.
3. An electronic radio watch on MF DSC on 2187.5 kHz at MRCC Falmouth, MRCC Milford Haven, MRCC Holyhead, MRCC Clyde, MRCC Stornoway, MRCC Shetland, MRCC Aberdeen, and MRCC Humber, covering 30 to 150 miles offshore.

All MRCCs also keep a continuous telephone and fax watch and have a VHF Direction Finding capability.

MRCC Dover, which is also the station responsible for the Channel Navigation Information Service (CNIS), operates a radar surveillance system and maintains a constant liaison with its French counterpart at Cap Nez in monitoring the traffic flow through the Dover Strait.

Regular broadcasts are made at 40 minutes past each hour on VHF channel 11, with additional broadcasts in poor visibility or as circumstances dictate. CNIS operates an aircraft to identify vessels which may appear not to be complying with the International Regulations for Preventing Collision at Sea, 1972. All its facilities are available for SAR operations or other maritime emergencies.

CALDOVREP is a mandatory ship reporting system under SOLAS regulations for the Dover Strait Traffic Separation Scheme (TSS); it is operated jointly by the United Kingdom and France, with ships reporting to either MRCC Dover or MRCC Gris Nez.

MRSC Portland are also "reporting in" stations for ships operating the Ship Movement Reporting System (MAREP).

Vessels may also make voluntary Position and Intended Movement Reports to MRCC Falmouth, MRCC Shetland, and MRCC Stornoway when on passage through their areas of responsibility.

In addition to its regional responsibilities, MRCC Falmouth plays an important role in the GMDSS established by the IMO. MRCC Falmouth is the UK Single Point of Contact (SPOC) for worldwide RCC outside the European area of operations. It is also the link for INMARSAT alerts and satellite traffic, as well as maintaining the UK EPIRB Registry.

Resources

HMCG operates SAR helicopters based at Sumburgh in the Shetland Isles, Stornoway, Lee on Solent, and, in daylight hours only, Portland.

The MCA has four emergency towing vessels (ETV) on charter to provide emergency towing service in those areas deemed at high risk of environmental damage due to vessel casualties. These vessels are based in the Northern Isles, the Minches, Dover Strait, and the Southwestern Approaches.

The Coastguard Agreement for Salvage and Towing (CAST) is a standing agreement with tug operators and other vessels capable of assisting MCA with towing, salvage, or other work

related to saving life or property or environmental protection.

The Royal Air Force operates SAR fixed wing aircraft and helicopters which are controlled through the Air Rescue Coordination Center at Kinloss. It is responsible for coordinating and controlling rescues on behalf of service and civil aviation in the UK SRR and provides resources for civil maritime SAR in the form of fixed wing aircraft and helicopters.

The Royal Navy operates SAR helicopters from two Royal Naval Air Stations. Royal Naval ships and aircraft, including non-SAR helicopters, also assist casualties.

The Royal National Lifeboat Institution (RNLI), which is a private organization supported entirely by voluntary contributions, maintains over 400 lifeboats of various types (all-weather lifeboats and inshore lifeboats) at more than 230 lifeboat stations around the coast of the United Kingdom, the Republic of Ireland, the Isle of Man, and the Channel Islands. The inshore lifeboats are equipped with VHF/FM radio and only maintain a listening watch on VHF channel 16. Every all-weather lifeboat is equipped the following:

1. VHF radiotelephone and DSC equipment.
2. Medium frequency radiotelephone and DSC equipment.
3. High frequency radiotelephone and DSC equipment
4. VHF direction-finding equipment capable of detecting EPIRB and PLB transmissions on marine VHF frequencies and on 121.5 MHz.
5. Radar capable of activating and detecting SART transponders.

When on service, these boats monitor all GMDSS DSC emergency frequencies appropriate to Sea Area A1 and Sea Area A2.

The coxswain of the lifeboat is kept informed by radiotelephone either directly from HMCG.

All-weather lifeboats are from 12 to 17m long, with speeds of 17 knots or more and ranges of 140 to 250 miles. Inshore lifeboats are of inflatable or rigid inflatable construction, with outboard moters capable of speeds of 20 to 30 knots.

All-weather lifeboats and the larger inshore lifeboats of the RNLI are now fitted with a quick flashing blue light exhibited from the masthead showing at least 120 flashes every minute.

Air Traffic Control Centers are often the first to receive information about aircraft in distress. All commercial and many private aircraft are able to communicate with these centers by radio, and, in certain circumstances, are obligated to do so. They may be requested to assist in the search for a casualty at sea by keeping a look out along or near their normal routes, by reporting the position of the casualty if they should find it and, if possible, by guiding ships to the rescue.

Lloyd's, who are informed of casualties by HMCG, will advise HMCG of the position of any tugs in the area they are aware of and may also notify of any ocean-going tugs.

Local officers of the Fishery Departments communicate with HMCG when reports are received of fishing vessels which are missing or overdue.

The SAR action taken when a casualty occurs or is imminent depends on whether a ship or aircraft is involved, its position and the circumstances.

Marine Casualties within the UK SRR

If a ship in distress transmits a distress call, other ships must proceed its its assistance. An MRCC or an MRSC, upon hearing or receiving the distress call, will rebroadcast it by all appropriate means, to alert shipping in the area and to Lloyd's. Immediate SAR action will be taken and assistance will be requested from:

1. The ARCC at Kinloss, who can call upon RN warships and helicopters, and RAF fixed-wing aircraft and helicopters.
2. HMCG helicopters, where appropriate.
3. Royal National Lifeboat Institution Lifeboats, if the casualty is within their operating range.
4. Shipping in the area of the casualty.
5. The Automated Mutual-Assistance Vessel Rescue System (AMVER) Center in New York to establish which ships may be in the vicinity of the casualty.
6. Auxiliary Coastguard Rescue Teams.
7. HMCG ETVs when on station.
8. Tugs available under the CAST agreement.

The MRCC or MRSC will coordinate SAR action until a successful conclusion, or until search is called off, keeping all participants, including foreign SAR authorities where necessary, informed. Tug companies, on being alerted by Lloyd's or HMCG, may send tugs.

Vessels Close to the Coast

HMCG may be informed of an actual or imminent distress situation by VHF or MF radio (direct or through a coast radio station), satellite, EPIRBs, or a report of distress by a 999 (or 112) emergency telephone call. In every case, the MRCC or MRSC receiving the initial distress automatically becomes the coordinating station for the incident.

Automatic Ship Identification System (AIS) Network

The Maritime and Coastguard Agency (MCA) has established an AIS network of base station transponders in accordance with SOLAS Chapter V Regulation 19 and European Monitoring Directive 2002/59/EC.

The AIS operates primarily on two dedicated VHF channels, as follows:

1. AIS1—161.975 MHz.
2. AIS2—162.025 MHz.

Where these two channels are not available regionally, the AIS is capable of automatically switching to alternative designated channels.

United Kingdom—AIS Network	
MCA District	**Base Station**
Aberdeen	Dunnet Head
	Durness
	Gregness
	Noss Head
	Rosemarkie
	Windyheads Hill
Belfast	Limavady
	Orlock Head
Brixham	East Prawle

United Kingdom—AIS Network	
MCA District	**Base Station**
Clyde	Glengorm
	Kilchiaran
	Law Hill
	Pulpit Hill
	South Knapdale
	Tiree
Dover	Fairlight
	MRCC Dover
	North Foreland
Falmouth	Land's End
	Lizard Point
	The Scillies
Forth	Inverbervie
	MRSC Forth
	Saint Abb's Crosslaw
Holyhead	South Stack
Humber	Cullercoats
	Flamborough Head
	Whitby
Liverpool	MRSC Liverpool
	Snaefell
Milford	Dinas
	Saint Ann's Head
Portland	The Grove
Shetland	Collarfirth Hill
	Compass Head
	Saxa Vord
	Wideford Hill
Solent	Needles
	Newhaven
	Selsey
Stornoway	Butt of Lewis
	Forsnaval
	Melvaig
	Rodel
Swansea	Hartland Point
	Mumbles Hill
	Severn Bridge
Thames	MRSC Thames
Yarmouth	Langham
	MRCC Yarmouth
	Skagness

The locations of the base stations of the AIS network are given in the accompanying table titled **United Kingdom—AIS Network**.

The AIS network operates within IMO guidelines and is capable of receiving all message types and, in particular, AIS message type 5 (ship's static and voyage-related data), provided at 6-minute intervals in accordance with ITU-R M.1371-3.

The information requested can include position, vessel and cargo type (e.g. tanker or cargo vessel and whether cargo is hazardous), length, draft, next port of call, course, and speed. This automated procedure will allow identification and tracking of suitably-equipped vessels without further interaction from either the UK Coastguard or the vessel's crew.

Mariners on vessels fitted with an AIS should be aware that the AIS will be transmitting own-ship data to other vessels and shore stations. Vessels are advised to:

1. Initiate action to prevent improper installation.
2. Ensure the correct information on the vessel's identity, position, and movements (including voyage-specific information) is transmitted.
3. Ensure the AIS is turned on within at least 100 miles of the coast of the United Kingdom.

The routine updating of data into the AIS should be included in the navigating officer's checklist. The following data should be manually entered at the start of the voyage:

1. Vessel's draft.
2. Hazardous cargo on board.
3. Destination and ETA.
4. Route plan (way points).
5. Correct navigational status.
6. Short safety-related messages.

It is recommended that the UN/LOCODE be used for destination name to avoid any confusion caused by incorrect spelling.

Further information may be obtained from:

Navigation Safety Branch
Maritime and Coastguard Agency
Spring Place
105, Commercial Road
Southampton
SO15 1EG
United Kingdom
Telephone: 44-2380-329521
Facsimile: 44-2380-329204
E-mail: navigationsafety@mcga.gov.uk

Voluntary Search and Rescue Organizations

National Coastwatch Institute (NCI).—A voluntary organization keeping a visual watch along the shores of the United Kingdom. Currently (2010) over 40 fully-operational NCI sta-

tions are situated along the coast from Cornwall in the SW to Wearside in the NE.

National Coastwatch Institute Home Page
http://www.nci.org.uk

Sea Safety Group (SSG).—A voluntary organization keeping a visual watch along the shores of the United Kingdom as well as monitoring all VHF distress channels. Currently (2010) operates seven stations situated along the coast.

Sea Safety Group Home Page
http://www.seasafetygroup.org.

Ship Reporting System

United Kingdom Ship Movement Report System (MAREP)

The United Kingdom Ship Movement Report System (MAREP) is a voluntary reporting system which applies to the following vessels:

1. All merchant vessels over 300 grt. Vessels of 300 grt and under are strongly encouraged to participate.
2. Any vessels "not under command" or at anchor in a Traffic Separation Scheme (TSS) or an Inshore Traffic Zone (ITZ).
3. Any vessel "restricted in its ability to maneuver."
4. Any vessel with defective navigational aids.

There are multiple areas off the coast of the United Kingdom where MAREP regulations apply, as follows:

1. English Channel and Dover Strait—See the Appendix.
2. Fair Isle Channel—See Pub. 141, Sailing Directions (Enroute) Scotland.
3. Pentland Firth—See Pub. 141, Sailing Directions (Enroute) Scotland.
4. The Minches—See Pub. 141, Sailing Directions (Enroute) Scotland.
5. Kyle of Lochalsh—See Pub. 141, Sailing Directions (Enroute) Scotland.
6. Land's End/Isles of Scilly—See Pub. 191, Sailing Directions (Enroute) English Channel.

Dover Strait Reporting System (CALDOVREP)

CALDOVREP, a mandatory reporting system under SOLAS regulations, has been established in a 65-mile stretch of the Dover Traffic Separation Scheme (TSS). All vessels over 300 gross tons are required to participate in this system; specified vessels under 300 gross tons are also required to paricipate in the system.Vessels participating in this system are tracked by radar. Vessels which appear to be navigating within a TSS contrary to the requirements of Rule 10 of the International Collision Regulations (72 COLREGS) will be reported to their flag state.

Further information can be found in Pub. 191, Sailing Directions (Enroute) English Channel.

CORSEN-OUESSANT (OUESSREP)

CORSEN-OUESSANT (OUESSREP), a Vessel Traffic Service (VTS) system, has been established in the W approaches to the English Channel. It is a mandatory reporting system under SOLAS regulations and operates within an area with a radius of 40 miles centered on Ile d'Ouessant. All vessels over 300 gross tons are required to participate in this system. Special IMO provisions have also been established for vessels using the Traffic Separation Scheme (TSS) situated off Ouessant (Ushant).

Further information can be found in Pub. 191, Sailing Directions (Enroute) English Channel.

Jobourg Vessel Traffic Service (MANCHEREP)

MANCHEREP is a mandatory reporting system operating under SOLAS regulations which has been established in an area covering the Traffic Separation Scheme off Les Casquets. All vessels over 300 gross tons are required to participate in this system; specidied vessels under 300 gross tons are also required to paricipate in the system.

Further information can be found in Pub. 191, Sailing Directions (Enroute) English Channel.

Western Europe Tanker Reporting System (WETREP)

The Western Europe Tanker Reporting System (WETREP), a mandatory reporting system covering the waters off Belgium, the W coast and English Channel coasts of France, Ireland, Portugal; the N and W coasts of Spain, and the English Channel and W coasts of the United Kingdom, including the Shetland Isles, is in effect.

Further information can be found in North Atlantic Ocean—Ship Reporting System.

Signals

The display of a visual gale warning signal indicates that a gale is expected within 12 hours, or is already in progress, in the coastal area on the landward boundary of which the station flying the cone is situated.

The cone signal will be lowered when the wind is below gale force and a renewal of gale force winds is not expected within 6 hours, so that the cone signal is left flying during a temporary abatement of a gale if a renewal is expected.

The coastal sea areas are those designated for use in the weather reports for shipping and for dissemination through the medium of the BBC and GPO coast radio stations broadcasts which abut the coasts of the United Kingdom.

The warning signals are, as follows:

1. By day—A black or a white cone, 1m high and 1m wide at the base.
2. By night—Three lights in the form of a triangle, 1m wide at the base.

The N cone (point up) is hoisted for gales from any point N of the E-W line. The S cone (point down) is hoisted for gales from any point S of the E-W line.

When the direction of the gale is expected to change from the N side to the S side of the E-W line, the N cone is lowered and the S cone hoisted. Conversely, when the direction of the gale is expected to change from the S side to the N side of the E-W line the cone is changed accordingly.

Inshore mariners, for whose benefit the visual gale warning service is primarily intended, are advised that a cone signal now relates solely to the operation of a local sea area gale warning. Information given by these cone signals is to be re-

garded only as supplementary to the more detailed weather bulletins for shipping which are regularly broadcast from the BBC and GPO radio transmitters.

Traffic and Tidal Signals

Most British ports use a form of the International Traffic and Tidal Signals which may vary to the specific need of the individual harbors. In general, tidal locks and basins display these type signals to indicate entrance depths and traffic conditions and specific details are published in the appropriate volume of Sailing Directions (Enroute) for the area.

Port Entry Control Signals

Certain ports under the control of the Ministry of Defense of the United Kingdom may find it necessary to control the entrance of ships into and the movement of ships within these ports. Further information on these signals can be found under Regulations.

Submarine Operating Areas

The British Admiralty indicates that British submarines may be met day or night while operating in any of the waters of the British Isles, but most particularly in the vicinity of the ports of Clyde, North Channel, Minches, Plymouth, and Barrow. Submarines may be surfaced or submerged, operating independently or with surface ships or aircraft. Submarines also operate in the Firth of Forth and its approaches; off Flamborough Head; in an area centered on position 56°45'N, 1°30'E; and in an area centered on position 54°05'N, 2°32'E.

It must not be inferred from the above that submarines exercise only when in company with escorting vessels. The notice "Submarine Exercise Area" on certain charts should not be read to mean that submarines do not exercise outside such areas. Warnings that submarines are exercising in specified areas will be broadcast by a British Telecom coast radio station.

Submarines occasionally tow sonar equipment. Vessels are recommended to remain at least 1,500m clear when crossing astern of a surfaced submarine.

Submarine Indicator Buoys

British submarines are fitted with two indicator buoys, one at each end of the ship, which can be released from inside in case of emergency or if for any reason the submarine is unable to surface.

The buoy, known as Type 0070, is made of expanded plastic foam covered with a 3mm thick GRP skin for physical protection. It is semi-spherical in shape, 76cm in diameter and 90cm deep.

Anchorage for the 5mm braided nylon rope mooring at the bottom of the buoy is slightly offset from the center.

The buoy floats end up with a freeboard of about 15cm in slack water. It is covered with longitudinal strips of reflective tape alternately red and white. For identification purposes each buoy is allocated a three digit serial number which is displayed on each side under the words "Forward" or "Aft."

Also inscribed around the top of the buoy are the words: "FINDER INFORM NAVY, COASTGUARD OR POLICE. DO NOT SECURE TO OR TOUCH."

A program is in place to change the color scheme of these indicator buoys to a uniform international orange. The other wording will remain the same. It is possible that either type may be encountered.

A light which flashes approximately every 2 seconds, over a period of about 72 hours, is mounted in the center of the top surface. In darkness and during good weather, the unassisted visibility of the light is 5 miles.

The buoy carries UHF whip aerials (200cm and 100cm long) and is fitted with two automatic transmitting radio units which operate on 406.0 MHz and 243.0 MHz.

The 243.0 MHz SABRE emission will consist of three audio sweeps from 1600 Hz down to not lower than 300 Hz, occupying a period of 1.2 seconds. The emission will then be silent for 0.8 second. The transmission duration should continue for a minimum of 72 hours.

The 406.0 MHz emission will consist of a SARSET transmission.

Visual Signals

The following signals may frequently be met with in areas where British ships and aircraft exercise, whether or not submarines are present, and should not be confused with submarine indicator buoys.

In case of doubt the object should be approached to confirm, visually, whether or not it is a submarine indicator buoy before reporting it.

White Smoke Candles.—These are fired from submarines to indicate their position. They burn for up to 10 minutes emitting white smoke and flame and can thus be seen by day or night; they can easily be confused with aircraft marine markers and floats, smoke, and flame. The candle can also give off a yellowish-green dye indicating that a message is attached at its top end; the candle is green.

Yellow Smoke Candles.—These are fired from submarines to indicate their position. They burn for about 5 minutes, emitting yellow smoke.

They can be seen more easily than the white smoke candles in rough weather, but cannot be seen at night. The candle is green with a red band.

Sonobuoys

These are dropped from aircraft to detect submarines and may be encountered anywhere at sea. The sonobuoy has a yellow flotation bag.

Smoke and Flame Flares and Marine Markers

These are dropped from aircraft to aid in search operations. They burn for varying durations. The flares and markers have pale blue and luminous orange tips. Other versions are in service and may be encountered.

British vessels fly the appropriate group of the International Code of Signals to denote that submarines, which may be submerged, are in the vicinity. Vessels are cautioned to steer so as to give a wide berth to any vessel flying this signal.

If from any cause it is necessary to approach the vessel, a good lookout must be kept for submarines whose presence may be indicated only by their periscopes or snorts showing above the water.

A submarine submerged at a depth too great to show the periscope may sometimes indicate the position by red and white or red and yellow buffs or floats, which tow on the surface close astern.

Submerged submarines also use white or yellow smoke candles, or yellow and green pyrotechnic flares to indicate their positions in response to requests from surface ships or aircraft or as required. Red pyrotechnic flares are released to indicate emergency surfacing procedures are in effect and all vessels in the vicinity should clear the immediate area at once without stopping their propellers and thence standby at a distance to render assistance.

Two white or yellow smoke candles released singly about 3 minutes apart indicate the submarine is preparing to surface.

Vessels should clear area immediately without stopping propellers.

Distress Signals

A bottomed submarine which is unable to surface will try to indicate its position by the following methods:

1. Releasing a red and white striped indicator buoy (which carries a vertical whip aerial) as soon as the accident occurs.
2. On the approach of surface vessels and at regular intervals by firing candles giving off a red flame and white smoke or just yellow smoke.
3. Pumping out oil, fuel, or lubricating oil.
4. Blowing out air.

If the red pyrotechnic flare signal is sighted and the submarine does not surface within 5 minutes, it should be assumed that the submarine is in distress and has sunk.

An immediate attempt should be made to fix the position in which the signal was sighted, after which action in accordance with emergency reported procedures should be taken.

It should be remembered that it may be impossible for a submarine to fire its smoke candles. Correspondingly, a partially-flooded submarine may have only a certain number of its smoke candles available and searching ships should not therefore expect many to appear.

Some submarine pyrotechnics can be fitted with message carriers. If a message has been attached, the pyrotechnic will be fitted with a dye marker, giving off a yellowish-green dye on the surface. Such a pyrotechnic should be recovered as soon as it has finished burning.

Since oil slicks or debris may be the only indication of the presence or whereabouts of the sunken submarine, it is vitally important that surface ships refrain from discharging anything which might appear to have come from a submarine while they are in the submarine probability area. Searching ships and aircraft can waste many valuable hours investigating these false contacts.

In any submarine accident, time is the most vital factor affecting the chances of rescue of survivors, and as the sighting of an indicator buoy may be the first intimation that an accident has in fact occurred, it is vital that no time should be lost in taking action.

The sighting of an indicator buoy or other submarine distress signal should be reported by the quickest available means to the Navy, Coast Guard, or Police. However, if vessels are unable to establish communications without leaving the vicinity of the submarine, it should be borne in mind that the primary consideration should be for vessels to remain standing by to rescue survivors and not leave the scene of the accident.

Every effort should be made to include in the report the serial number of the buoy; this number is affixed below the word "Forward" or "Aft."

Indicator buoys are attached to the submarine by a 1,000m braided line. Buoys found in areas where the depth of water is less than 1,000m may be secured to a sunken submarine. In areas where strong tidal streams or currents are prevalent the depth from which the buoy may be expected to watch is considerably reduced and in these areas it is possible that a buoy may only watch at slack tide.

It is possible that indicator buoys may break adrift accidentally even though the parent submarine may not have sunk, similarly a buoy found to be adrift is not necessarily an indication that all is well since it may have broken adrift after being deliberately released following an accident.

In any case it is therefore important to establish whether or not the buoy is adrift and it is considered that the only practical means of determining movement is by observing its behavior in a tidal stream or seaway, or periodically fixing its position.

In any event, it is absolutely vital that the mooring wire is not parted, nor any tension applied to it. Boats should not secure to it.

The preferred method of saving the lives of personnel in a sunken submarine is by rescue. This involves the use of specialized submersible and support craft, and is likely to take a considerable period of time before they can all arrive at the scene of the accident. The first assisting personnel on the scene are likely to be parachuted in with their own inflatable boats. Once a rescue operation gets underway, it is vital that vessels not involved keep well clear. Most submarines are now fitted to receive rescue vehicles, but for those that are not, escape is the only option.

At any time between the accident and the arrival of assisting or rescue forces, conditions in the bottomed submarine may deteriorate to the point where the crew have to escape. The precise time at which an escape may be conducted will not be known in the early stages of any operation, and thus it is important that any ship finding an indicator buoy should stand by ready to receive escapees until relieved by naval forces.

In order that those trapped in the submarine know that help is at hand, naval vessels drop patterns of very small explosive charges, the meanings of which are known to the submarine. Rather than do this, other vessels can indicate their presence by the intermittent running of an echo sounder on high power, or by banging on the outer skin of an underwater portion of the ship's hull with a hammer. Such sounds are likely to be heard by the submarine and should be carried out at frequent intervals. The submarine may, if possible, acknowledge this by releasing a flare which gives off a flame or smoke once reaching the surface. Once naval forces arrive, such noise-making should be stopped so as not to interfere with other underwater communications.

If the escape option is started, escapees will ascend nearly vertically from the bottomed submarine, either individually or in small groups. On arrival at the surface, they may be exhausted or ill, and the presence of an already lowered boat to assist in their recovery is very desirable. Some men may require recompression treatment, and naval authorities will aim to get such recompression chambers to the scene as soon as possible.

Naval authorities are always ready to put an escape and rescue operation into effect, but it remains clear that any vessel finding evidence of a submarine disaster may be in a unique position to assist lifesaving by taking prompt action as de-

scribed above.

Navigation Lights

The masthead and side lights of British submarines are placed well forward and very low over the water in proportion to the length and tonnage of these vessels. Stern lights are placed very low and may at times be partially obscured by spray and wash. They are invariably lower than the sidelights.

While at anchor or a buoy by night submarines display an all-round white light amidships in addition to the normal anchor lights. The after anchor light of nuclear submarines is mounted on the upper rudder which is some distance astern of the hull's surface waterline. Care must be taken to avoid confusion with two separate vessels of less than 50m in length.

The overall arrangement of submarine lights are unusual and may well give the impression of markedly smaller and shorter vessels than they are.

Their vulnerability to collision when proceeding on the surface and the fact that some submarines are nuclear powered dictates particular caution when approaching them.

Some submarines are fitted with an amber quick-flashing light situated about 1 to 2m above or below the masthead light.

This additional light is for use as an aid to identification in narrow waters and areas of dense traffic. The rate of flash of the submarine fitted light is 70 to 180 flashes per minute or flashing (3) at a short interval; this should not be confused with a similar light used by hovercraft currently with a rate of 120 flashes per minute. Some Bristish submarines display an all round flashing amber light showing 90 flashes per minute.

The showing of one of these quick-flashing lights is intended to indicate to an approaching vessel the need for added caution rather than to give immediate identification of the type of vessel exhibiting such lights. Subsequent identification of submarine or hovercraft can usually be made by observation.

Limits of Areas

British submarines operate in numerous areas off the coast of Scotland, the coast of Northern Ireland, and the W coast of England. Submarine operating areas are shown on a special series of charts (PEXA charts) published by the British Hydrographic Department.

Submarines also operate in the Firth of Lorne (56°18'N., 5°47'W.), The Minches (58°00'N., 6°00'W.), and the approaches to Belfast Lough (54°46'N., 5°30'W.).

Submarines operate frequently in the SW approaches to the English Channel and the Bristol Channel, S of 50°30'N and E of 10°00'W. A good lookout should be kept for them when passing through these waters.

Time Zone

The Time Zone description is ZULU. Daylight Savings Time (ALFA (-1)) is maintained from the last Sunday in March until the last Sunday in October.

Traffic Separation Schemes

Traffic Separation Schemes (TSS) in the United Kingdom are, as follows:

1. **East Coast**
   a. Approaches to the River Humber. (IMO adopted)
   b. In the Sunk area and Northern Approaches to the Thames Estuary. (IMO adopted)
   c. At North Hinder (comprising Noord Hinder North and Noord Hinder South Traffic Separation Schemes). (IMO adopted)
   d. In the approaches to the Hook of Holland (comprising Maas West Outer, Maas West Inner, Maas Northwest, and Maas North Traffic Separation Schemes). (IMO adopted)
   e. At West Hinder. (IMO adopted)
2. **South Coast**
   a. In the Strait of Dover and adjacent waters. (IMO adopted)
   b. Off Land's End between Seven Stones and Longships. (IMO adopted)
   c. South of the Scilly Isles. (IMO adopted)
   d. West of the Scilly Isles. (IMO adopted)
   e. Off Fastnet Rock. (IMO adopted)
   f. Off Smalls. (IMO adopted)
   g. Off Tuskar Rock. (IMO adopted)
3. **West Coast (Wales).—**Holyhead Harbor. (Stena Line Ports Limited, Holyhead)
4. **West Coast (England)**
   a. Liverpool Bay. (IMO adopted)
   b. Land's End. (IMO adopted)
5. **West Coast (Scotland)**
   a. Off Skerries. (IMO adopted)
   b. Off Neist Point. (IMO adopted)
6. **North Coast (Scotland).—**In the North Channel. (IMO adopted)

U.S. Embassy

The embassy is situated at 24 Grosvenor Square, London. The mailing addresses are, as follows:

1. United Kingdom address—
   24 Grosvenor Square
   London W1A 1AE
2. U. S. address—
   PSC 801, Box 40
   FPO AE (09498-4040)

U. S. Embassy United Kingdom Home Page
http://london.usembassy.gov

Vessel Traffic Service

Vessel Traffic Services are in operation, as follows:

1. Aberdeen (57°09'N., 2°03'W.). [1]
2. Peterhead (57°30'N., 1°46'W.). [1]
3. Orkney Islands (58°54'N., 3°04'W.). [1]
4. Sullum Voe (60°28'N., 1°18'W.). [1]
5. Larne (54°51'N., 5°48'W.). [2]
6. Belfast (54°40'N., 5°51'W.). [2]
7. Liverpool (53°27'N., 3°02'W.). [2]
8. Manchester Ship Canal (53°19'N., 2°57'W.). [2]
9. Milford Haven (51°42'N., 5°02'E.). [2]
10. Bristol (51°30'N., 2°44'W.). [2]
11. Plymouth (50°21'N., 4°11'W.). [3]
12. Poole (50°42'N., 1°59'W.). [3]

13. Southampton (50°53'N., 1°24'W.). [3]
14. Dover (51°07'N., 1°20'E.). [3]
15. St. Helier, Channel Islands (49°10'N., 2°07'W.). [3]
16. Medway (51°27'N., 0°44'E.). [4]
17. London (51°34'N., 0°54'E.). [4]
18. Sunk (51°50'N., 1°46'E.). [4]
19. Harwich/Ipswich (51°57'N., 1°18'E.). [4]
20. Humber (53°33'N., 0°04'W.). [4]
21. Tees and Hartlepool (54°40'N., 1°08'W.). [4]
22. Tyne (55°01'N., 1°24'W.). [4]
23. Forth Ports (58°00'N., 3°24'W.). [4]

[1] For further information, see Pub. 141, Sailing Directions (Enroute) Scotland.

[2] For further information, see Pub. 142, Sailing Directions (Enroute) Ireland and the West Coast of England.

[3] For further information, see Pub. 191, Sailing Directions (Enroute) English Channel.

[4] For further information, see Pub. 192, Sailing Directions (Enroute) North Sea.

Wrecks

As promulgated by U.K. authorities, the Protection of Wrecks Act (1973), enables the Secretary of State to make orders to protect certain wreck sites in United Kingdom waters from unauthorized interference on account of either:

1. Their historic, archaeological or artistic importance or
2. Their potentially dangerous condition

In the case of historic wrecks as in 1 above, "unauthorized interference" includes tampering with, damaging or removing any part of a wreck within the area indicated, or carrying out diving or salvage operations within the area without a special license issued by the Secretary of State.

In dangerous condition as at 2 above, entry into the area is prohibited.

The wreck sites are shown in magenta on NIMA charts. Anyone convicted under the terms of this Act will be liable to a fine not exceeding 1,000 pounds sterling.

There are 37 historic wrecks within the waters of the UK. under this Act. They have been declared restricted on account of the historical and archaeological importance of these sites.

The stranded wreck Richard Montgomery (51°27.9'N., 00°47.2'E.) has been declared a prohibited area due to explosives contained within the wreck.

There are over 2,000 wrecks in the English Channel area and although the least depth over the most critical ones has been obtained by wire sweep, experience shows that unknown wrecks, most of vessels sunk in the two world wars, do sometimes exist in the vicinity of the shipping lanes, since a number or previously unknown wrecks have been found in recent surveys.

Sonar searches to locate wrecks are carried out simultaneously with modern surveys, but sonar conditions in the area are particularly bad and wrecks may also be screened by sand banks making their location difficult. In addition, wrecks previously covered by sand may become uncovered in newly formed navigational channels.

Strong tidal currents cause deep scouring close to wrecks, which may sometimes capsize into the scour. In most cases this results in a greater depth over the wreck, but a decrease of depth from this cause can sometimes occur.

Appendix—United Kingdom Ship Movement Report System (MAREP)

The United Kingdom Ship Movement Report System (MAREP) is a voluntary reporting system which applies to the following vessels:

1. All merchant vessels over 300 grt. Vessels of 300 grt and under are strongly encouraged to participate.
2. Any vessels "not under command" or at anchor in a Traffic Separation Scheme (TSS) or an Inshore Traffic Zone (ITZ).
3. Any vessel "restricted in its ability to maneuver."
4. Any vessel with defective navigational aids.

The reporting area is bounded by, as follows:

1. A line between the Ouessant SW Lanby (48°30.0'N., 5°50.0'W.) and Bishop Rock Light (49°52.3'N., 6°26.7'W.).
2. A line joining North Foreland (51°22'N., 1°28'E.) to the Belgian coast through Mid Falls Lighted Buoy (51°1.09'N., 1°47.0'E.).

Mandatory reporting procedures apply to all vessels over 300 grt in the following areas:

1. The TSS Off Ouessant (OUESSREP) and its associated ITZs.
2. The TSS Off Casquets (MANCHEREP) and its associated ITZs.
3. The TSS in the Strait of Dover and its Adjacent Waters (CALDOVREP) and its associated ITZs.

Vessels should report to the appropriate shore station, as follows:

1. The TSS Off Ouessant—when crossing the reporting line consisting of a circle with a radius of 40 miles centered on Ile d'Ouessant (Le Stiff Radar Tower) (48°28.6"N., 5°03.1'W.).
2. The TSS Off Casquets—2 miles before entering the reporting area, which consists of an area bounded by lines joining the following positions:
   a. 50°10'N, 2°58'W.
   b. 50°10'N, 2°00'W.
   c. 49°20'N, 2°00'W.
   d. 49°20'N, 2°58'W.
3. The TSS in the Strait of Dover and its Adjacent Waters:
   a. Northeastbound vessels—Report to Griz Nez Traffic 2 miles before crossing a line joining Royal Sovereign Light Tower (50°43'N., 0°26'E.) to the French coast through Bassurelle Lighted Buoy (50°33'N., 0°58'E.).
   b. Southwestbound vessels—Report to Dover Coastguard when within VHF range of North Foreland and not later than when crossing a line joining North Foreland to the Belgian coast through Mid Falls Lighted Buoy.
   c. On departure from a port within the ITZ—Report to Griz Nez Traffic or Dover Coastguard, whichever is closer to the port of departure.

In addition, vessels should maintain a continuous listening watch on VHF channel 16, on VHF channel 80 for Jobourg Traffic, and, if possible, on the main calling frequencies of the relevant shore stations.

Vessels with no defects should send a Position Report (POSREP). Vessels with defects (not under command, restricted in their ability to maneuver, defective navigational aids, etc.) should send a Defect Report (DEFREP). If necessary, a subsequent amending report (CHANGEREP) should be sent.

All reports should be made in English, prefixed MAREP, and followed by POSREP, DEFREP, or CHANGEREP, using the format given in the table titled **MAREP—Reporting Information**.

These reports should be made to the following designated shore stations:

TSS	MAREP Receiving Station	VHF Channel
Ouessant (Ushant)	Ouessant Traffic	13, 79
Casquets	Jobourg Traffic	13, 80
Dover Strait	Griz Nez Traffic (northeastbound vessels)	13
	Dover Coastguard (southwestbound vessels)	11

Information broadcasts, which are preceded by an announcement on VHF channel 16, are made in English and French, as follows:

Station	VHF Channel	Clear Visibility	Restricted Visibility
Ouessant Traffic	79	H+10 H+40	
Jobourg Traffic	80	H+20 H+50	
Griz Nez Traffic	79	H+10	H+25
Dover Coastguard	11	H+40 (English only)	H+55

Restricted visibility means when visibility is less than 2 miles.

These broadcasts contain navigational and traffic information on movements of vessels, urgent warnings to mariners, and special weather bulletins. Urgent information will be broadcast at any time as necessary.

MAREP—Reporting Information

Designator	Information Required
ALFA	Name and call sign of vessel.
BRAVO	Day of month (2 figures) and time in hours and minutes (UTC in 4 figures).

MAREP—Reporting Information	
Designator	**Information Required**
CHARLIE *	Latitude (4 figures N or S) and longitude (5 figures E or W).
DELTA *	True bearing (3 figures) and distance in miles (2 figures) from a clearly-identified landmark.
ECHO	True course in degrees (3 figures).
FOXTROT	Speed in knots and tenths of knots (3 figures).
GOLF	Last port of call.
INDIA	Destination.
MIKE	VHF channels monitored.
OSCAR	Maximum present draft, in meters and centimeters.
PAPA	Type and quantity (in tons) of cargo.
QUEBEC	Defects in steering, navigational equipment, etc., and restrictions on maneuverability (Omit if nothing to report).
XRAY	Any other useful information (Omit if nothing to report).
* Either format may be used.	

VENEZUELA

General	**689**
Buoyage System	**689**
Cautions	**689**
Currency	**689**
Government	**689**
Holidays	**690**
Industries	**690**
Languages	**690**
Navigational Information	**690**
Regulations	**690**
Search and Rescue	**691**
Time Zone	**691**
Traffic Separation Schemes	**691**
U.S. Embassy	**691**
Vessel Traffic Service	**691**

General

Venezuela is located in Northern South America, bordering the Caribbean Sea and the North Atlantic Ocean, between Colombia and Guyana.

The climate is tropical, hot and humid, becoming more moderate in the highlands.

The terrain contains the lowlands of the Maracaibo and the highlands just to the E. The central part of the coast is dominated by two sections of the coastal mountain range and the E third of the coast is low-lying areas in the delta of the Orinoco.

Buoyage System

The IALA Buoyage System (Region B) is in effect. See Chart No. 1 for further IALA Buoyage System information.

Cautions

Many navigational lights along the coast have been reported to be unreliable, irregular, or operating at a reduced range.

Piracy incidents have been reported (2006) in Guanta and Islas de Piritu.

Drilling platforms, well heads, and pipelines occupy the greater portion of Lago de Maracaibo. Drilling platforms and drill rigs are also found N of Peninsula de Paria (10°40'N., 62°20'W.).

Currency

The official unit of currency is the bolivar, consisting of 100 centimos.

Government

Flag of Venezuela

Venezuela is a republic. The country is divided into 23 states,

one federal district, and one federal dependency.

Venezuela is governed by a directly-elected president who serves a 6-year term. The unicameral National Assembly is composed of 167 directly-elected members who serve 5-year terms.

The legal system is based on organic law as of July, 1999.

The capital is Caracas.

Holidays

The following holidays are observed:

January 1	New Year's Day
Monday nearest January 6	Epiphany
Carnival (two days)	Variable
March 19	St. Joseph Day
Palm Sunday	Variable
Holy Thursday	Variable
Good Friday	Variable
Easter Sunday	Variable
April 19	Declaration of Independence Day
May 1	Labor Day
Ascension Day	Variable
Corpus Christi	Variable
June 24	Battle of Carabobo
June 29	Sts. Peter and Paul Day
July 5	Independence Day
July 24	Bolivar's Birthday
August 15	Assumption Day
October 12	Columbus Day (Dia de la Raza)
November 1	All Saints' Day
December 8	Immaculate Conception
December 24	Christmas Eve
December 25	Christmas Day
December 31	New Year's Eve

Industries

The main industries are petroleum, iron ore mining, construction materials, food processing, textiles, steel, aluminum, and motor vehicles assembly.

The main exports are petroleum, bauxite and aluminum, steel, chemicals, agricultural products, and basic manufactured goods. The main export-trading partners are Bermuda, the United States, and the Netherlands Antilles.

The main imports are raw materials, machinery and equipment, transport equipment, and construction materials. The main export-trading partners are the United States, Colombia, Brazil, and Mexico.

Languages

Spanish is the official language.

Navigational Information

Enroute Volume

Pub. 148, Sailing Directions (Enroute) Caribbean Sea Volume 2.

Maritime Claims

The maritime territorial claims of Venezuela are, as follows:

Territorial Sea *	12 miles.
Contiguous Zone **	15 miles.
Fisheries or Economic Zone	200 miles.
Continental Shelf	Depth of 200m or the Limit of Exploitation.

* Claims straight baselines.

** Claims a 15-mile Security Zone.

Maritime Boundary Disputes

Barbados, Dominica, Saint Kitts and Nevis, Saint Lucia, and Saint Vincint and the Grenadines are countering Venezuela's claim that Isla Aves (15°42'N., 63°38'W.) sustains human habitation, which would permit Venezuela to extend its Exclusive Economic Zone over a large portion of the Caribbean Sea.

Maritime boundary dispute in the Gulf of Venezuela with Colombia.

Venezuela's claim of all territory W of the River Essequibo has prevented any discussions regarding the maritime boundary between Guyana and Venezuela.

Guyana has expressed its intention to challenge the N limit of Trinidad and Tobago's maritime boundary with Venezuela under the claim that this boundary extends into the territorial waters of Guyana.

Pilotage

Pilotage is compulsory in all ports, rivers, and lakes where the government has established a pilotage zone. See the individual ports in Pub. 148, Sailing Directions (Enroute) Caribbean Sea, Volume II for further information.

Regulations

General

In Venezuelan territorial waters, the Venezuelan flag must be displayed continuously. At night, on demand, the name of the vessel must be signaled by Morse lamp.

Petroleum or other oils must not be discharged overboard into the territorial waters surrounding the Venezuelan coasts.

Vessels are not permitted by Venezuelan authorities to anchor within territorial waters except in ports and places usually used for commerce or under stress of weather.

There are strict dress regulations in force in Venezuelan ports.

Accommodation is to be provided to the same standard as ships' officers for Customs guards on board vessels.

Vessels carrying explosive or inflammable cargo must notify the Port Captain in advance prior to discharge or transit.

Vessels navigating in channels may not overtake other vessels in the channel except in an emergency, provided there is no other vessel approaching from ahead. When crossing, vessels should keep as far to starboard as possible. Vessels proceeding in the same direction should keep at least 1 mile apart.

Vessels in a channel have priority over vessels about to enter the channel. A vessel in a main channel has priority over a vessel entering from a secondary channel. When crossing or overtaking, speed must be reduced to avoid heavy or the effects of suction.

Pre-arrival Quarantine Reporting

Messages should be send via telex, through the agent at least 48 to 72 hours prior to arrival. Messages should include the following information:

1. Name and nationality of vessel.
2. Last port entered before arrival at Puerto Cabello.
3. ETA at Puerto Cabello.
4. Number of officers and total number of crew members
5. Declaration that no sick persons are on board and that no suspicion of illness exists.
6. Request for free access.
7. Name and nationality of captain.

Search and Rescue

Port authorities maintain a continuous listening watch for distress traffic on VHF channel 16.

Contact information for Maritime Rescue Coordination Center (MRCC) La Guaira and the three Rescue Coordination Centers (RCC) in Venezuela can be found in the table titled **Venezuela—MRCC and MRSC Contact Information**.

Time Zone

The observed Standard Time is 4 hours 30 minutes behind UTC (GMT). Daylight Savings Time is not observed.

Traffic Separation Schemes

Traffic Separation Schemes are located, as follows:

1. Canal de Maracaibo. (Government of Venezuela)
2. Golfo de Venezuela. (Government of Venezuela)

U.S. Embassy

The U.S. Embassy is situated at Calle F con Calle Suapure, Urbanizacion Colinas de Valle Arriba, Caracas.

The mailing addresses are, as follows:

1. Venezuela address—
   P.O. Box 62291
   Caracas 1060-A
2. U. S. address—
   APO AA (34037)

U. S. Embassy Venezuela Home Page
http://caracas.usembassy.gov

Vessel Traffic Service

A Vessel Traffic Service is in operation in the approaches to Puerto Jose Terminal (10°07'N., 64°52'E.). For further information, see Pub. 148, Sailing Directions (Enroute) Caribbean Sea, Volume 2.

Venezuela—MRCC and MRSC Contact Information

	Telephone	Facsimile	E-mail
VZMCC	58-212-3551518 58-212-3551920	58-212-3551920	sar@inac.gov.ve
MRCC La Guaira	58-212-3327387	58-212-3322891	opecguard@hotmail.com
RCC Maiquetia	58-212-3551920	58-212-3551920	—
RCC Puerto Cabello	58-242-3601230	58-242-3601245	epgpc@hotmail. com
RCC Puerto Fijo	58-269-2502372 58-269-2502373	58-269-2502372	guardacostaspf@hotmail. com