



**Bonn Agreement
Accord de Bonn**

Aerial Operations Handbook

Part 4

NATIONAL INFORMATION

CHAPTER 1

BELGIUM



BRITTEN NORMAN ISLANDER

1 Introduction

MUMM (Management Unit of the Mathematical Model of the North Sea) and the Directorate-general Environment of the Federal Public Service Health, Food Chain Safety and Environment are the two Belgian authorities competent for the aerial surveillance of marine pollution above Belgium's zone of responsibility in the North Sea.

MUMM plans, directs and controls the surveillance missions using a Britten Norman Islander (OO-MMM) aircraft fitted with SLAR, IR/UV and camera systems. The aircraft is operated by MUMM and flying with Belgian military pilots. The remote sensing equipment is handled by an operator from MUMM. During aerial surveillance patrols, the aircraft retains state aircraft status.

The Directorate-general Environment complements MUMM's surveillance activities with a fast response service using private stand-by helicopters certified for a broad range of operations above sea (including hoisting). A helicopter can be scrambled at any time for verifying reported information on possible marine pollution. The helicopter on duty is equipped with a purpose-built portable video system with day and night capabilities. This system is operated by the agent of the Directorate-general Environment leading the mission on board of the helicopter.

2 National Surveillance Points

B0	51°22,5'	N	002°53,3'	E
B1	51°11,5'	N	002°27,5'	E
B2	51°21,2'	N	002°20,8'	E
B3	51°33,5'	N	002°14,3'	E
B4	51°41,7'	N	002°25,6'	E
B5	51°50,0'	N	002°36,7'	E
B6	51°40,0'	N	002°53,4'	E
B7	51°30,0'	N	003°11,0'	E
B8	51°31,0'	N	002°37,5'	E
FB1	51°13,5'	N	002°05,0'	E
FB2	51°05,0'	N	001°47,0'	E
NH	52°00,0'	N	002°51,0'	E
UKB	51°23,5'	N	002°00,0'	E

3 National Focal Point

Commando Marine Operaties (COMOPSNAV)

Maritime Information Crosspoint (MIK)

Graaf Jansdijk, 1

B-8380 ZEEBRUGGE

Belgium

Tel: OPS ROOM MIK (24/24h) - +32 (0)50/55.83.24 or 83.34

Fax: OPS ROOM MIK (24/24h) - +32 (0)50/55.83.19

E-mail: mik@mil.be

Responsible authority for flight planning, scheduling and operations:

Management Unit of the North Sea Mathematical Models

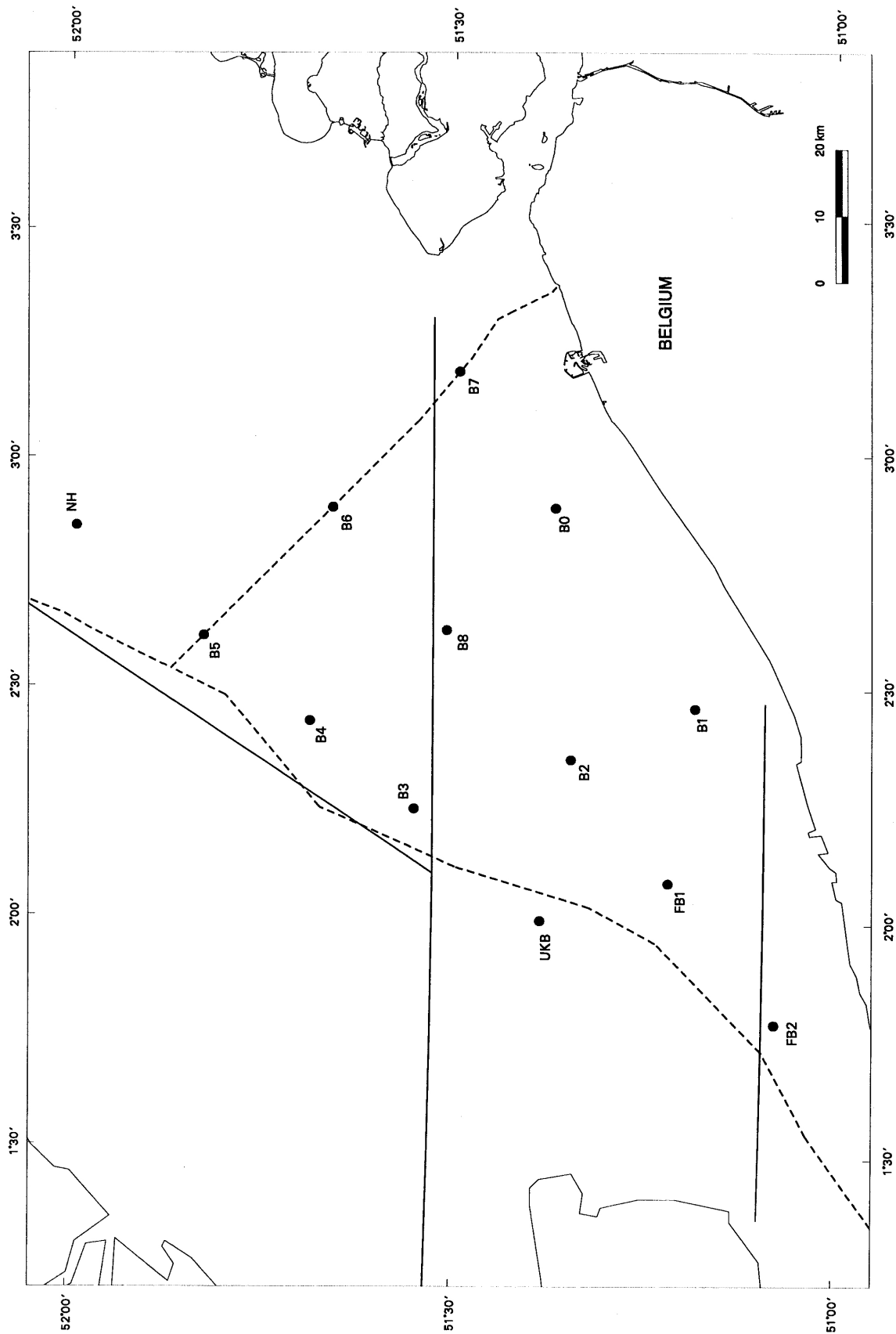
Gulledelle 100

B-1200 Brussels; Belgium

Tel: +32 2 773 21 11 (office hours)

Fax: +32 2 773 21 12

E-mail: surv@mumm.ac.be



NZ0178F

BELGIAN NAVIGATION POINTS

CHAPTER 2

DENMARK



Beech King Air B200, LN-TRG

1 Introduction

Defence Command Denmark has outsourced the airborne pollution control to the Norwegian company Sundt Air. Sundt Air operates 2 Beech King Air 200/350E aircraft equipped with SLAR (SAAB, MSS 6000 generation), video/photo cameras with annotation of navigational data, a FLIR Star Safire III and SAAB AIS.

2 National Surveillance Routing Points

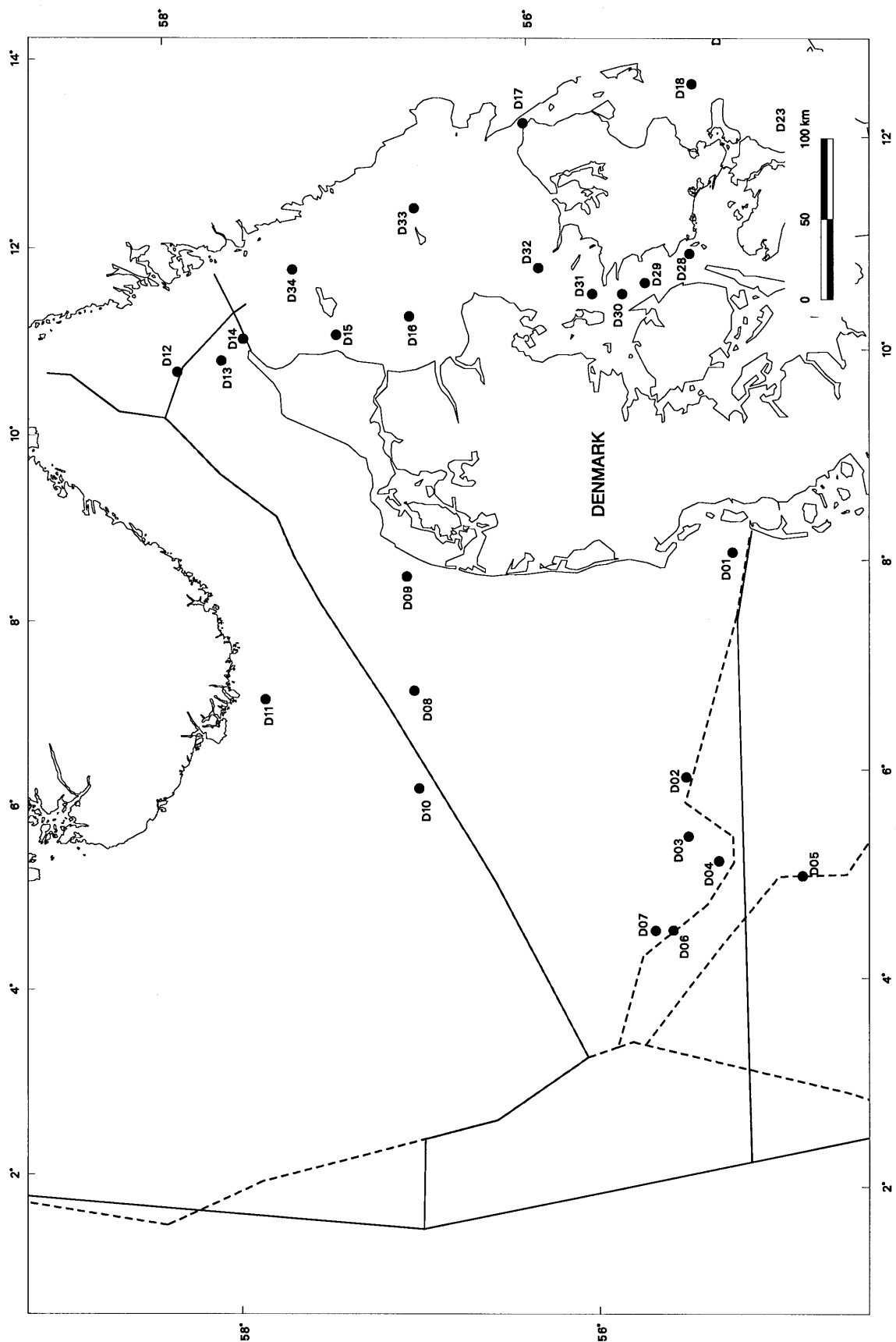
DK1	57° 00' N	010° 42' E
DK2	56° 22' N	011° 24' E
DK3	56° 07' N	010° 45' E
DK4	54° 43' N	010° 42' E
DK5	54° 30' N	012° 00' E
DK6	54° 46' N	012° 50' E
DK7	54° 54' N	014° 00' E
DK8	54° 55' N	014° 20,7' E
DK9	55° 00' N	015° 53' E
DK10	55° 30' N	016° 00' E
DK11	55° 13' N	014° 00' E
DK12	55° 09' N	012° 44' E
DK13	56° 08' N	012° 30' E
DK14	57° 45' N	010° 44' E
DK15	57° 48' N	010° 30' E
DK16	57° 00' N	007° 40' E
DK17	55° 33' N	007° 40' E
DK18	55°28,27' N	008°05,30' E
DK19	55°00' N	007°52,57' E
DK20	55°15' N	006°45' E
DK21	57°00' N	006°41,87' E
DK22	55°30' N	006°00' E
DK23	57°03' N	007°36' E

DK24	55°15' N	005°55' E
DK25	56°04' N	003°44' E
DK26	57°00' N	006°27,4' E
DK27	57°48' N	009°03' E
DK28	58°08' N	010°16' E
DK29	55°47' N	004°17' E
DK30	56°11' N	004°57' E
DK31	55°15' N	004°57' E
DK32	56°30' N	005°55' E
DK33	56°50' N	006°45' E
DK34	55°15' N	007°40' E
DK52	57°28' N	011°18' E
DK53	56°45' N	011°45' E
DK54	56°41' N	011°00' E
DK55	56°18' N	012°00' E
DK56	56°05' N	010°24' E
DK57	56°03' N	012°37' E
DK58	56°01' N	011°05' E
DK59	55°53' N	010°49' E
DK60	55°34' N	010°49' E
DK61	55°32' N	012°42' E
DK62	55°26' N	012°35' E
DK63	55°25' N	009°41' E
DK64	55°12' N	011°00' E
DK65	55°07' N	012°50' E
DK66	55°04' N	011°16' E
DK67	55°03' N	012°38' E
DK68	54°48' N	012°14' E
DK69	54°41' N	010°42' E
DK70	54°34' N	011°58' E
DK71	55°19' N	011°58' E
DK72	55°25' N	016°00' E
DK73	54°59' N	015°04' E

3.National Focal Point

Defence Command Denmark, Joint Operations Centre, Maritime Assistance Service Herningvej 30 DK-7470 - Karup Denmark Tel: +45 7285 0370 (24 hours) Fax: +45 7285 0384 Email: mas@sok.dk	Defence Command Denmark Joint Operations Staff, J33 Herningvej 30 DK-7470 - Karup Denmark Tel: +45 7284 0436 (Office hours) Email: FKO-KTP-O-J33@mil.dk
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Detected and observed pollution in Danish waters should be reported using a BAPOL format and mailed to: mas@sok.dk and CC to FKO-KTP-O-J33@mil.dk.



DANISH NAVIGATION POINTS

NZ0178D

CHAPTER 3

FRANCE



POLMAR 3



POLMAR 2

REIMS AVIATION F406

1 Introduction

1.1 Several aircraft within the customs organisation perform routine flights over the sea and carry out pollution surveillance as well. Two Reims Aviation F406 are equipped with remote sensing systems integrated by LNE. Polmar 2, based in Hyères, and Polmar 3, based in Lorient, are both equipped with SLAR (Terma), IR/UV (Sagem) and FMS. Additionally, the Polmar 2 is equipped with Microwave Radiometer (MWR) and Polmar 3 with a Low Level Light TV, they are both equipped with AIS receiver and SATCOM.

2 National Surveillance Points

EAST CHANNEL

A	49°55 N	002°20	W
B	49°55 N	000°05	E
C	50°30 N	001°10	E
D	50°50 N	001°30	E
E	50°15 N	001°20	E
F	49°40 N	000°00	E/W

WEST CHANNEL

A	47°50 N	005°40'	W
B	48°30 N	005°20'	W
C	49°50 N	002°00'	W
C	49°50 N	002°00'	W
D	49°55 N	002°20'	W
E	48°40 N	006°00'	W
F	47°50 N	006°20'	W

3 National Focal Point

CROSS JOBOURG

Route d'Auderville

F-50440 JOBOURG

FRANCE

Tel. +33 233 52 72 13

Fax. +33 233 52 71 72

e-mail : jobourg@mrc CFR.eu

Aerial Surveillance:

Customs General Directorate

tel : (33) (0)6 64 58 71 23 (H 24)

(33) (0)1 57 53 46 66

Fax : (33) (0)1 57 53 49 76

Email : dg-b2@douane.finances.gouv.fr

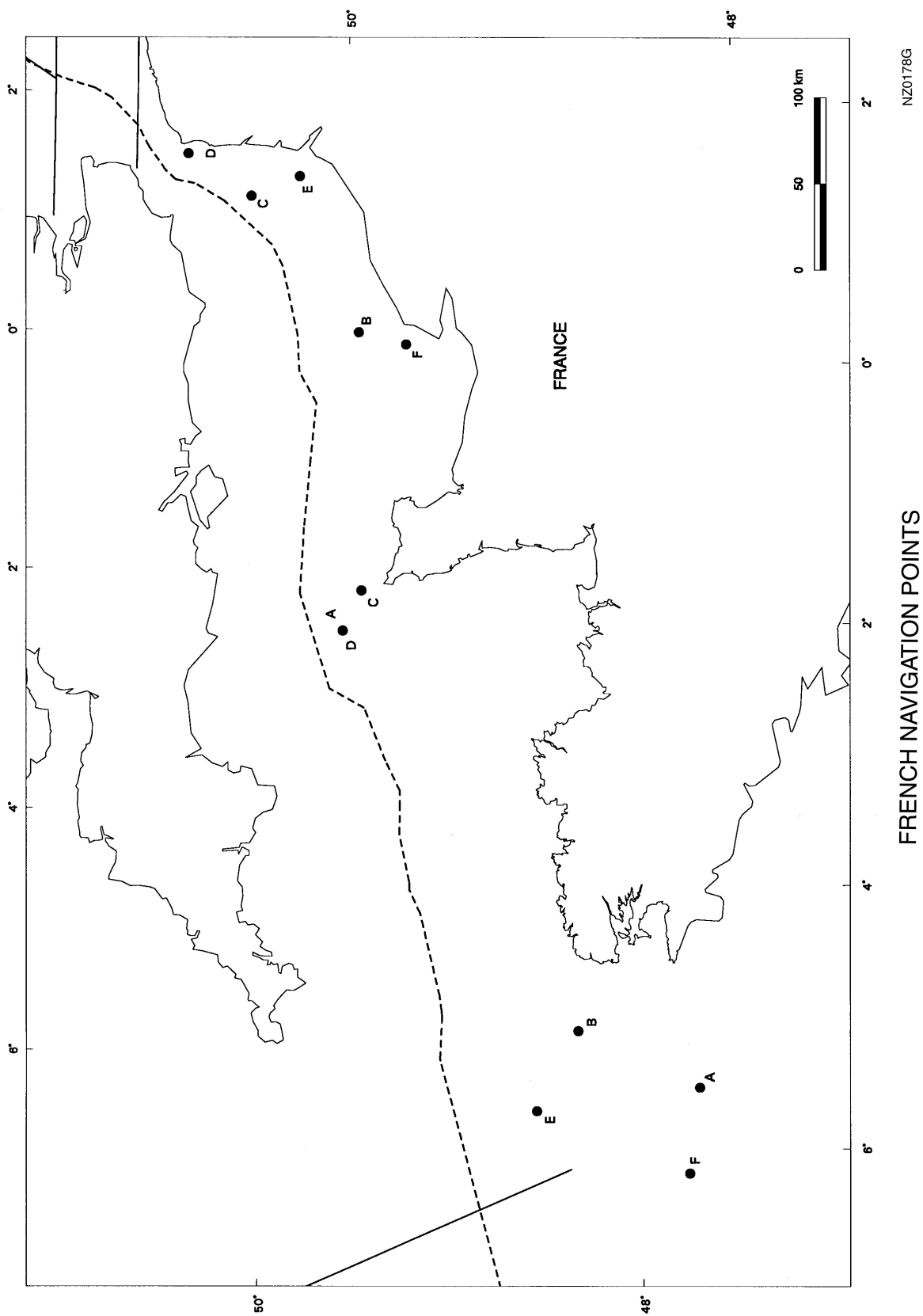
christian.cosse@douane.finances.gouv.fr

Direction générale des douanes et des droits indirects

Monsieur le chef du bureau B2

11, rue des deux communes

F-93558 MONTREUIL Cedex France



CHAPTER 4

FEDERAL REPUBLIC OF GERMANY



DORNIER 228

1 Introduction

1.1 The Havariekommando (Central Command for Maritime Emergencies) owns two Dornier Do 228-212 LM aircraft. The aircraft are operated by the Naval Airwing 3 based at Nordholz. Both are equipped with SLAR, IR/UV sensors and EOIR / CALI system. The Do228 57+04 is equipped additionally with a line scanning microwave radiometer (MWR) for quantification of larger volumes. For documentation purposes, a video system, a nadir camera and photo cameras are on board of both aircraft.

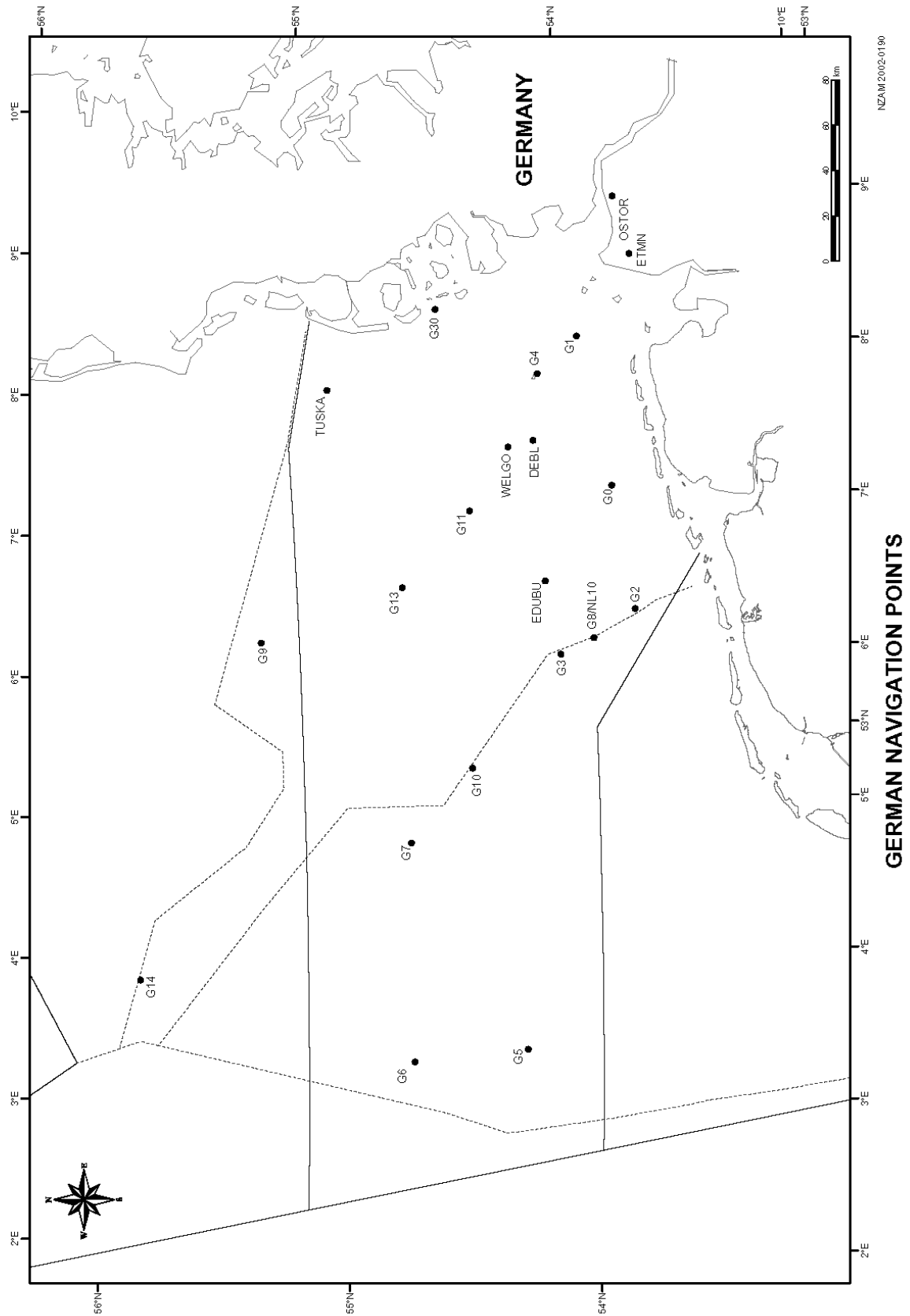
1.2 The Central Command for Maritime Emergencies (CCME), Section 2, Maritime Pollution Control / High Sea plans, directs and controls the aerial surveillance missions.

2 National Surveillance Points

G 0	53° 54.00' N	007° 07.00' E
G 1	54° 00.00' N	008° 08.00' E
G 2	53° 50.00' N	006° 17.00' E
G 3	54° 08.00' N	006° 00.00' E
G 4	54° 10.00' N	007° 54.00' E
G 5	54° 18.00' N	003° 20.00' E
G 6	54° 45.00' N	003° 15.00' E
G 7	54° 45.00' N	004° 45.00' E
G 8	54° 00.00' N	006° 06.00' E (is same as NL10)
G 9	55° 19.00' N	006° 10.00' E
G 10	54° 30.00' N	005° 15.00' E
G 11	54° 28.00' N	007° 00.00' E
G 12	54° 41.00' N	007° 00.00' E
G 13	54° 45.00' N	006° 30.00' E
G 14	55° 50.00' N	003° 50.00' E
G 30	54° 33.00' N	008° 23.00' E
DEBL	54° 12.00' N	007° 27.00' E
OSTOR	53° 49.00' N	009° 03.00' E
EDUBU5	4° 11.00' N	006° 30.00' E
ETMN	53° 46.05' N	008° 39.52' E
WELGO	54° 18.00' N	007° 25.00' E
TUSKA	55° 00.00' N	007° 53.00' E

3 National Focal Point

MLZ Cuxhaven Am Alten Hafen 2 27472 Cuxhaven Federal Republic of Germany Tel: + 49 (0) 30 185420 1400 Fax: + 49 (0) 30 185420 2009 E-mail: MLZ@havariekommando.de	Havariekommando Central Command for Maritime Emergencies Am Alten Hafen 2 27472 Cuxhaven Federal Republic of Germany Tel: + 49 (0) 30 185420 2400 Fax: + 49 (0) 30 185420 2408 E-mail: Havariekommando@havariekommando.de
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Chapter 5

Republic of Ireland



Number: Two Casa CN-235MP Based at Casement Aerodrome, crewed 24/7

Principal Role: Maritime Surveillance, Search and Rescue, Air Ambulance, Troop & Logistics Support,

Length: 21.4 m

Wing Span: 25.8 m

Height: 8.2m

Cruise speed: 240Kts, 265 mph (426 km/h)

Range: 3000km (with 2000kg Cargo)

Crew: 6 (2 x Pilots, 2 x Systems & Radar Operators, Signalman, Photographer)

Radar: Telephonics APS-143C/V3 Oceaneye, Airborne Long Range Maritime Surveillance Radar. This is the aircraft's primary sensor with a range of 200nm. **Forward Looking Infra-Red (FLIR):** StarSafire III Thermal/Electro-Optic Imaging System in conjunction with the radar augments crew acquisition of targets.

Secure AIS: SAAB Automatic Identification System used to detect AIS equipped marine vessels.

Communications Systems: U/VHF Tactical Radio, 2 Collins ARC 9000 HF, 1 Thrane and Thrane SatCom Aero I, 1 SINCGARRS Tactical VHF, TX/ARQ HF/SatCom Datalink.

CHAPTER 6

NETHERLANDS



DORNIER 228

1 Introduction

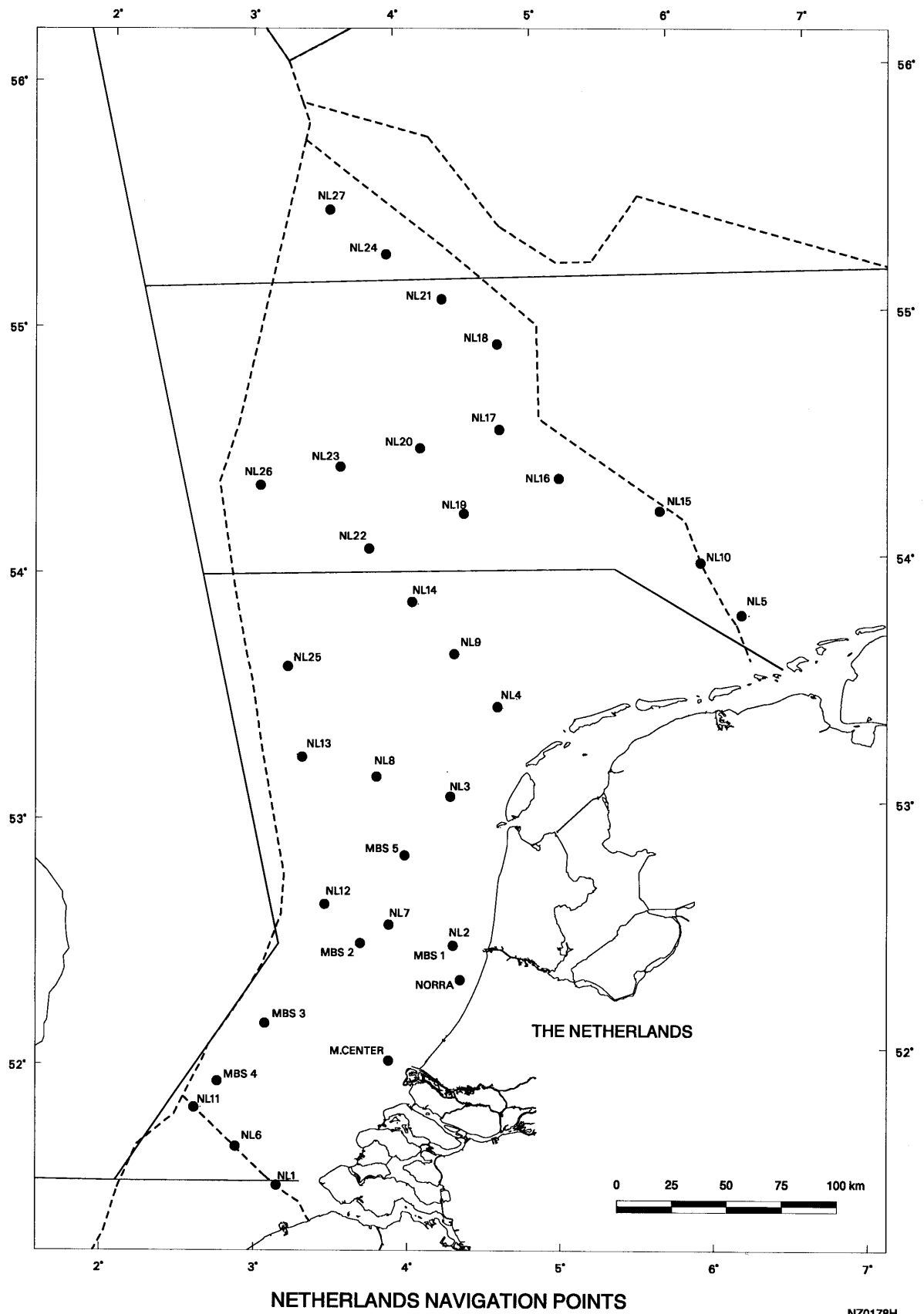
1.1 The Ministry of Defence, represented by the Netherlands Coastguard, operates two Dorniers 228-212. The aircraft are equipped with SLAR (Terma), FLIR, video camera and digital photo cameras. A data downlink is part of the system.

2 National Surveillance Points

NL1	51° 31' 05" N	003° 09' 01" E
NL2	52° 29' 06" N	004° 20' 00" E
NL3	53° 05' 30" N	004° 20' 00" E
NL4	53° 27' 12" N	004° 40' 00" E
NL5	53° 47' 30" N	006° 22' 00" E
NL6	51° 40' 32" N	002° 52' 57" E
NL7	52° 34' 28" N	003° 54' 16" E
NL8	53° 10' 39" N	003° 49' 59" E
NL9	53° 40' 16" N	004° 22' 37" E
NL10	54° 00' 38" N	006° 05' 55" E
NL11	51° 49' 56" N	002° 36' 41" E
NL12	52° 39' 38" N	003° 28' 30" E
NL13	53° 15' 39" N	003° 19' 43" E
NL14	53° 53' 08" N	004° 05' 30" E
NL15	54° 13' 42" N	005° 49' 42" E
NL16	54° 22' 30" N	005° 07' 49" E
NL17	54° 34' 47" N	004° 43' 17" E
NL18	54° 55' 32" N	004° 43' 07" E
NL19	54° 14' 25" N	004° 27' 41" E
NL20	54° 30' 40" N	004° 09' 39" E
NL21	55° 06' 45" N	004° 19' 48" E
NL22	54° 06' 09" N	003° 47' 53" E
NL23	54° 26' 22" N	003° 36' 09" E
NL24	55° 17' 54" N	003° 56' 15" E
NL25	53° 37' 41" N	003° 14' 00" E
NL26	54° 21' 55" N	003° 02' 47" E
NL27	55° 28' 58" N	003° 32' 29" E
NERRA	52° 20' 42" N	004° 22' 36" E
MBS1	52° 29' 06" N	004° 20' 00" E
MBS2	52° 30' 00" N	003° 42' 42" E
MBS3	52° 10' 35" N	003° 04' 30" E
MBS4	51° 56' 21" N	002° 45' 45" E
MBS5	52° 51' 18" N	004° 01' 00" E
Maas C.	52° 01' 11" N	003° 53' 33" E

3 National Focal Point

Netherlands Coast Guard Den Helder P.O. Box 10000 1780 CA Den Helder The Netherlands Direct Alert Tel No: + 31 900 0111 Tel: +31 223 542 300 Fax: +31 223 658 358	Ministry of Transport, Public Works and Water Management, Rijkswaterstaat Noordzee P.O. Box 5807 2280 HV Rijswijk The Netherlands Tel: +31 70 336 6600 Fax: +31 70 3951724
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CHAPTER 7

NORWAY



NORWAY

1 Introduction

Norway operates one special mission Beech 350ER (extended range) aircraft, fully equipped with a remote sensing capability and a drop tube. Norway also has a backup aircraft fully equipped with a remote sensing capability and a drop tube.

2 National Surveillance Points

N01	59°42,0' N	010°33,0' E
N02	59°01,0' N	010°30,0' E
N03	58°48,0' N	009°54,0' E
N04	58°34,0' N	009°46,0' E
N05	57°44,0' N	008°05,0' E
N06	57°40,0' N	006°58,0' E
N07	58°30,0' N	004°48,0' E
N08	60°13,0' N	004°14,0' E
N09	61°25,0' N	003°47,0' E
N10	61°40,0' N	005°30,0' E

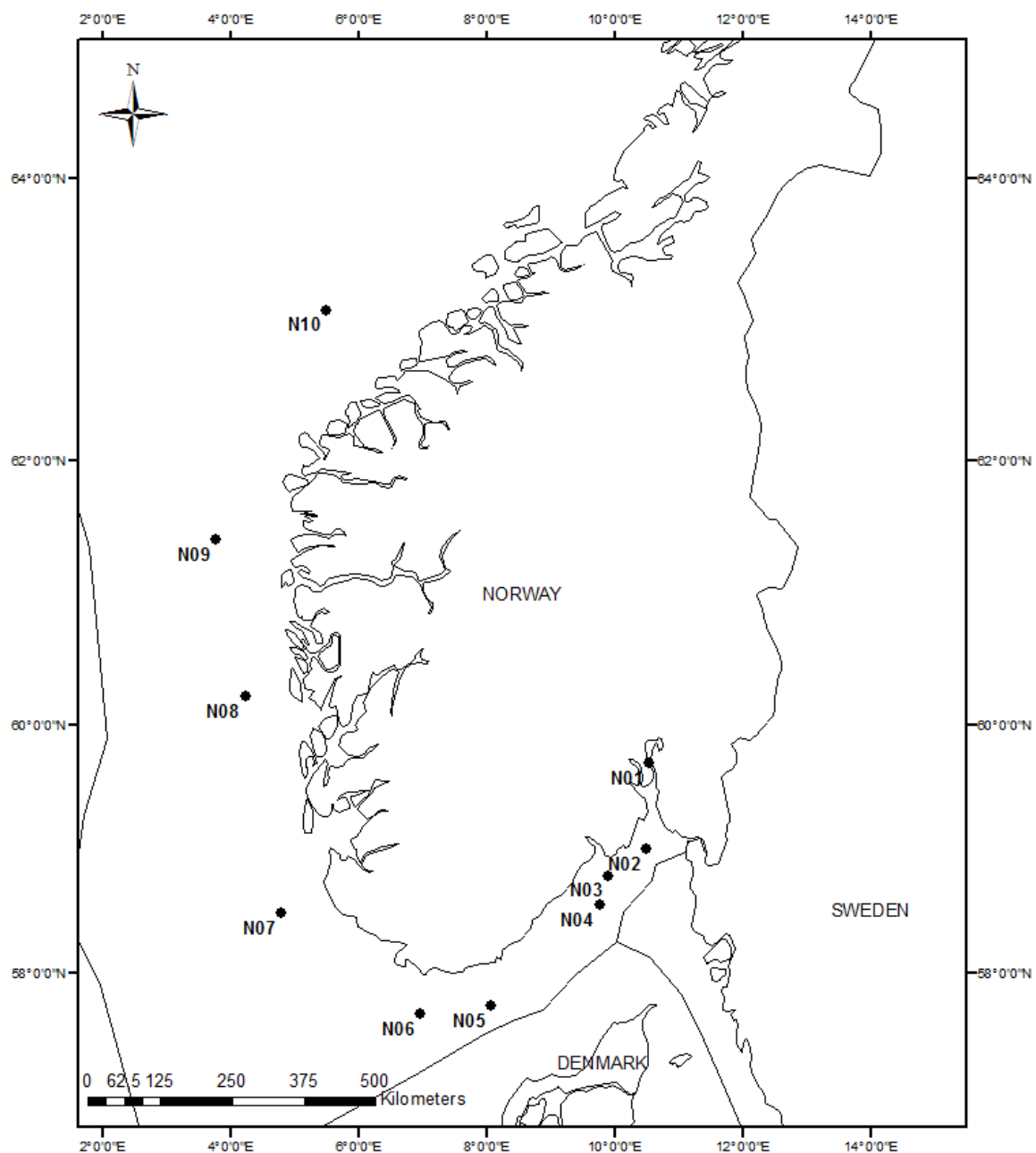
3 National Focal Point

Norwegian Coastal Administration
Centre for Emergency Preparedness
P.O. Box 125
N-3191 Horten, Norway

Duty officer
Tel: +47 33034800 (24 hour)
Fax: +47 33034949
Email: vakt@kystverket.no

Contact Address, Telephone, Fax:
Norwegian Coastal Administration
Centre for Emergency Preparedness
P.O.Box 125
N-3191 Horten, Norway

Tel: +47 33034800
Fax: +47 33034949



NORWEGIAN NAVIGATION POINTS

CHAPTER 8

SWEDEN



DASH 8 Q-300

1 Introduction

1.1 The Swedish Coastguard operates three Dash 8 Q-300, all fully equipped with remote sensing systems, for routine operations in the Skagerrak and North Sea. The aircraft are based in Nyköping, Skavsta Airport (ESKN).

2 National Surveillance Points

S6	57°40'7"	N	011°10'7"	E
S7	57°54'	N	011°01'	E
S8	58°15'4"	N	010°01'5"	E
S9	58°30'4"	N	010°08'5"	E
S10	58°45'4"	N	010°35'4"	E
S11	58°53'3"	N	010°38'3"	E
S12	58°25'	N	010°35'	E
S13	58°10'	N	010°30'	E

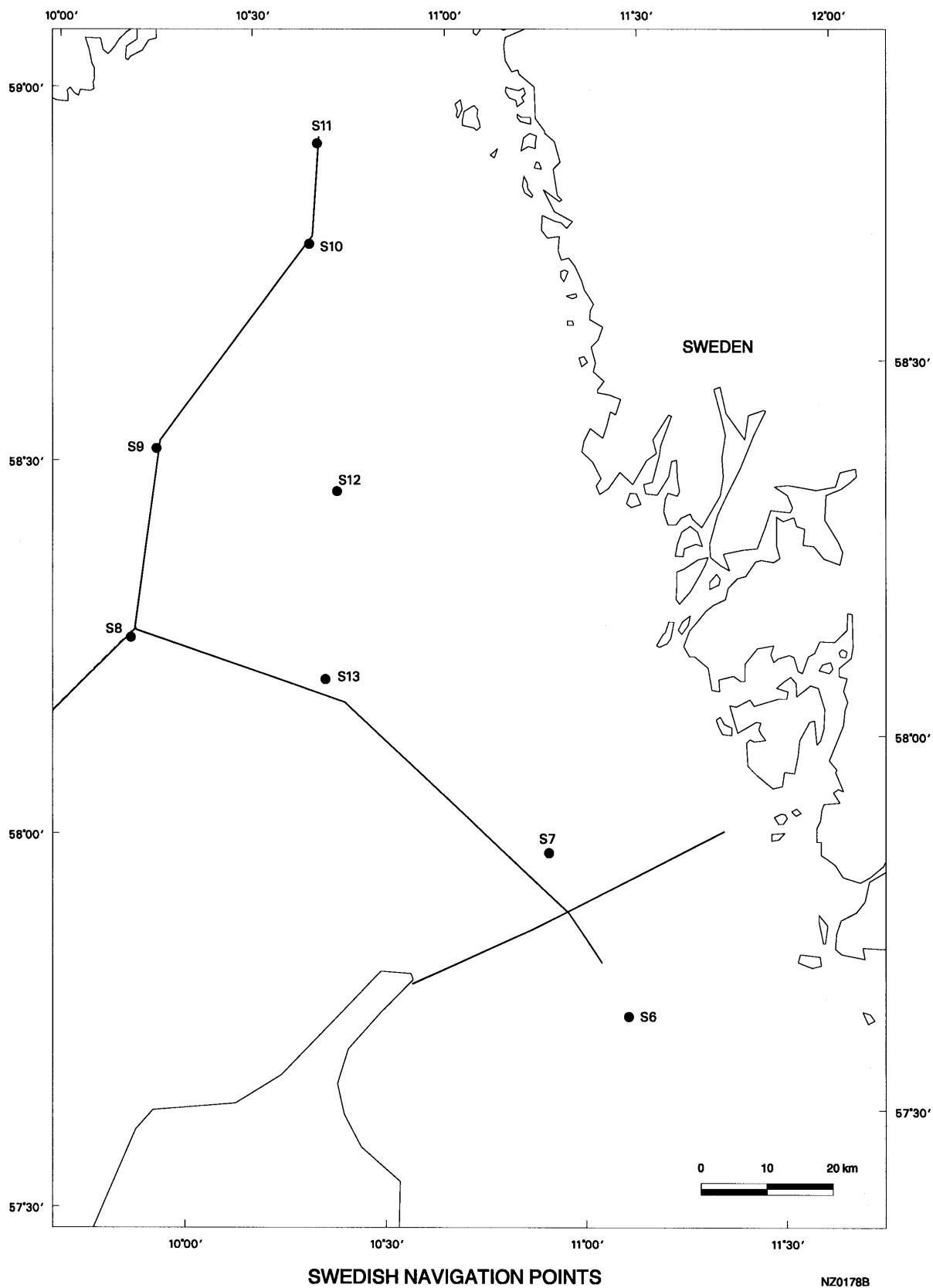
3 National Focal Point

Swedish Coast Guard Headquarters
Stumholmen
S-371 23 Karlskrona
Sweden

Tel: +46 455 353 535
Fax: +46 455 812 75

Ministry of Defence
S-103 33 Stockholm
Tel: +46 8 405 2611
Fax: +46 8 204 483

Contact Point for POLREPs, Algae
Reports, MOU Port State Control and
equipment requests to :
Swedish Coast Guard Headquarters
Stumholmen
S-371 23 Karlskrona
Tel: +46 455 35 35 35 / 36
Fax: +46 455 812 75



CHAPTER 9

UNITED KINGDOM



CESSNA 406

1 Introduction

1.1 The United Kingdom, Maritime and Coastguard Agency (MCA), Counter Pollution Branch, plans, directs and controls regular surveillance flights using two marine pollution surveillance aircraft. The aircraft, a Cessna 404 and a Cessna 406 are equipped with SLAR, IR/UV, Video and digital cameras, night identification equipment and a data transmission system. The UK also participates in the EMSA CleanSeaNet service and receives a number of Synthetic Aperture Radar acquisitions per month which are used in conjunction with routine fixed wing surveillance of the UK Pollution Control Zone.

2 The United Kingdom Pollution Control Zone

2.1 The UK Pollution Control Zone covers more than 300,000 square kilometres of sea. To the north, the zone extends nearly 200 miles north of the Shetland Isles; it then follows the median line through the North Sea to the English Channel. The English Channel is shared with France, along the median line, to the Celtic Sea out to 170 miles south east of the Isle of Scilly. The boundary, shared with the Republic of Ireland, then travels northeast to the Irish Sea. After passing through the Irish Sea and North Channel the zone goes out to 200 miles west of Rockall before moving along the border, shared with Iceland and Faeroe Islands, back to north of the Shetland Isles.

2.2 The UK's 18,000 kilometres of coastline is one of the largest in Europe, and the UK economy relies on shipping for 95 per cent of its visible trade. There are several major commodity ports, London, Milford Haven, Teesport, Grimsby / Immingham, Southampton, Forth, Liverpool, Manchester and Medway. The major oil/gas terminals are Teesport, Sullom Voe, Flotta, Hound Point, Milford Haven and Southampton.

2.3 A large volume of shipping passes through UK waters en route to or from major ports on the European mainland. There are a number of straits for example the Pentland Firth, Little Minch, North Channel and the Dover Strait. The Dover Strait connects the English Channel to the North Sea and is one of the busiest straits used for international navigation, with some 350 through shipping movements per day. Due to this density of shipping, as well as bad weather and strong tidal currents, the risk of collision is ever present.

2.4 The UK has several hundred oil and gas producing fields. The gas fields are predominantly located in the Southern North Sea and in Morecambe Bay in the Irish Sea, whereas the oil fields are located in the Central and Northern North Sea and West of Shetland. Oil and gas production has been carried out since the mid 1960's. Recent new activity include areas to the West of Scotland and on international boundaries between the Faeroes, Norway and the UK.

2.5 The UK has suffered 3 of the world's 20 largest recorded oil spills, Torrey Canyon, Braer and Sea Empress.

2.6 The Maritime and Coastguard Agency (MCA) is responsible for minimising the risk of pollution of the marine environment from ships and, where pollution occurs, minimising its impact on UK waters, coastlines and economic interests. The MCA works closely with the Department of Energy and Climate Change (DECC), which in part is responsible for regulating and licensing offshore installations, including minimising the risk of pollution.

2.7 The MCA aerial surveillance flight programme varies from month to month to avoid becoming predictable so as not to undermine the deterrent effect. Aerial surveillance is generally targeted on the areas posing the greatest risk such as the major shipping routes and around the offshore installations. CleanSeaNet is used to assist this targeting process.

3 National Surveillance Routing

3.1 The United Kingdom Pollution Control Zone is divided into regions/areas. The surveillance flight is programmed by region/area. Within each region/area the patrol aircraft routes along the shipping routes or around offshore installations. The United Kingdom does not specify national navigation points. A chart showing the United Kingdom Marine Aerial Surveillance Regions is on the following page.

4 National Focal Point

24 hour contact point

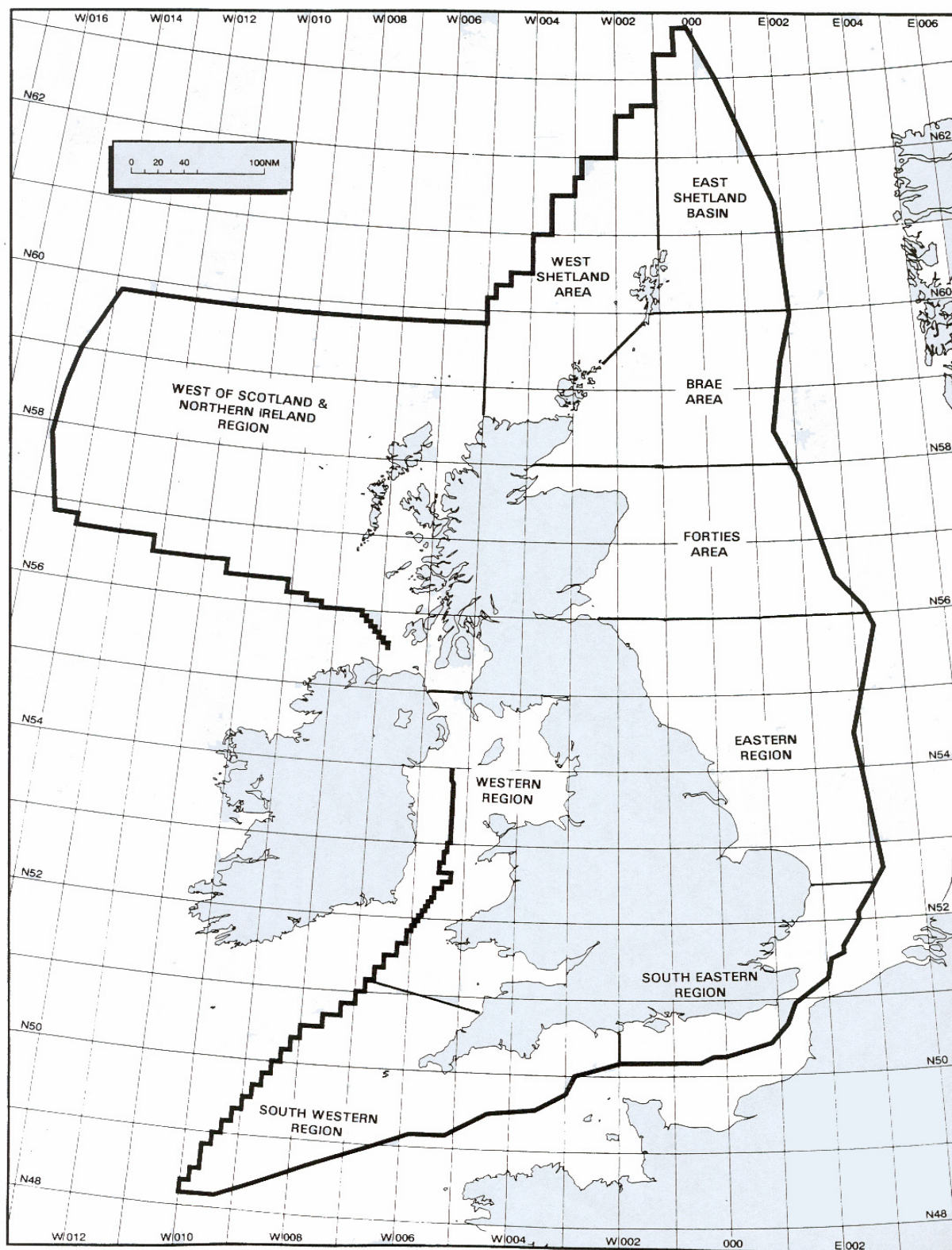
Maritime and Coastguard Agency (MCA)
Falmouth Maritime Rescue Co-ordination Centre
Pendennis Point
Castle Drive
Falmouth
Cornwall
TR11 4WZ

Telephone +44 1326 317575
Fax +44 1326 318342

Office hours contact point

Maritime and Coastguard Agency (MCA), Counter Pollution Branch
Spring Place, 105 Commercial Road
SOUTHAMPTON
United Kingdom
SO15 1EG
Telephone +44 1703 329 100 (Switchboard)
Fax +44 1703 329 446 (MEOR)

<p>The contact details for Aberdeen MRCC =</p> <p>Scotland and N.Ireland Region HM Coastguard 4th Floor Marine House Blaikies Quay ABERDEEN AB11 5PB</p> <p>Tel: +44(0)1224 592334 Fax: +44(0)1224 575920</p>	<p>It would not do any harm to include Shetland for reports North of 59deg should the reporting crew fail to contact Aberdeen.</p> <p>Contact details for Shetland MRCC:</p> <p>HM Coastguard The Knab Knab Road LERWICK Shetland ZE1 0AX</p> <p>Tel: 01595 692976 Fax: 01595 694810</p>
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CHAPTER 10

SPAIN



CASA CN 235-300

1. Introduction

The Spanish Maritime Safety Agency (SASEMAR), the operations branch of the Maritime Authority (General Directorate of the Merchant Marine), controls the marine pollution aerial surveillance missions. SASEMAR owns 3 aircraft CASA CN235-300 fully equipped, one of which patrols the Mediterranean Sea, and the other two the Atlantic Ocean, covering the Spanish North Coast and the Canary Islands respectively.

The aircraft based in Santiago de Compostela, Galicia, patrols the Spanish North Atlantic Coast, and is fitted with specific antipollution sensors: SLAR, IR/UV, MWR, LFS, and with other equipment: FLIR/CALI, video recorder, digital photo camera, AIS and data link, managed by two operators placed in two mission consoles. The data is analyzed in the Mission Support Centre.

The helicopters can support the marine pollution aerial surveillance, even taking samples from the sea. The Spanish Maritime Safety Agency operates eleven helicopter bases with nine medium size helicopters (three AW139 in the Spanish North Atlantic Coast), and two heavy helicopters (one EC 225 in the Spanish North Atlantic Coast), equipped with FLIR, video recorder and digital photo camera.

2. National Surveillance Points

SASEMAR plans the surveillance routes in the Spanish North Atlantic Coast, taking into account the major shipping routes in the area, the Finisterre Traffic Separation Scheme, the satellite images coverage and pollution information reported. National navigation points are not included in this chapter as the surveillance flight programme varies periodically. The following chart shows the area covered by the routine surveillance flights in the Spanish North Atlantic Coast.

3. National Focal Point

National authority	24 hour contact point
GENERAL DIRECTORATE OF THE MERCHANT MARINE Subdirectorates of Maritime Security, Pollution and Inspection C/ Ruiz de Alarcón 1 28071 MADRID SPAIN Tel 91 597 92 70 Fax 91 597 92 87/35 Mail vjimenez@fomento.es	SPANISH MARITIME SAFETY AGENCY MRCC c/Fruela 3 28011 MADRID SPAIN Tel 91 755 91 32 / 91 755 01 33 Fax 91 526 14 40 Mail cncs@sasemar.es (in case of emergency, please make a previous call)

