7. CO-OPERATION ON AERIAL SURVEILLANCE OVER THE BALTIC SEA AREA

7.1 INTRODUCTION

Co-operation on surveillance within the Helsinki Convention is carried out in accordance with Regulations 1, 4, a) and 3, 1. and 2. of Annex VII to the Helsinki Convention and HELCOM Recommendation 12/8.

The purpose of aerial surveillance is to detect spills of oil and other harmful substances which can threaten the marine environment of the Baltic Sea area. These spills caused by accident or made in contravention of international Conventions will be registered and, if possible, sampled from both the sea surface and on board the suspected offender.

The aerial surveillance is complemented by satellite surveillance to enable bigger area coverage and optimisation of flights effectiveness.

Within the framework of the Helsinki Convention it has been decided to establish close co-operation on airborne surveillance. This will be achieved by

a. regular National Flights
b. setting up special flights such as CEPCO Flights
c. standardization of reporting formats and exchange of information to Contracting Parties
d. working together in improving existing systems and developing new techniques to enhance the information obtained.

7.2 PARTICIPATING STATES

All Contracting Parties to the Helsinki Convention have agreed to participate in the collaboration to the best of their ability. Each State operates in its own response region except for CEPCO Flights. Not all states have delimited their response regions, but the response region should be used as far as possible.

7.3 CO-OPERATION

The Informal Working Group on Aerial Surveillance is, under the auspices of the Response Group (HELCOM RESPONSE), responsible for the co-operation in the field of joint aerial surveillance as well as for co-ordination of the satellite based oil spill surveillance and evaluation of its results and operational effectiveness. In the regular meetings the Contracting Parties appoint one Contracting Party to be Lead Country for the Informal Working Group for an agreed period. The tasks to be undertaken are stated in terms of reference for the Lead Country and for the Informal Working Group on Aerial Surveillance (cf. Annex 5, the Minutes of HELCOM RESPONSE 8/2007).

7.4 FLIGHT TYPES

Three various types of flights are carried out.

National flights

National flights are conducted to the extent and with the timetable which is decided by each of the Contracting Parties themselves. The results of the surveillance are to be reported

yearly to the Response Group in accordance with the agreed HELCOM annual reporting format on illegal discharges observed during aerial and satellite surveillance.

CEPCO Flights ("Coordinated Extended Pollution Control Operation Flights")

The aim of CEPCO Flights is a continuous flight activity within the responsibility zones of neighbouring countries. According to a prefixed flight schedule surveillance aircraft of several countries adjoining the chosen CEPCO Flight routines have to maintain for 24 hours (or even more) a continuous surveillance flying along the prefixed flight patterns. The chosen flight routes are where the likelihood spills is higher than in other areas with sporadic traffic: Each year a CEPCO North and a CEPCO South Flight are carried out with the participation of interested countries located close to the selected surveillance area.

In order to shorten the approaching time of participating aircraft the chosen airport/air base should be located close to the respective area. The airport must ensure a day and night service for forthrunning landing, starting, and preferably ground power facility for stand-by.

The route length should be oriented on the lowest endurance time/endurance distance of the relevant aircraft.

Route planning must exclude restricted areas for flight operations.

Diplomatic clearance for flights within neighbouring territorial waters must be sought for well in advance of the CEPCO operation.

A communication scheme between the surveillance aircraft and patrol vessels must be disseminated to all participating Parties in order to ensure a close co-operation between aerial observations/-detections and subsequent law enforcement and/or prosecution measures including sampling by patrol vessels.

CEPCO Flights should be supported as far as possible with satellite images covering the operation area in order to provide indication of possible oil slicks.

All the participating countries must ensure a day and night service of their National Reporting Centres (R.C.); the hosting country uses its R.C. during the CEPCO Flight conduction as lead agency also for the coordination of unforeseeable events.

In case of having caught a polluter red-handed an urgent notice shall be sent to the R.C. in whose area the suspected pollution was detected.

“Small” CEPCO Flights

Small CEPCO Flights may be arranged by neighbouring countries, during which a common area is continuously overflown for 24 hours or more.

To reduce the cost of the operation, the participating aircraft will use their normal national airports during the operation.

7.5 GUIDELINES FOR NATIONAL AERIAL SURVEILLANCE IN THE BALTIC SEA AREA

7.5.1 Introduction

The aim of the following provisions for surveillance flight planning is to give guidance for reconnaissance flights and to implement the first part of HELCOM Recommendation 12/8, namely to intensify their endeavours to cover by individual or joint action the whole of the Baltic Sea Area with regular and efficient airborne surveillance (cf. also Regulations 1, 4.a) and 3.1 of Annex VII to the Helsinki Convention).

The detection of MARPOL 73/78 offenders and the early discovery of marine pollution shall enhance the deterrent effect for illegal discharges and should facilitate rapid discovery and recovery of marine pollution.

Recommendation 12/8 contains a wide range for national interpretation of a regular and efficient airborne surveillance and its implementation in national responsibility zones.

For instance the national summaries on observed marine pollution incidents can be evaluated with reliability only if the flights are made according to an agreed surveillance scheme with

- a minimum of regularly flown operations
- in areas with a certain ship traffic density, fishing and offshore activities
- flown in sufficient weather and visibility conditions
- use of remote sensing equipment.

7.5.2 General rules for a minimum of regular surveillance flights

Flight frequency

All coastal States should endeavour to fly - as a minimum - twice per week over regular traffic zones including approaches to major sea ports as well as in regions with regular offshore activities.

Experienced observers/pilots shall hereby contribute reliable detections, classifications and quantification of observed pollution, their frequencies and geographical distributions.

Other regions with sporadic traffic and fishing activities should be covered once per week.

It is recognized that there might be some limitations to carrying out the surveillance flights due to weather conditions and that all flights will be performed according to national flight operational manuals.

Priority at the flight planning must always be given to the detection and identification of polluters.

Geographical coverage - Detection range for a Minimum of Flight Operations

Flights with SLAR systems

A coverage of approximately 60 km per flight pattern could be assumed if a SLAR is used for detection of polluters and pollutions and if the detection capacity is not limited by sea state 6 and /or wind force 6-7 and more.

Flights without SLAR systems

The visual detection range under normal visibility conditions can be assumed with 20 km; only under extremely good horizontal and vertical visibility can a detection range of 40 km be covered. However, a maximum cover range of 15 km on both sides of the flight patterns

should be the basis for a minimum of flight hours for National Flights in order to ensure reliable and comparable observation conditions.

7.5.3 Additional remarks concerning flights flown in darkness or poor visibility with RSS

Flights in darkness or poor visibility have a limited possibility to identify offenders of the MARPOL 73/78, on the other hand it is a well-known fact that many potential polluters prefer the limited visibility for deliberate discharges of oily residues from ships operation.

Consequently, the Contracting Parties with reliable detection and identification systems in addition to the minimum frequency - see sub-chapter 7.5.2 - should envisage a certain flight proportion for detection of polluters at night or during poor visibility.

7.6 GUIDELINES FOR SATELLITE SURVEILLANCE IN THE BALTIC SEA AREA

Satellite surveillance is an important tool supporting aerial surveillance in the Baltic Sea area. It is recommended that satellite indications are checked as soon as possible by aerial surveillance or other means available.

IWGAS is responsible for defining the total operational needs for satellite images in the Baltic Sea and agrees on common practices.

7.7 REPORTING

Reporting formats

To record the flights the following two formats should be used:

1. BONN Agreement/HELCOM Standard Pollution Reporting Format (electronic version of the format and related Completion Guide are available on HELCOM web site: http://www.helcom.fi/shipping/waste/en_GB/surveilance/)

2. HELCOM annual reporting format on illegal discharges observed during aerial and satellite surveillance

The pollution observation log should always be filled in, even when no spills were observed.

STANDARD POLLUTION REPORTING FORMAT)

http://www.helcom.fi/stc/files/shipping/Pollution_Report_Master.xls

HELCOM Annual reporting format on illegal discharges observed during aerial and satellite surveillance

I. DEFINITIONS USED IN THE REPORTING OF DATA FROM

Aerial Surveillance

Country	Name of the Contracting Party reporting.
One Flight	Unit of operation between take-off and next landing.
No. of flight hours	Nationally allocated flight hours carried out by trained observers per Contracting Party.
Day (daylight)	From 30 minutes after Morning Civil Twilight, until 30 minutes before Evening Civil Twilight as given in the Air Almanac.
Night (darkness)	From 30 minutes before Evening Civil Twilight, until 30 minutes after Morning Civil Twilight as given in the Air Almanac.
Detections	Number of first reports on possible pollutions obtained in aerial operations (raw data).
Detections confirmed	Number of the total detections (first reports) that have been verified and/or identified by means of instruments or visually and are confirmed by a trained operator as a pollution.
Estimated volume of a spill	Total volume of one spill calculated using the Bonn Agreement Oil Appearance Code.
Identified polluter	Name of vessel, platform or other source positively identified as the polluter.
Slick	An area of (possible) pollution.
Spill	A collection of one or more slicks originating from the same source.
Remarks	This column should be used to inform on particular situations.

Satellite Surveillance

Satellite detections	The number of satellite detections is the number of reports obtained through satellite detections within the EEZ of the contracting party – including those obtained from other countries
Confirmed mineral oil	The number of verified/investigated satellite detections consisting of mineral oil.
Confirmed other oil or chemical	The number of verified/investigated satellite detections consisting of vegetable or fish oil or chemical.
Confirmed natural phenomena	The number of verified/investigated satellite detections consisting of algae or natural phenomena as currents, waves, ice etc.
No detections	The number of verified/investigated satellite detections that nothing has been found.

II. Reporting format

Contracting Parties should report on their entire annual surveillance activity in the reporting year including the data obtained for areas outside their responsibility zone. The following format (tables 1 to 4 and any additional national comments) should be used:

Table 1. National flights

Annual overview in columns and rows.

Country	No. of flight hours		No. of detections		Detections confirmed/ observed as mineral oil spills		Estimated Volume	No. of polluters[1]			Remarks[2]
	Daylight	Darkness	Daylight	Darkness	Daylight	Darkness	m^3	Rigs	Ships	Unknown	
Inside own EEZ											
Outside own EEZ											
Detections made inside EEZ by other Contracting Parties											

Table 2. All flights

Only the mineral oil spills detected inside the EEZ are reported (see the instructions for Table 3).

	No. of spills detected	Spill IDs (cf. Table 3)
< $1m^3$		
1-10 m^3		
10-100 m^3		
> 100 m^3		

[1] The sum of Rigs+Ships+Unknown must equal the sum of Daylight+Darkness under “Detections confirmed / observed as oil spills”

[2] Additional remarks in case of accidental spills and quantities of those.

Additional remarks on unconfirmed pollution detection.

Additional explanatory notes or national comments can be added on an extra page. This information will be used for the text of the annual report.

Table 3. Information on observed spills[3] (*updated March 2010*)

Spill ID	Date	Time in UTC	Position[4]		Estimated volume	Confirmed source	Detection made by	Case file name
			Latitude	Longitude	m^3		CP code	
5						6	7	8

Table 4. Satellite surveillance

	No. of detections
Satellite detections	
Confirmed mineral oil	
Confirmed other pollution or unknown substances	
Confirmed natural phenomena	
No detections	

[3] When reporting the annual data to the HELCOM Secretariat, Table 3 should include only those spills that are inside the Contracting Party's own EEZ. A Contracting Party has to (using Table 3) send a compilation of the spills detected in other Contracting Parties' EEZs to the Contracting Party in question at least three weeks prior to the Secretariat's deadline. The Contracting Party that received the details of the spills detected by others, will compare the data with their national data, delete the doubles and report all spills inside their EEZ - also those detected by other Contracting Parties - to the HELCOM Secretariat (using Table 3).

[4] In decimal degrees, i.e. with the minutes and seconds converted to a decimal function of the degree. Longitude west is taken as negative. Latitude and longitude should each occupy a separate cell in a table.

[5] When a Contracting Party is confident that a particular spill observed on subsequent flights is actually the same slick, this slick should only be reported once with the most appropriate position (e.g. first observed position). Spills can be numbered as e.g. "NL-07", i.e. Country (B, DK, F, G, NL, N, S, UK) + Number (1 to …).

[6] Insert "SHIP" or "RIG" as appropriate.

[7] Contracting Parties should identify in this column, by writing a two letter code (DK for Denmark etc) which CP made the detection.

[8] To be filled in only when either "SHIP" or "RIG" has been entered in the previous column. Insert the name of the case file used in your country when an administrative or judicial follow-up has been instituted.

7.8 AVAILABLE AIRCRAFT AND FLIGHT HOURS

The information of all Contracting Parties is available via the MARIS system:
http://www.helcom.fi/gis/maris/en_GB/main/

7.9 LIST OF RESPONSIBLE AUTHORITIES

DENMARK

Emergency numbers for public use	
Admiral Danish Fleet Operations Centre	**Tel**: +45 89 43 30 99 **Fax**: + 45 89 43 32 30 **E-mail**: o-rum@sok.dk
Operational contact point on 24 hour duty	
Admiral Danish Fleet Operations Centre	**Tel**: +45 89 43 32 03 **Fax**: + 45 89 43 32 30 **E-mail**: o-rum@sok.dk
Administrative contact point	
Admiral Danish Fleet Maritime Environment Section PO Box 483 DK-8100 Aarhus C	**Tel**: +45 89 43 33 81 **Fax**: +45 89 43 33 88 **E-mail**: pol.con.den@sok.dk

Danish link: http://www.cis.forsvaret.dk/

ESTONIA

Joint Rescue Coordination Centre (JRCC TALLINN) Süsta 15 EE-11712 Tallinn	**Tel**: +372 619 1124, +372 692 2500 +372 692 2271 (Aviation Group) **Fax**: +372 692 2501 **E-mail**: NCC_estonia@pv.ee

Estonian link: http://www.envir.ee/helcom/Aerial.htm

FINLAND

Finnish Environment Institute (SYKE) P.O. Box 140 FI-00251 Helsinki	**Tel**: +358 20 610 123 (office hours) **Fax**: +358 9 54 902 478 (office hours) **E-mail**: name@environment.fi where name=oilduty

Finnish link: http://wwwi.ymparisto.fi/oilspill/helcom/aircraft.htm
last update 9.10.2009

GERMANY

Office hours)	
Central Command for Maritime Emergencies (CCME) Section 2 c/o WSA Cuxhaven Am Alten Hafen 2 D-27472 Cuxhaven	**Tel**: +49 4721 567 480 / 567 482 **Fax**: +49 4721 567 490 **E-mail**: FB2@havariekommando.de

For more information on responsibility for counter-pollution measures at sea and on land as well as on oil recovery equipment, please visit the following link:
http://www.havariekommando.de/en/cis/

LATVIA

Emergencies	
Maritime Rescue Coordination Centre (MRCC Riga) Meldru 5a LV-1015 Riga	**Tel**: +371 67323103 (emergency), +371 29476101, +371 67082070 **Fax**: +371 67320100, +371 29270690 **E-mail:** sar@mrcc.lv **Inmarsat-C**: 581-427518510
Inquiries	
Marine and Inland Waters Administration Voleru 2 LV-1007 Riga	**Tel**: +371 29544526 (24 hrs), +371 67469664 (office hrs) **Fax**: +371 67465888, +371 67408166 **E-mail**: jiup@jiup.vvd.gov.lv

Maritime Administration of Latvia Trijadibas 5 LV-1048 Riga	**Tel**: +371 67062101 **Fax**: +371 67860082 **E-mail**: lja@lja.lv

Latvian link: http://www.jiup.vvd.gov.lv/spill

LITHUANIA

Raimondas Satkauskas Marine Environment Protection Agency Environmental Protection Department of Klaipeda Region Zalgirio St.11 a LT-93251 Klaipeda	**Tel**: +370 46 341607 **Fax**: +370 46 341610 **E-mail**: r.satkauskas@klrd.am.lt

POLAND

Maritime Office in Gdynia Ul. Chrzanowskiego 10 PL-81 338 Gdynia	**Tel**: +48 58 21 61 62 (24 hours) +48 58 20 58 25 **Fax**: +48 58 20 67 43

Polish link: http://osc.ums.gov.pl/modules.php?name=Sections&op=viewarticle&artid=23

RUSSIA

SWEDEN

Swedish Coast Guard Headquarters Box 536 SE-371 23 Karlskrona	**Tel**: + 46 455 35 34 00 **Fax**: + 46 455 105 21 **E-mail**: kcl@coastguard.se

Swedish link: http://www.coastguard.se/ra/helcom/aerial.htm
last update 3.9.2002

7.10 LIST OF CONTACT POINTS; JOINT AERIAL SURVEILLANCE IN THE BALTIC

DENMARK

Emergencies (24 hrs)	
Emergency numbers for public use	
Admiral Danish Fleet Operations Centre	**Tel**: +45 89 43 30 99 **Fax**: + 45 89 43 32 30 **E-mail**: o-rum@sok.dk
Operational contact point on 24 hour duty	
Admiral Danish Fleet Operations Centre	**Tel**: +45 89 43 32 03 **Fax**: + 45 89 43 32 30 **E-mail**: o-rum@sok.dk
Inquiries (office hrs)	
Administrative contact point	
Admiral Danish Fleet Maritime Environment Section PO Box 483 DK-8100 Aarhus C	**Tel**: +45 89 43 33 81 **Fax**: +45 89 43 33 88 **E-mail**: pol.con.den@sok.dk

Danish link: http://www.cis.forsvaret.dk/

ESTONIA

Joint Rescue Coordination Centre (JRCC TALLINN) Süsta 15 EE-11712 Tallinn	**Tel**: +372 61 1124 (alarm), +372 692 2500 (24 hours) **Fax**: +372 692 2501 (24 hours) **E-mail**: NCC_estonia@pv.ee

Estonian link: http://www.envir.ee/helcom/Aerial.htm

FINLAND

MRCC Turku Operations Center of the Guard P.O. Box 16 FI-20101 Turku	**Tel**: +358 204 1000 (24 hours) **Fax**: +358 71 872 7019 (24 hours)

Finnish link: http://wwwi.ymparisto.fi/oilspill/helcom/aircraft.htm
last update 9.10.2009

GERMANY

Emergencies (24/7) Central Command for Maritime Emergencies (CCME) Maritimes Lagezentrum Cuxhaven (MLZ) c/o WSA Cuxhaven Am Alten Hafen 2 D-27472 Cuxhaven	Tel: +49 4721 567 485 / 567 392 Fax: +49 4721 554 744 / 745 Email: mlz@havariekommando.de
Administrative Contact Point (for Inquiries, office hours) Central Command for Maritime Emergencies (CCME) Section 2 c/o WSA Cuxhaven Am Alten Hafen 2 D-27472 Cuxhaven	Tel: +49 4721 567 480 / 567 482 Fax: +49 4721 567 490 Email: FB2@havariekommando.de

For more information on responsibility for counter-pollution measures at sea and on land as well as on oil recovery equipment, please visit the following link:

http://www.havariekommando.de/en/cis/

LATVIA

Emergencies	
Maritime Rescue Coordination Centre (MRCC Riga) Meldru 5a LV-1015 Riga	**Tel**: +371 67323103 (emergency), +371 29476101, +371 67082070 **Fax**: +371 67320100, +371 29270690 **E-mail:** sar@mrcc.lv
Inquiries	

Marine and Inland Waters Administration Voleru 2 LV-1007 Riga	**Tel**: +371 29544526 (24 hrs), +371 67469664 (office hrs) **Fax**: +371 67465888, +371 67408166 **E-mail**: jiup@jiup.vvd.gov.lv

Maritime Administration of Latvia Trijadibas 5 LV-1048 Riga	**Tel**: +371 67062101 **Fax**: +371 67860082 **E-mail**: lja@lja.lv

Latvian link: http://www.jiup.vvd.gov.lv/spill

LITHUANIA

Raimondas Satkauskas Marine Environment Protection Agency Environmental Protection Department of Klaipeda Region Zalgirio St.11 a LT-93251 Klaipeda	**Tel**: +370 46 341607 **Fax**: +370 46 341610 **E-mail**: r.satkauskas@klrd.am.lt

POLAND

Maritime Office in Gdynia Ul. Chrzanowskiego 10 PL-81 338 Gdynia	**Tel**: +48 58 21 61 62 (24 hours) +48 58 20 58 25 **Fax**: +48 58 20 67 43

Polish link: http://osc.ums.gov.pl/modules.php?name=Sections&op=viewarticle&artid=23

RUSSIA

SWEDEN

Swedish Coast Guard Flight Command Box 536 SE-371 23 Karlskrona	**Tel**: + 46 455 35 34 00 **Fax**: + 46 455 105 21 **E-mail**: registrator.flyg@coastguard.se

Swedish link: http://www.coastguard.se/ra/helcom/aerial.htm (last update 3.9.2002)

7.11 LIST OF REFERENCE POINTS

National indicators are as follows:

Denmark	**DK**
Estonia	**EE**
Finland	**FI**
Germany	**DE**
Latvia	**LV**
Lithuania	**LT**
Poland	**PL**
Russia	**RU**
Sweden	**SE**

The reference points are situated in the Baltic.

NUMBER	***NAME***	***POSITION***	
DENMARK			
DK 52	Läsö Trindel	57 28' N	11 18' E
DK 53	Anholt Ö	56 45' N	11 45' E
DK 54	Anholt V	56 41' N	11 00' E
DK 55	Gilleleje N	56 18' N	12 00' E
DK 56	Sletterhage	56 05' N	10 24' E
DK 57	Kronborg	56 03' N	12 37' E
DK 58	Sj. Odde	56 01' N	11 05' E
DK 59	Hatter Barn	55 53' N	10 49' E
DK 60	Romsö Tue	55 34' N	10 49' E
DK 61	Drogden	55 32' N	12 42' E
DK 62	Köge Bugt	55 26' N	12 35' E
DK 63	Lille Bält	55 25' N	09 41' E
DK 64	Hov	55 12' N	11 00' E
DK 65	Krigers Flak	55 07' N	12 50' E
DK 66	Vejrö	55 04' N	11 16' E
DK 67	Mön	54 03' N	12 38' E
DK 68	Grönsund	54 48' N	12 14' E
DK 69	Keldsnor	54 41' N	10 42' E
DK 70	Gedser	54 34' N	11 58' E
DK 71	Hammeren	55 19' N	14 46' E
DK 72	16 öst	55 25' N	16 00' E
DK 73	Due Odde	54 59' N	15 04' E

ESTONIA

EE 1		59 22' N	23 20' E
EE 2		59 00' N	21 51' E
EE 3		58 23' N	21 34' E
EE 4		57 54' N	21 35' E
EE 5	Naissaar	59 35' N	24 30' E
EE 6	Keri	59 41' N	25 01' E
EE 7	Vaindlo	59 49' N	26 21' E
EE 8	Uhtju	59 39' N	26 32' E

FINLAND

FI 1	Kemi1	65°23,1' N	24°06,0' E
FI 2	Nahkiainen	64°36,5' N	23°55' E
FI 3	Ulkokalla	64°20' N	23°27' E
FI 4	Valassaaret	63°26,1' N	21°04,5' E
FI 5	Norrskär	63°14,8' N	20°36,4' E
FI 6	Ritgrund	63°25,5' N	21°30,9' E
FI 7	Strömmings-Bådan	62°58,8' N	20°44,6' E
FI 8	Santio	60°27,3' N	27°43,6' E
FI 9	Sälskär	60°24,7' N	19°35,8' E
FI 10	Haapasaari	60°17,2' N	27°11,3' E
FI 11	Enskär	60°13,2' N	19°18,8' E
FI 12	Kotkan majakka	60°10,3' N	26°39,2' E
FI 13	Airisto	60°25' N	22°05' E
FI 14	Kaunissaari	60°22' N	26°45' E
FI 15	Tiiskeri	60°10' N	26°16' E
FI 16	Söderskär	60°06,5' N	25°24' E
FI 17	Kihti	60°00' N	21°04' E
FI 18		59°52,0' N	24°55,0' E
FI 19	Flötjan	59°48,5' N	19°47,4' E
FI 20		59°40,0' N	23°55,0' E
FI 21	Bogskär	59°30,3' N	20°21,3' E
FI 22		59°00,0' N	21°00,0' E
FI 23	Kalbådagrund	59°59,1' N	25°36,1' E
FI 24		59°56' N	24°21' E
FI 25	Utö	59°47' N	21°22' E
FI 26	Russarö	59°47' N	22°57' E
FI 27	Jussarö	59°47' N	23°33' E

GERMANY

G20	N54°06,80'	E010°59,00'
G21	N54°41,20'	E012°56,60'
G22	N54°12,00'	E013°19,00'
G23	N54°13,00'	E013°50,00'
G24	N54°55,00'	E013°34,00'
G25	N54°50,00	E012°41,00'
G26	N54°28,00'	E011°39,00'

G27	N54°40,00'	E011°00,00'
G28	N54°50,30'	E009°51,50'
G29	N54°50,20'	E008°23,00'
SDG1	N54°41,20'	E012°56,60'
SDG2	N54°55,00'	E014°20,70'
SDG3	N55°15,00'	E014°20,00'
SDG4	N55°09,80'	E013°02,20'
SDG5	N54°50,00'	E012°41,00'

LATVIA

LV	57 54' N	20 15' E
LV	56 00' N	19 14' E
LV	57 54' N	21 30' E
LV	56 00' N	19 52' E

LITHUANIA

POLAND

PL 1	54 46' N	19 16' E
PL 2	55 50' N	18 52' E
PL 3	55 50' N	18 24' E
PL 4	55 05' N	15 35' E
PL 5	54 46' N	15 25' E
PL 6	54 46' N	14 53' E
PL 7	54 21' N	14 10' E
PL 8	53 58' N	14 23' E
PL 9	55 29' N	18 11' E
PL 10	55 00' N	18 20' E
PL 11	54 40' N	19 00' E
Rebiechowo	54 22,41 N	18 28,05 E

RUSSIA

Baltic Proper

RU 1	59 15' N	22 00' E
RU 2	59 00' N	21 10' E
RU 3	57 55' N	20 30' E
RU 4	55 40' N	19 00' E
RU 5	54 50' N	19 30' E
RU 6	55 20' N	19 30' E
RU 7	55 40' N	19 40' E
RU 8	56 15' N	20 10' E

RU 9		57 33' N	21 00' E
RU 10		59 00' N	21 20' E

Gulf of Finland

RU 11	Port Leningrad		
RU 12	Island Kotlin		
RU 13	Island Seskar		
RU 14	Island Moschny		
RU 15	Island Tjutersy		
RU 16	Ustj-Luga Town		
RU 17	Ustj-Narva Town		
RU 18	Island Gogland		
RU 19	Vyborg Town		

SWEDEN

SE 101	Malören	65 32' N	23 34' E
SE 102		65 21,8 N	23 55' E
SE 103	Farstugrund	65 20' N	22 45' E
SE 104		64 30' N	21 30' E
SE 105		63 40' N	21 30' E
SE 106	Västra Kvarken	63 40' N	20 40' E
SE 107		63 29,1 N	20 41,8 E
SE 108		63 29' N	20 27' E
SE 109		63 20' N	20 24' E
SE 110		62 42,3 N	19 31,5 E
SE 111	Vänta Litets grund	62 30' N	18 17' E
SE 112	Brämön	62 13' N	17 45' E
SE 113	Västra Banken	60 53' N	17 56' E
SE 201		60 36,6 N	19 13' E
SE 202	Understen	60 17' N	18 55' E
SE 203	Svenska Björn	59 33' N	20 01' N
SE 204		58 46,8 N	20 28,7 E
SE 205	Landsort	58 44' N	17 52' E
SE 206		58 20' N	17 50' E
SE 207		58 13,6 N	18 39,5 E
SE 208		58 03,9 N	19 43' E
SE 209		57 54,7 N	20 24,9 E
SE 210		57 40' N	17 30' E
SE 211		56 50' N	18 30' E
SE 212		55 57,3 N	19 04' E
SE 301	Ölandsbroen	56 41' N	16 24' E

SE 302	Ölands Södra grund	56 04' N	16 41' E
SE 303		55 52,9 N	18 54' E
SE 304		55 55,3 N	18 21,8 E
SE 305		55 21,3 N	16 30,5 E
SE 306		55 44,8 N	15 43' E
SE 307		55 41,5 N	15 02,6 E
SE 308	Bornholms Gattet	55 18,7 N	14 27,6 E
SE 309		55 10' N	14 00' E
SE 310		54 57,8 N	13 59,7 E
SE 311		55 01,3 N	13 47,1 E
SE 312		55 00,6 N	13 08,8 E
SE 313		55 20,2 N	12 38,5 E
SE 314		55 40' N	12 56,3 E
SE 315		56 02,7 N	12 40,9 E
SE 316		56 13' N	12 21,8 E
SE 401		56 18,2 N	12 05,3 E
SE 402		56 30' N	12 30' E
SE 403		56 30,5	12 08,9 E
SE 404		57 30' N	11 30' E
SE 405		57 27' N	11 23,9 E
SE 406		57 49' N	11 02,9 E
SE 407		58 08' N	10 32,5 E
SE 408		58 15,7 N	10 01,8 E
SE 409		58 30,7 N	10 08,8 E
SE 410		58 45,7 N	10 35,7 E