



Bonn Agreement Accord de Bonn

Bonn Agreement Aerial Surveillance Programme Annual report on aerial surveillance for 2012

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Bonn Agreement Aerial Surveillance Programme

Annual report on aerial surveillance for 2012

Introduction

1. The eight countries bordering the North Sea which work together within the Bonn Agreement undertake aerial surveillance using specially equipped aircraft and specialised personnel to detect spills of oil and other harmful substances and enforce international environmental regulations¹.

2. The North West European Waters – the main part of which is formed by the North Sea – have been declared a Special Area by the International Maritime Organization for the purpose of MARPOL Annex I (Oil). This took effect on 1 August 1999, from which date the discharge of all oily wastes at sea in the Special Area is prohibited. This report demonstrates the effectiveness of co-operation in aerial surveillance among North Sea countries and their collective effort to detect marine pollution.

3. This report presents the results of aerial surveillance operations undertaken as a collective effort under the Bonn Agreement. In addition to national flights carried out under the Bonn Agreement in their own parts of the maritime area (the objectives of these are described in Annex 3) and other aerial surveillance undertaken for national purposes, the Bonn Agreement countries also co-ordinate flights of the following types:

- a. *Tour d'Horizon* (TdH) flights - monthly flights carried out by countries in turn to survey the offshore area of the North Sea where offshore oil and gas activities take place;
- b. *Co-ordinated Extended Pollution Control Operations* (CEPCO), where some neighbouring countries co-operate to survey intensively an area with high traffic density during a relatively short period (e.g. 24 hours). Contracting Parties may also decide to organise a so called "Super CEPCO" where Bonn Agreement Contracting Parties, often together with countries from neighbouring regions, cooperate in the surveillance of a specific area over a period of up to 10 days.

4. This report compiles, in Tables 1 - 4, data for all the flight types undertaken for Bonn Agreement purposes. These Tables are based on data related to the number of flight hours, the number of spills and their estimated volume. This report differs from those for 2000-2002 in that the data on the number of oil spills was related in those reports to the geographical coverage of the surveillance by side-looking airborne radar (SLAR). Following the revision of the reporting format by BONN 2003, this is no longer the case. Definitions of some of the terms used in these tables are given in Annex 1. In the 2008 reporting round a draft revised reporting format has been used, which was then harmonised with the Helsinki Commission. OTSOPA 2013 agreed to update the reporting format to include data on confirmed detections/observations of "[other substances](#)" and "[unknowns](#)", as Contracting Parties had identified increasing numbers of these types of spills and to collect this data for the 2012 report.

5. In 2012 a SuperCEPCO was organised by France in conjunction with Spain, a longstanding observer to the Bonn Agreement, on 10-14 September covering the Brest – La Coruna shipping route. During the operation 6 aircraft from 5 countries performed 42.7 flight hours (19.4 at night time) in 13 missions. Only one CSN detection was received during the operation; however this detection was not confirmed by aerial observation. The information from the SuperCEPCO has been included in the Annual report despite it being held outside the Agreement area.

¹ Ireland joined the Bonn Agreement as a Contracting Party in April 2010 and is exploring options to participate in the Bonn Agreement aerial surveillance programmes. The UK does not fly routine aerial surveillance operations and instead uses satellite imagery for first alert and undertakes specific follow up operations.

6. Details on the oil slicks identified during the Tour d'Horizon flights, including maps of the flight routes and location of oil slicks, and on the outcome of investigations by Government inspectors into those oil slicks are set out in Annex 2.
7. Annex 3 includes the following information about each Contracting Party:
- a. size of the Exclusive Economic Zone (EEZ) in km²;
 - b. any major traffic routes in the EEZ;
 - c. the number of any oil/gas rigs in the EEZ;
 - d. a short description of the objective of the flights.
8. A summary report on the EU-EMSA CleanSeaNet Service that supports Bonn Agreement Contracting Parties with satellite images is at Annex 4. The report presents CleanSeaNet data for the North Sea for the period 1 January 2012 – 31 December 2012.

Commentary

9. The results of the follow-up of "identified polluters" (see Tables 1 and 3) are not included in this report since it may take a year or more to obtain the outcome of court or administrative proceedings in the country responsible for such proceedings (acting as flag state, coastal state or port state). In cooperation with the North Sea Network of Investigators and Prosecutors (NSN) the Bonn Agreement has published the North Sea Manual on Maritime Oil Pollution Offences (2009) providing detailed information *inter alia* on the legal and organisational framework, national laws of North Sea states and technical and operational means of securing evidence (the Manual is available at: www.bonnagreement.org).
10. For most of the detections observed/confirmed as oil slicks or other substances, the source of the slick (i.e. the polluter) has not been identified. Most visible slicks, however, come from shipping and offshore installations.
11. This report includes estimates of the total amounts of oil discharged based on the aerial surveillance data. These oil volume estimates have been obtained by means of a simple addition of the estimated (minimum)² volumes of the various mineral oil slicks detected/observed at the sea surface for a given year, per type of flight and per country. These estimates use the Bonn Agreement Colour Code until 2003 and from 2004 use its replacement, the more scientifically underpinned Bonn Agreement Oil Appearance Code (BAOAC), as standard oil volume estimation method. The use of the BAOAC (just like the older BA colour code) results in a best estimate of the amount of oil detected on the sea surface within a reliable order of magnitude. It leads to a minimum and maximum estimated quantity, which basically reflects the respective use of the minimum and maximum oil layer thicknesses defined for each oil appearance. More detailed information on the BAOAC, the oil slick appearances and the use of the code can be found in the Bonn Agreement Aerial Operations Handbook and the BAOAC Photo Atlas.
12. However, as only limited aerial surveillance is conducted, it can be concluded that there is the potential for other incidents of oil in the sea not being detected over the course of any one year. Moreover, oil slicks are often detected with no known source, and already weathered to a certain degree, thus the amount estimated may be less than originally discharged. The Contracting Parties to the Bonn Agreement therefore consider the aerial surveillance data currently available to be too sparse and too diverse to allow for a reliable overall annual estimation of oil inputs in the entire Bonn Agreement area and that such estimates should be interpreted as indicative only.
13. The quantities of oil discharged into the North Sea by the offshore industry are reported to the OSPAR Commission by the countries under whose jurisdiction offshore oil extraction takes place (the total

² As agreed within the Bonn Agreement, the minimum oil volumes should preferably be used for enforcement and statistical purposes, whereas the maximum oil volumes should preferably be used in the context of oil pollution response.

quantity of oil discharged from the offshore oil and gas industry into the OSPAR maritime area through discharges and spillages of oil in 2011 was 4191). There are at present no equivalent reliable figures for the amount of oil input to the North Sea from land-based sources or from shipping.

14. In 2012 Contracting Parties observed 136 mineral oil slicks in the Bonn Agreement area and for 111 of these, volumes were estimated (as outlined in table 5). Figure 1 shows the percentage of slicks subdivided into different size categories.

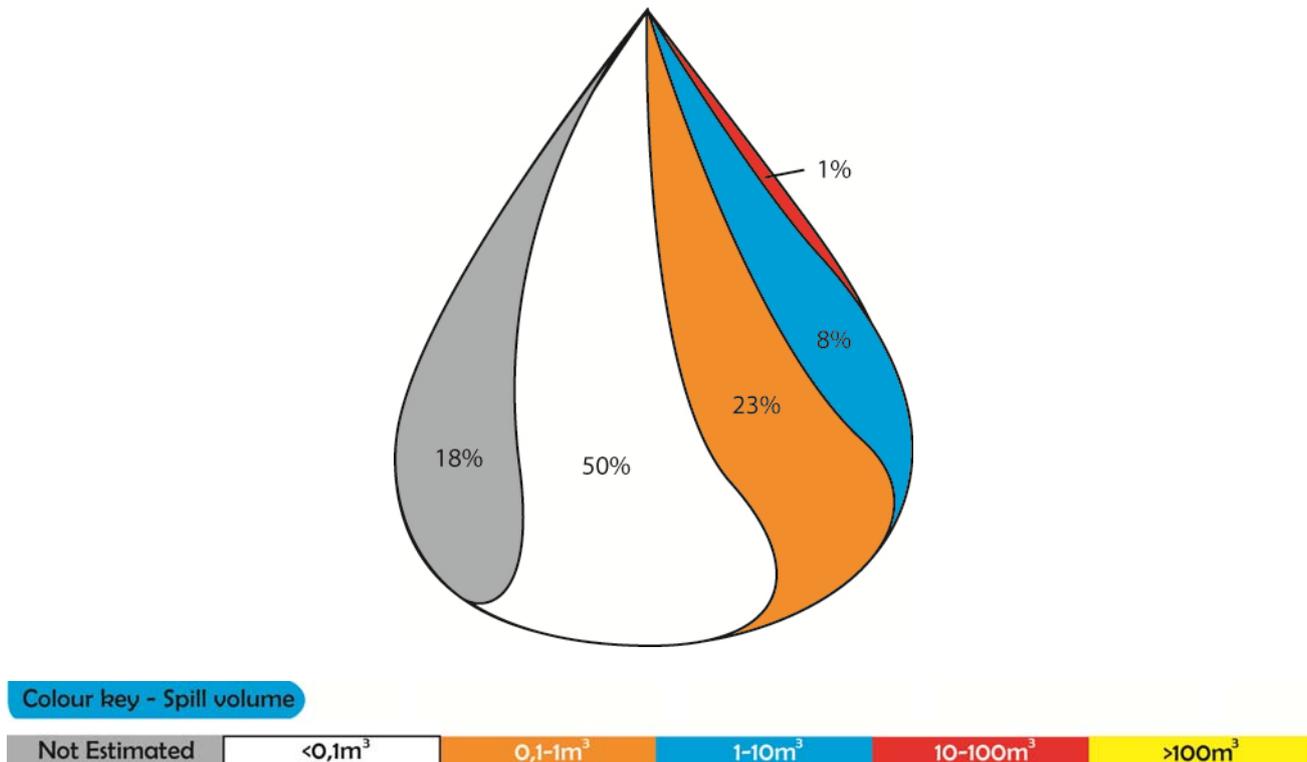


Figure 1: Percentage of mineral oil slicks in size categories observed in the Bonn Agreement area in 2012

15. No mineral oil slicks of over 100m³ were reported and most slicks were in a size-category that did not warrant action to combat them, since they would evaporate, dissolve and disperse naturally.

16. An overview of the locations of slicks observed during 2012 is given in Figure 2 (Map). A common HELCOM / Bonn Agreement map, showing the location of oil spills observed by aerial surveillance and their estimated minimum volumes in the Baltic Sea and North Sea areas in 2012, is given in Figure 3. An overview of slicks observed during Bonn Agreement aerial surveillance activities during 2012 categorised by spill type is given in Figure 4. An overview of the major traffic routes in the Netherlands EEZ is given in Figure 5. When examining Figures 2, 3, 4 and 5, the reader should take account of the following:

- a. the density of ship traffic, and thus the associated likelihood of observing slicks, are highest in the traffic corridor along the south-eastern shore of the Bonn Agreement area;
- b. Contracting Parties' flight hours reported in Table 1 are mostly spent surveying the national zones of interest, which in most cases correspond with the national EEZ or continental shelf areas. There are large differences in the sizes of these zones of interest and the respective total numbers of hours spent surveying them. This implies that the relative frequency with which areas are visited – and thus the potential density of the observations – varies significantly between Contracting Parties.

17. The format of the report's tables 1 – 4 was modified in 2000, 2003 and in 2013. The 2000 to 2002 data reflects the relation of the observation with SLAR coverage through the concept of 'BA flight hour' (i.e. one hour of airborne remote sensing over the sea at a standardised speed of 335 km per hour). As a result of this revision of the reporting format in 2000, the flight hour data up to 1999 are absolute numbers and from 2000 to 2002 the flight hour data are standardised on SLAR-coverage, i.e. corrected for relative aircraft speed. For the countries for which the average aircraft speed is significantly different from the standard speed (e.g. Belgium and UK), the data up to 1999 and from 2000 will not be comparable. As a result of a new revision of the reporting format in 2003, from 2003 onwards, the data are again absolute numbers. In 2013 the format was updated to include data on confirmed detections/observations of "other substances" and "unknowns", as Contracting Parties had identified increasing numbers of these types of spills and agreed to collect this data for the 2012 report.

18. Figures 6, 7 and 8 outline the number of flight hours per country, the number of mineral oil slicks observed per country and the ratio of flight hours to mineral oil slicks. Although the number of flight hours is down from 2011 the number of observed slicks has fallen even quicker resulting in a continuation of the trend for a reduction in the ratio of flight hours to observed slicks. Figure 6 shows that in 2012 there were considerable reductions in flight hours for France, the Netherlands and UK. The reasons for this were:

- a. France said that this was due to technical problems;
- b. the Netherlands has reviewed its long term database on collected aerial surveillance data. It was concluded that since about the year 2000 the number of pollutions by mineral oil showed a sharp decline. Therefore authorities decided to reduce the number of dedicated flight hours for monitoring pollutions to 900. This number is considered sufficient to provide a statistically justifiable analysis in the future. In 2012 the Netherlands only reported 483 hours due to shortage of aircraft, personnel and bad weather conditions;
- c. the UK changed its procedures for aerial surveillance now relying on satellite reports with follow-up flights.

19. Figure 9 relates to the new additional data on other substances and unknowns which has been collected at the regional level for the first time in 2012. It outlines the number of spills confirmed observed as mineral oil and other substances and those that could not be identified as unknown, broken down by country. Contracting Parties will continue to gather this information in future years to identify trends in spills other than mineral oil.

Table 1. Summary of data relating to National Flights during 2012

Country	No. of flight hours			No. of detections inside own EEZ			Detections confirmed/observed as mineral oil spills			Estimated volume m ³ (1)	Detections confirmed/observed as other substances	"Unknown" Detections	Total confirmed detections	No. of polluters			Total	Remarks
	Daylight	Darkness	Sum	Daylight	Darkness	Sum	Daylight	Darkness	Overall					Rigs	Ships	Other/Unknown		
Belgium	157:37	18:30	176:07	8	0	8	4	0	4	0,05	2	2	8	0	0	0	0	Total of 4 slicks from presuming 3 spills
Denmark	164:17	17:41	181:58	52	10	62	45	10	55	17,67	6	1	62	10	5	40	55	
France	605:24	32:06	637:30	13	3	16	8	0	8	12,31	5	5	18	0	6	3	9	
Germany	648:11	299:23	947:34	24	8	32	16	4	20	0,12	3	9	32	0	4	28	32	11 satellite detections not checked due to unavailability of aircraft or bad weather
Netherlands	367:20	115:22	482:42	56	16	72	9	1	15	4,27	0	0	15	0	3	7	10	
Norway	549:00	10:00	559:00	26	0	26	25	0	25	45,82	0	1	26	10	0	16	26	4 of the "unknown" are known sources, but not ship or rig
Sweden	156:00	33:00	189:00	4	2	6	2	1	3	0,76	0	3	6	0	1	5	6	
UK	51:55	9:20	61:15	5	0	5	5	0	6	7,86	0	0	6	5	0	0	5	
Total	2699:44	535:22	3235:06	188	39	227	114	16	136	88,85	16	21	173	25	19	99	143	

(1) The data currently available do not allow reliable overall estimation of oil inputs. These estimates should therefore be interpreted as indicative and not totally accurate. They have therefore been rounded to the nearest 5 m³ (the nearest 1 m³ for estimated amounts below 5 m³).

(2) Notes from Contracting Parties:

Belgium: Total of 4 oil slicks from presuming 3 oil spills

Germany: 11 satellite detections not checked due to unavailability of aircraft or bad weather

Norway: 4 of the "unknown" are known sources, but not ship or rig

Table 2: Summary of data related to satellite detections in 2012

Country	Satellite detections					
	Detected	Confirmed mineral oil	Confirmed other substances	Confirmed "unknown" spills	Confirmed natural phenomena	Nothing found
Belgium	6	1	0	0	1	0
Denmark	55	7	6	0	1	3
France	22	1	0	4	2	8
Germany	28	2	3	1	1	10
Netherlands	120	14	9	0	0	97
Norway	ND	ND	ND	ND	ND	ND
Sweden	0	0	0	0	0	0
UK	278	6	0	0	0	272
Total	509	31	18	5	5	390

* ND = System failure in log system

Confirmed oil spills in this table are in addition to those in Table 1.

Table 3. Summary of data relating to Co-ordinated Extended Pollution Control Operations (CEPCO) flights during 2012

Country	No. of flights	No. of flight hours			No. of detections			Detections confirmed/	Estimated volume m ³	Detections confirmed/	"Unknown" Detections	No. of polluters			
		Daylight	Darkness	Sum	Daylight	Darkness	Sum					Rigs	Ships	Unknown	Total
France	1	23:19	19:23	42:42	1	0	1	1	0.9	0	0	0	0	0	0
Total	1	23:19	19:23	42:42	1	0	1	1	<1	0	0	0	0	0	0

Table 4. Summary of data relating to Tour d'Horizon (TdH) flights during 2012

Country	No. of flights	No. of flight hours			No. of detections inside own EEZ			detections identified as	Estimated volume m ³	confirmed/ observed as	"Unknown" Detections	No. of polluters			
		Daylight	Darkness	Sum	Daylight	Darkness	Total					Rigs	Ships	Unknown	Total
Belgium	6	18:55	0:00	18:55	6	0	6	1	0.0024	0	5	4	1	1	6
Denmark	2	8:20	0:00	8:20	0	0	0	0	0	1	0	0	0	1	1
Norway	2	7:30	0:00	7:30	3	0	3	3	0.10	3	0	0	3	0	3
UK	3	13:20	0:00	13:20	1	0	1	1	0.23	0	0	0	0	1	1
Total	13	48:05	0:00	48:05	10	0	10	5	0.33	4	5	4	4	3	11

Norway: there were very foggy conditions and low wind during both flights

Table 5. Distribution of the estimated sizes of confirmed/observed oil slicks

Country	Not quantified	Category 1: <0,1m ³	Category 2: 0,1-1 m ³	Category 3: 1-10 m ³	Category 4: 10-100 m ³	Category 5: >100m ³	Number of Slicks	Number of quantified Slicks	%
Belgium	0	4	0	0	0	0	4	4	2,94
Denmark	9	34	8	4	0	0	55	46	40,44
France	0	3	3	2	0	0	8	8	5,88
Germany	14	6	0	0	0	0	20	6	14,71
Netherlands	0	6	8	1	0	0	15	15	11,03
Norway	0	13	10	1	1	0	25	25	18,38
Sweden	0	2	1	0	0	0	3	3	2,21
UK	2	0	1	3	0	0	6	4	4,41
Total	25	68	31	11	1	0	136	111	100
%	18,38	50,00	22,79	8,09	0,74	0,00	100,00		

Figure 2: Overview of slicks observed during Bonn Agreement aerial surveillance activities during 2012

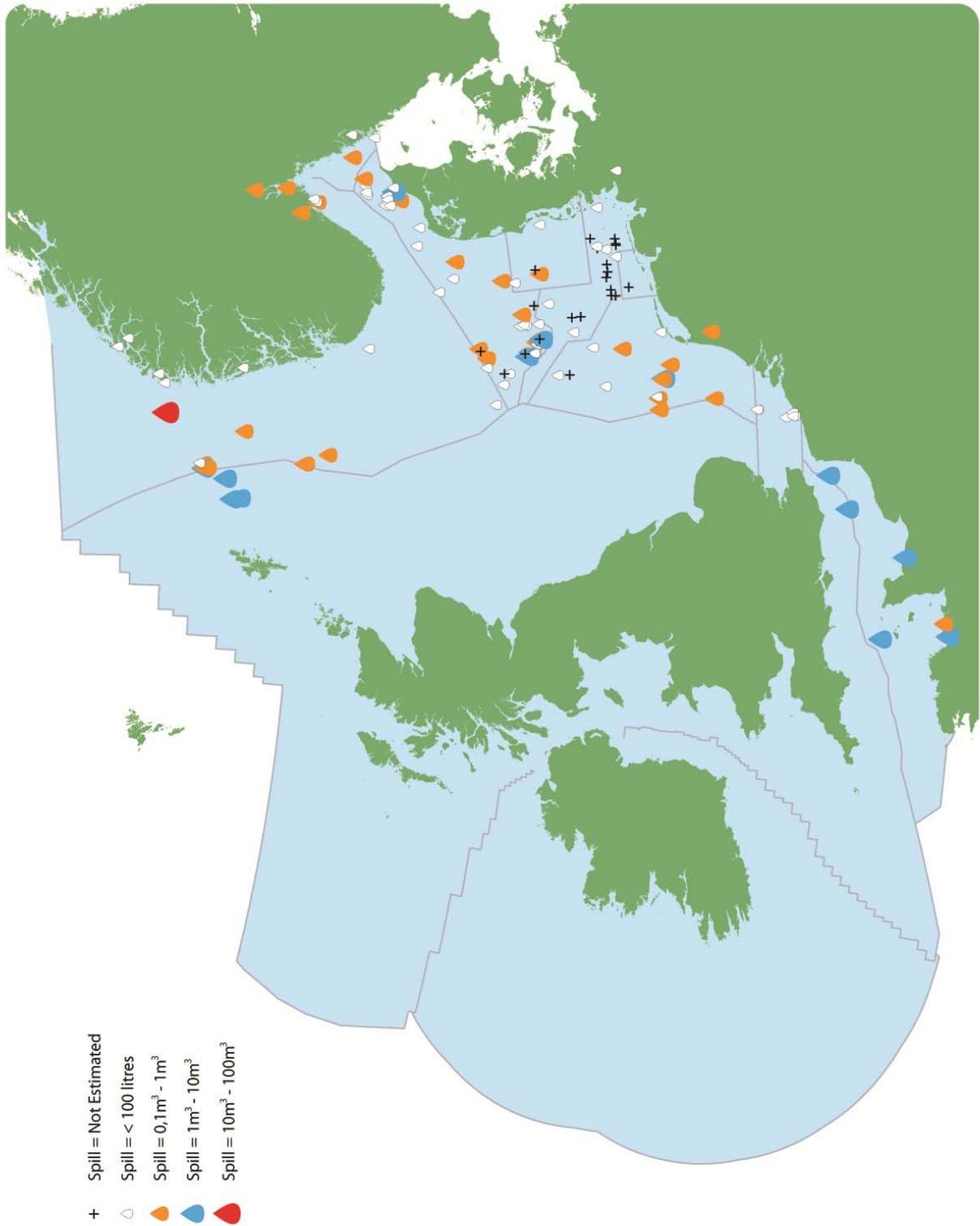


Figure 3: Common HELCOM / Bonn Agreement map showing the location of oil spills confirmed/observed by aerial surveillance within the Baltic Sea and North Sea areas in 2012

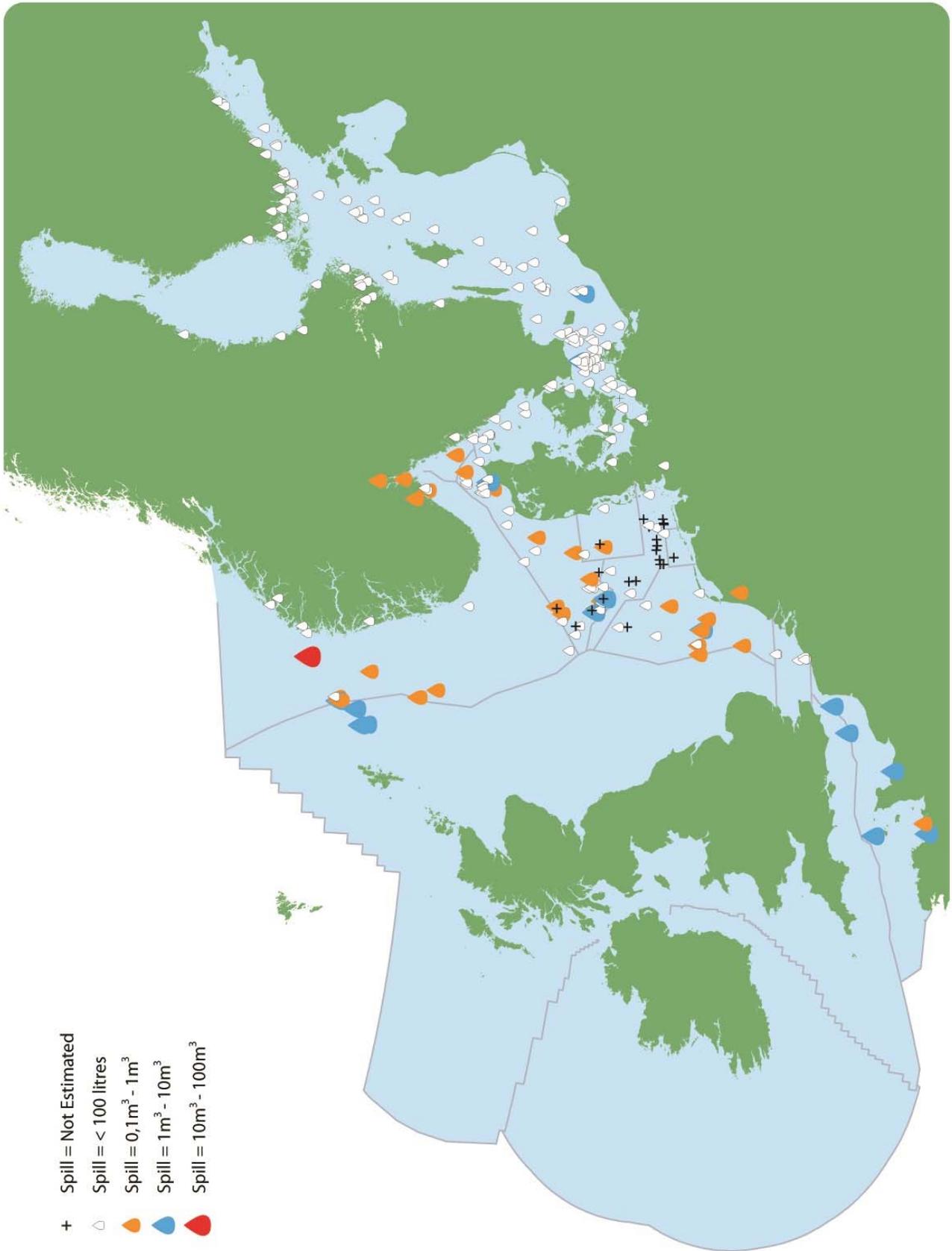


Figure 4: Overview of slicks observed during Bonn Agreement aerial surveillance activities during 2012 categorised by spill type

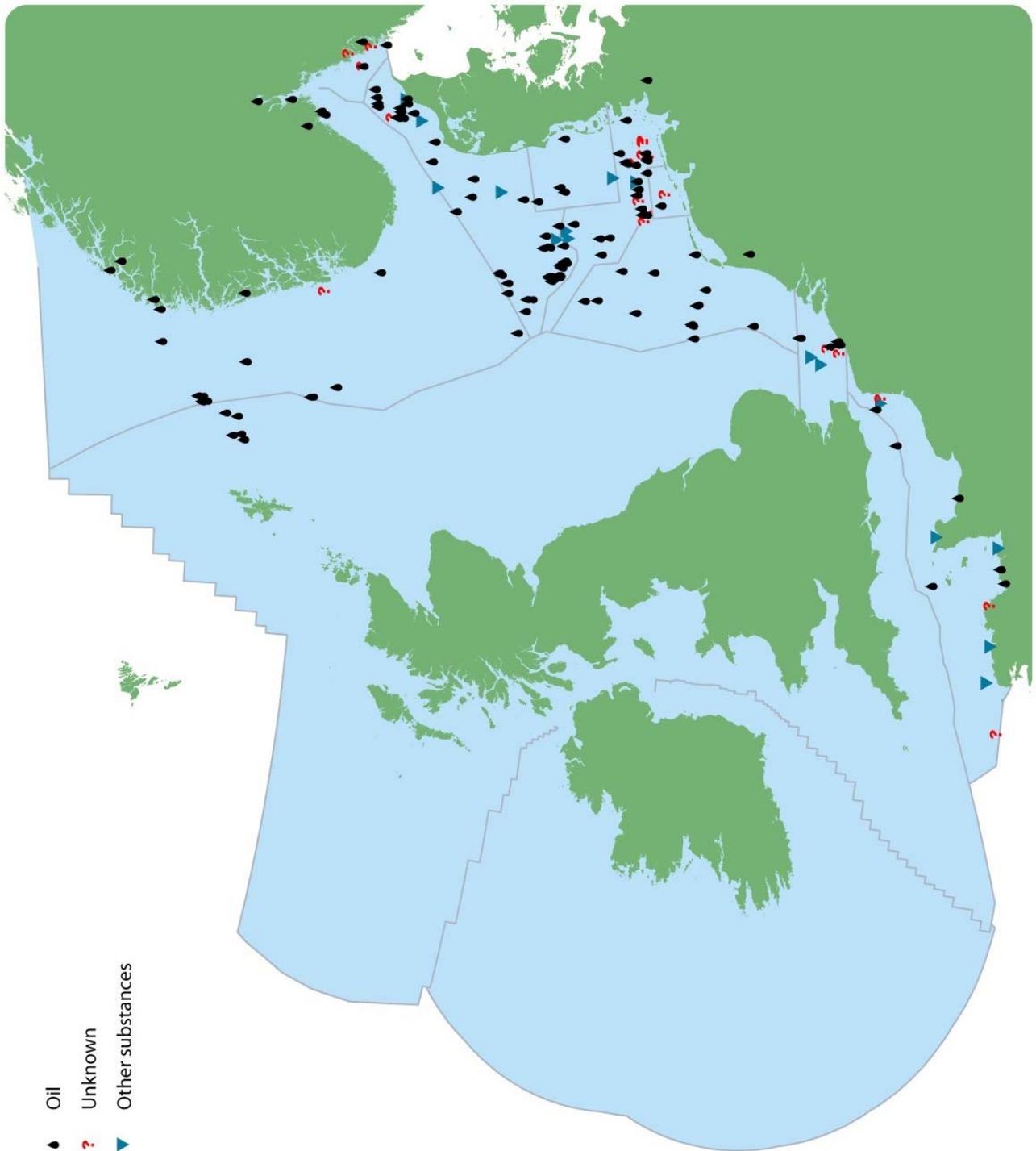


Figure 5: Maritime traffic routes off the Netherlands

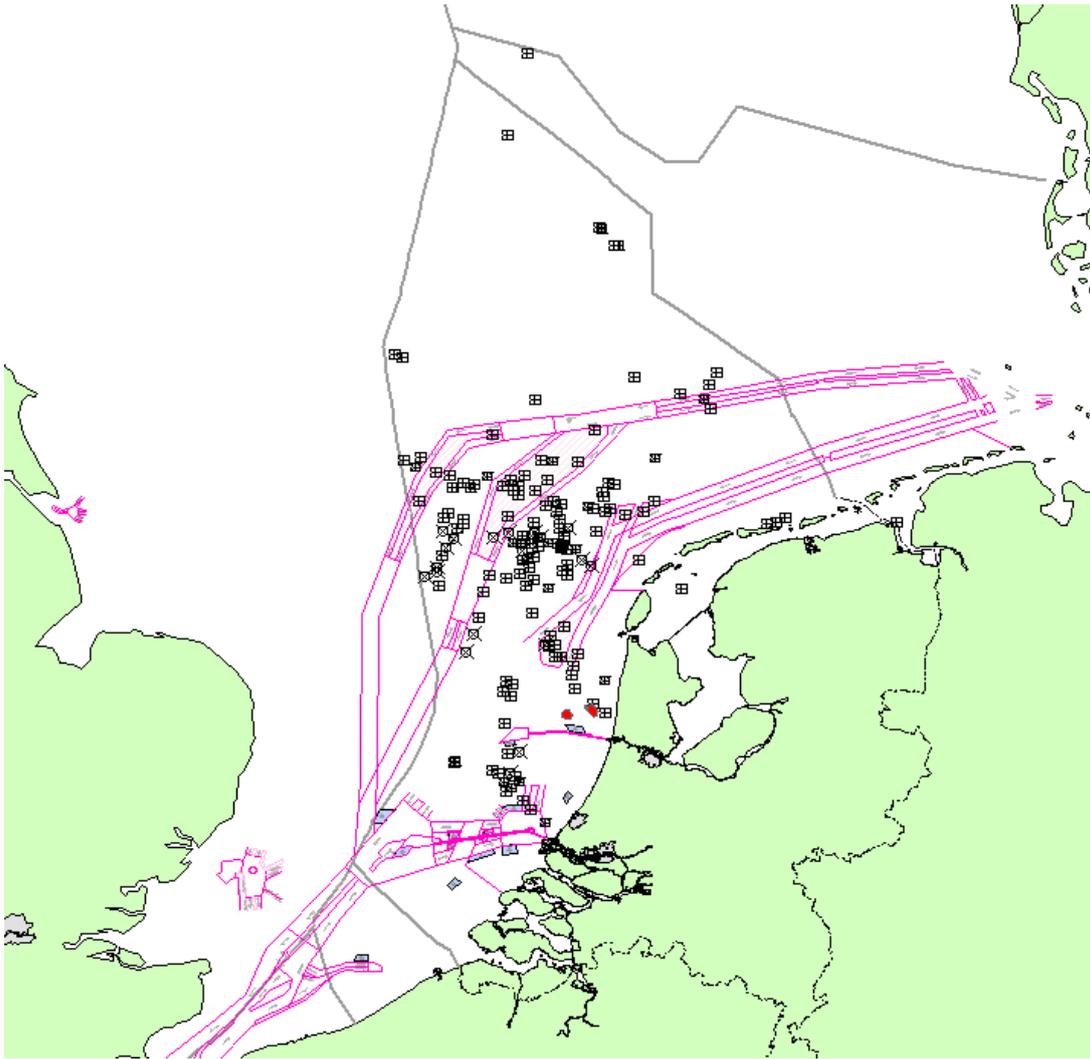
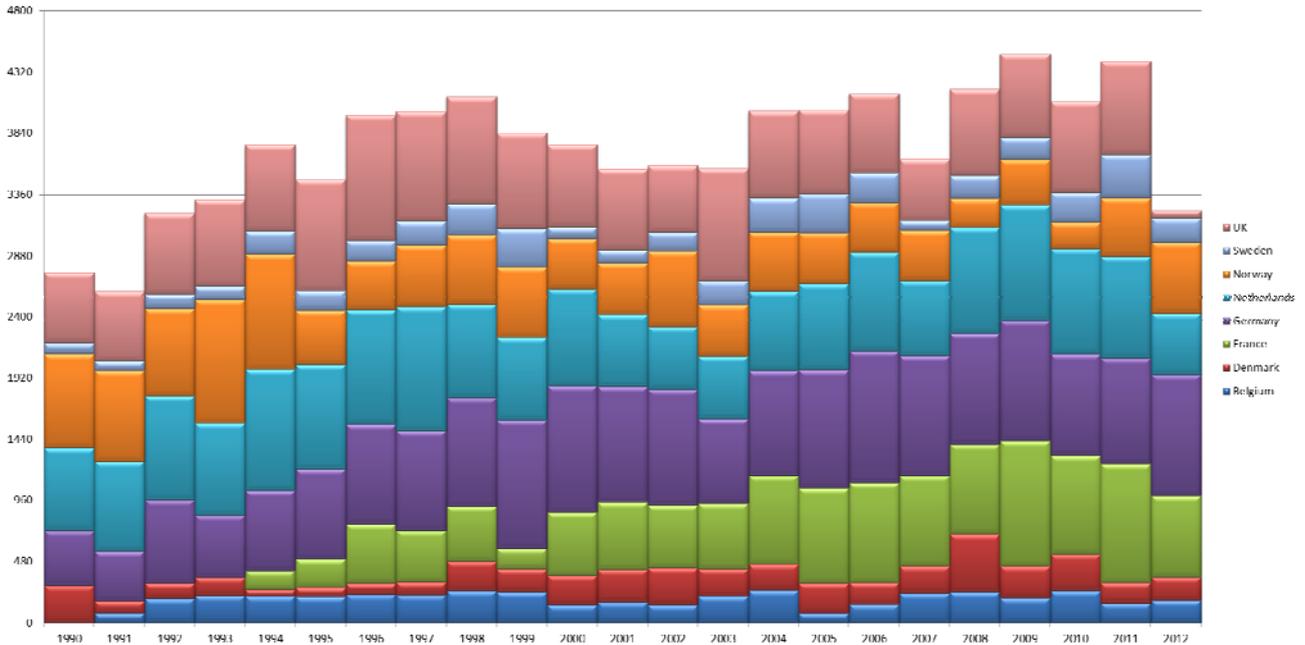


Figure 6: Number of flight hours per country 1990 – 2012



For an explanation of the substantial decrease in flight hours for France, the Netherlands and UK in 2012 see [paragraph 18](#) of the main report

Figure 7: Number of slicks observed 1990 – 2012

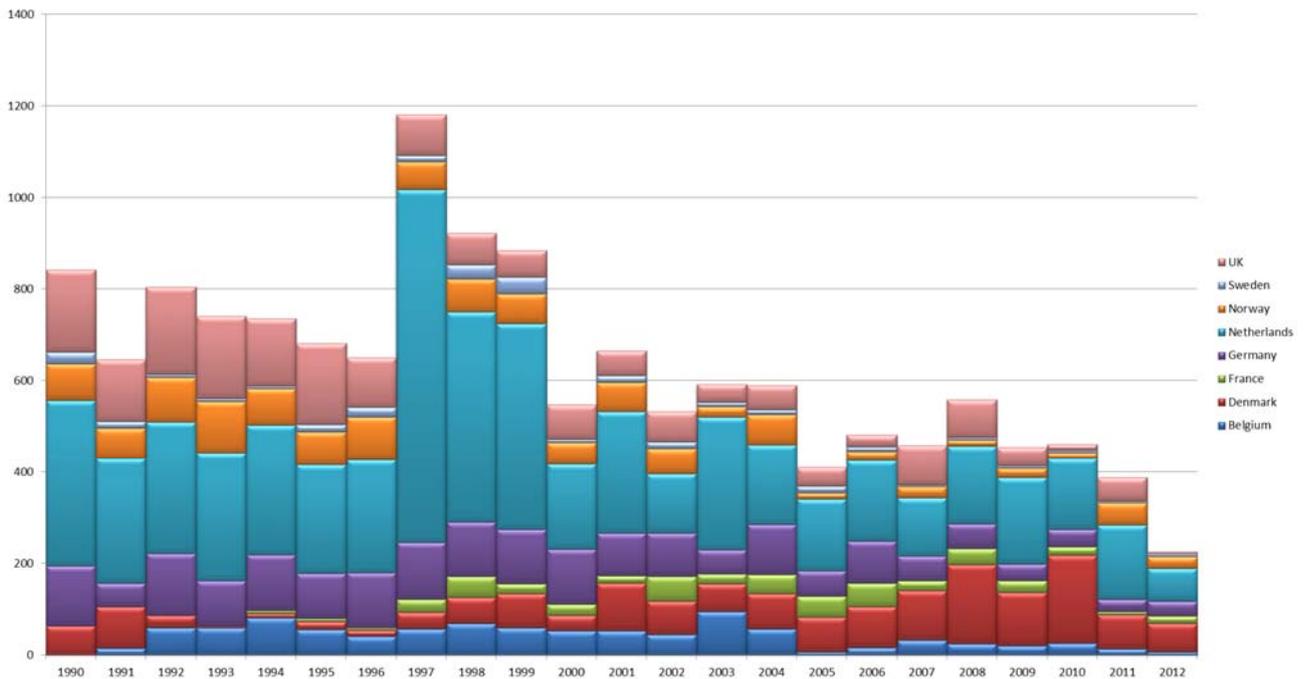


Figure 8: Total numbers: all flight hours and all observed slicks 1986 – 2012 and their ratio

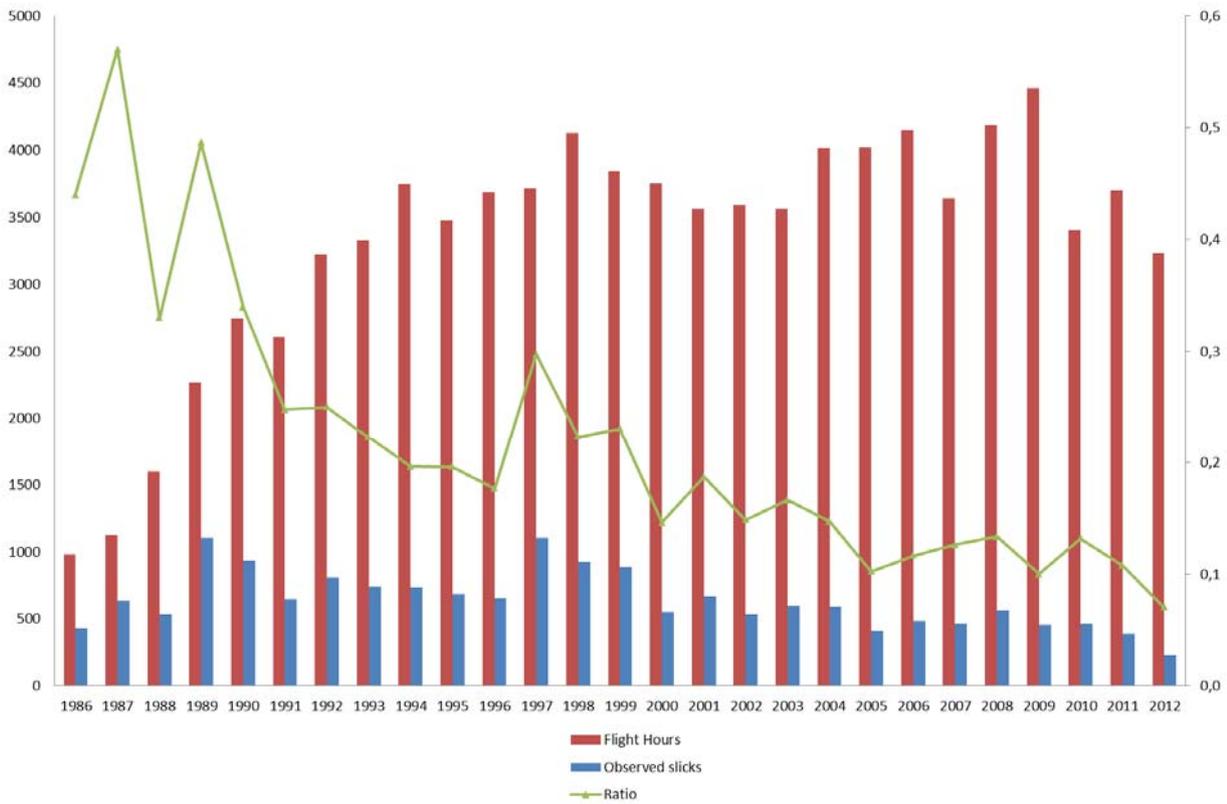
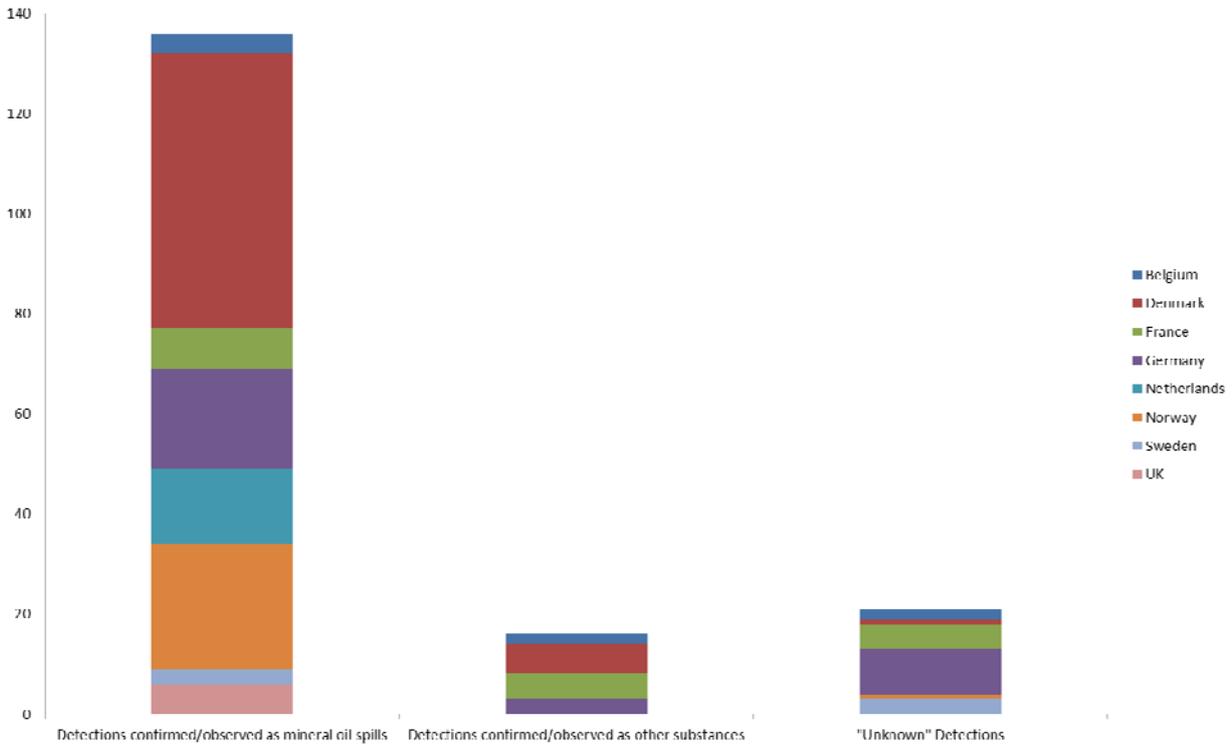


Figure 9: Number of mineral oil, other substances and unknown slicks observed 2012



ANNEX 1

Definitions used in the reporting of data from aerial and satellite surveillance

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 on behalf of the 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). This will be sensor data, without visual observation.
Detections confirmed/observed as oil	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 mineral oil pollution. In fact, it is only by visual observation that the operator can apply the BAOAC for estimating the volume.
Estimated volume of a spill	The volume of one spill calculated using the Bonn Agreement Oil Appearance Code, the lower figure (BAOAC minimum) .
Detections confirmed/observed as other substances	Detected spills that have been visually verified under daylight conditions but that were found to be different from mineral oil spills, i.e. without mineral oil appearances and colours. This category of spills contains: <ul style="list-style-type: none"> • Confirmed other substances (in case of polluter caught with substance identification possible) and • Non-identified substances, being spills without polluter of which the exact nature could not be determined.
“Unknown” spills	Number of total spills detected in darkness or bad visibility conditions that could not be visually verified and are therefore classified as “Unknown”.
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 report 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. A trained operator will have visually observed mineral oil
Confirmed other Substances	The number of visually verified/investigated satellite detections consisting of a substance other than oil, e.g. vegetable or fish oil or

	chemical.
Confirmed "Unknown" spills	The number of verified/investigated satellite detections at night or under bad visibility conditions, where the verified spill is categorized as "Unknown" detection.
Confirmed natural phenomena	The number of verified/investigated satellite detections consisting of algae or natural phenomena as currents, waves, ice etc.
Nothing found	The number of verified/investigated satellite detections that nothing has been found.

Additional information on the Tour de Horizon flights

Report on Tour de Horizon flights carried out during 2012

Introduction

The Tour de Horizon (TdH) flights for 2012 were flown as follows:

- March: the Netherlands and Norway;
- July: Belgium and Denmark;
- October: United Kingdom.

The flights took place on 16 days between 5 March and 25 October 2012, more specifically:

- From 5 to 8 March (NL);
- From 25 to 26 March (NO);
- From 2 to 6 July (BE);
- From 11 to 12 July (DK);
- From 23 to 25 October (UK).

All flight data have been sent to Belgium for compilation.

Detections

- 26 detections were made: 20 in British area, 2 in Norwegian area, and 4 in Danish area.
- 16 detections were identified as mineral oil.
- 10 detections could not be specified: 5 of these could be visually verified but consisted of other substances than mineral oil, the other 5 were 'unknown' detections where no visual verification was possible.
- 21 detections were found directly associated with offshore platforms (17 in UK area, 3 in NO area, 1 in DK area), of which 13 detections consisted of mineral oil and 8 detections of an unknown substance. 1 detection of unknown substance (in UK area) was linked to a ship. The source of pollution of the remaining 3 mineral oil detections (1 in UK area and 2 in DK area) and the last unknown substance (1 in DK area) could not be established – although 2 of these mineral oil detections were believed to originate from produced water.
- Of the 16 mineral oil detections, minimum 1 detection (~min.vol.) and maximum 4 detections (~max. vol.) consisted of major oil volumes - *i.e.* volume of more than 1 m³;
- Considering only the **minimum** oil volume estimates:
 - (i) Major oil volumes (more than 1 m³): 1 detection:
 - 0 detections were quantified as more than 10 or between 10-100 m³;

- 1 detection was quantified between 1-10 m³ (1.49 m³);
- (ii) Minor oil volumes (less than 1 m³): 15 detections:
 - 0 detections were quantified as between 0.5 and 1 m³;
 - 2 detections were between 0.1 and 0.5 m³ (0.13 m³; 0.23 m³);
 - 13 detections were lower than 0.1 m³.
- Considering only the **maximum** oil volume estimates:
 - (i) Major oil volumes (more than 1 m³): 4 detections:
 - 0 detections were quantified as more than 100 m³;
 - 1 detection was quantified between 10-100 m³ (15.10 m³);
 - 3 detections were between 1-10 m³ (1.39 m³; 1.05 m³; 1.62 m³);
 - (ii) Minor oil volumes (less than 1 m³): 12 detections:
 - 3 detections were quantified as between 0.5 and 1 m³ (0.84 m³; 0.58 m³; 0.61 m³);
 - 6 detections were between 0.1 and 0.5 m³;
 - 3 detections were below 0.1 m³.
- Only the United Kingdom reported that a detected oil spill was a verification of a satellite alert.
- Finally, 5 maps have been added to visualize the flight routes of the various aircraft that performed TdH flights in 2012. Except for the Norwegian aircraft (cf. the NO crew had to deal with severe weather conditions), these flight routes demonstrate that the central North Sea area where the offshore platforms, and in particular the oil fields are situated was well covered.

Detection reporting

- The detection reporting procedure varied from country to country (e.g. several aircrew performed post-flight reporting by mail instead of fax), but the general flight reporting procedures as stipulated in the BA AOH were correctly followed and applied.
- The use of email for digital reporting of flight observation reports –instead of fax- becomes standard practice.

Detection investigation

- With regard to the 17 detections found connected to UK platforms, no government inspector assessment was possible for 13 of these detections because the national competent authorities (DECC) did not receive a pollution incident report. The 4 remaining detections were assessed as follows:
 - In two cases, a technical problem on a platform (*Britannia*: control failure in degasser; *Balmoral*: process start-up problems), resulting in slightly higher than normal oil in produced water concentrations, was found to be the cause of the observed minor oil spills.
 - In one case (*Fulmar Alpha*), a third party pollution incident was reported by the platform, meaning that the spill was not attributed to the installation.

- In the last case, the government inspector reported that there was no known installation at the reported location.
- With regard to the 3 detections linked to NO platforms, the Norwegian authorities also reported that for 2 cases, NO authorities have no track of any flight report received. For one of these cases (*Oseberg C*) it was found that this was due to a reporting mistake made by the aircrew (who sent their flight report to the wrong National Contact Point). For the third detection (*Statsfjord* case), the Norwegian government inspector stated that no follow-up had been possible due to bad weather conditions.
- With regard to the one detection connected to a DK platform, the government inspector stated that no platform operator reports had been received for the day of observation, and that the oil in produced water discharges from that platform (*DUC-DFE*) was within legal limits.
- From the above it becomes clear that an appropriate follow-up of TDH detections by national government inspectors is severely hampered due to bad reporting or forwarding of flight reports to the competent authorities. Following discussion at BONN 2013, the Contracting Parties therefore agreed to the following recommendations in order to minimise reporting problems during TdH operations.
 - i. Aircrew should be instructed to systematically contact the appropriate National Focal Point (NFP) by phone for each detection, if possible already in-flight, and as soon as a written report is available to send this report with photos and/or sensor images attached, preferably by mail, to that coastal station with request to acknowledge receipt.
 - ii. It may be recommended to add the competent authorities as additional recipient to the mail (or fax) with the written report.
 - iii. It may also be recommended to work with a *TdH liaising officer or centre* for detection reporting: Since aircrew have reported problems in establishing contact with NFPs during their TdH operations (cf. TdH12 Report), the detection reporting by aircrew could be facilitated by means of a liaising officer or centre within the country performing the TdH operation, who could then establish the necessary contacts with and forward flight reports to the affected coastal State.
 - iv. In general, aircrew should be instructed to keep closer contact with NFPs throughout the TdH operation, not only for the purpose of detection reporting, but also for changes in planning or for CSN alert verification efforts/possibilities.
 - v. Contracting Parties with offshore oil and gas platforms in their waters may finally consider a re-briefing of their National Focal Points and coastal stations with regard to TdH operations and - in particular – agreed detection reporting and dispatching procedures.

TOUR D'HORIZON 2012 RESULTS

1. SUMMARY OF RESULTS

Summary of data relating to Tour d'Horizon (TdH) flights during 2012

Country	No. of flights	No. of flight hours			No. of detections			No of detections identified as oil	Estimated volume m ³	Detections confirmed/ observed as other substances	'Unknown' detections	No. of polluters				Remarks
		Daylight	Darkness	Sum	Daylight	Darkness	Sum					Rigs	Ships	Unknown	Total	
Belgium	6	18.91	0	18.91	6	0	6	1	0.01	0	5	5	1	0	6	
Denmark	2	8.33	0	8.33	8		8	7	1.85	1	0	7		1	8	
Germany	-	-	-	-	-	-	-	-	-			-	-	-	-	
Netherlands	6	17.00	0	17.00	8	0	8	4	0.28	4	0	8	0	0	8	
Norway	2	12.00	0	12.00	3	0	3	3	0.10			3	0	0	3	
Sweden	-	-	-	-	-	-	-	-	-			-	-	-	-	
UK	3	13.33	0	13.33	1	0	1	1	0.23			0	0	1	1	
Total	19	69.57	0	69.57	26	0	26	16	2.47	5	5	23	1	2	26	

2. OVERVIEW PER CONTRACTING PARTY**2.1 THE NETHERLANDS: 05-08 March 2012**

No	Date (dd.mm)	Time (UTC)	Position (N - E/W)		CP Area	Min. Quan.	Max. Quan.	Polluter ID	Pollution Type
						(m ³)	(m ³)		
1	0503	14:00	N 57°27.3'	E 001°24.1'	UK	-	-	Montrose-A	Other subs.
2	0503	14:12	N 57°43.0'	E 000°54.7'	UK	0.13	1.39	Forties-D	OIL
3	0503	14:16	N 57°43.3'	E 000°50.4'	UK	0.08	0.84	Forties-C	OIL
4	0603	10:24	N 58°02.0'	E 001°04.0'	UK	0.06	0.58	Alba North	OIL
5	0603	10:26	N 58°03.1'	E 001°08.2'	UK	0.01	0.09	Britannia	OIL
6	0603	15:10	N 60°36.2'	E 001°18.3'	NO (but flight report sent to UK)	-	-	Oseberg-C	Other subs.
7	0703	12:47	N 59°10.2'	E 002°29.3'	NO	-	-	Grane Statoil	Other subs.
8	0803	11:00	N 55°28.2'	E 005°07.4'	DK	-	-	DUC-DFE	Other subs.

- 4 detections/observations of mineral oil spills of minor oil volumes (min.vol.< 1m³), all linked to a platform. No major quantities of oil observed (min.vol. < 1 m³). The 4 'other substance' detections consisted of slicks with no colour.
- No CSN satellite detection alerts received; hence no verification performed.
- Only post-flight reporting performed by Fax, to NCPs of UK, NO and DK. The crew seems to have made one error in reporting, with respect to the detection near the Oseberg-C platform: the NL crew informed Belgium that they had sent a post-flight report to the UK (instead of NO) authorities.

2.2 NORWAY 25-26 March 2012

No	Date (dd.mm)	Time (UTC)	Position (N - E/W)		CP Area	Min. Quan.	Max. Quan.	Polluter ID	Pollution Type
						(m ³)	(m ³)		
1	2503	17:04	55° 31,9' N	005° 00,00' E	DK	0.005	0.04	Unknown	OIL
2	2603	12:41	56° 30,00' N	002° 09,00' E	UK	0.04	0.3	Fulmar Alpha	OIL
3	2603	12:37	56° 24,00' N	002° 04,00' E	UK	0.05	0.39	Unknown (~position Auk)	OIL

- 3 detections/observations of mineral oil spills, all of minor quantities (min.vol. < 1m³). The two spills with unknown polluter were reported to be typically produced water.
- No in-flight reports; post-flight reporting done by fax to NCPs DK and UK.
- No first alert via satellite reported.

2.3 BELGIUM: 02-06 July 2012

No	Date (dd.mm)	Time (UTC)	Position (N - E/W)		CP Area	Min. Quan.	Max. Quan.	Polluter ID	Pollution Type
						(m ³)	(m ³)		
1	0207	14:29	N 58°13,67'	E 001°06,70'	UK	0.002	0.02	Balmoral	OIL
2	0307	12:41	N 60°33,00'	E 000°43,20'	UK	-	-	Prins Bernhard (ship)	Unknown
3	0307	12:50	N 60°48,07'	E 001°26,71'	UK	-	-	Ninian	Unknown
4	0307	12:55	N 60°53,11'	E 001°17,82'	UK	-	-	Orphan	Unknown
5	0307	13:05	N 61°16,60'	E 000°55,27'	UK	-	-	Tern A	Unknown
6	0307	13:32	N 61°17,80'	E 001°53,83'	NO	-	-	Statsfjord	Unknown

- 1 detection/observation of a mineral oil spill, of minor quantity (min.vol. < 1 m³); 5 'unknown' detections due to bad visibility.
- No in-flight reports; post-flight reporting by TELCOM and email to NCPs UK and NO.
- No first alerts via satellite reported.

2.4 DENMARK: 11-12 July 2012

No	Date (ddmm)	Time (UTC)	Position (N - E/W)		CP Area	Min. Quan.	Max. Quan.	Polluter ID	Pollution Type
						(m ³)	(m ³)		
1	1107	11:00	N 56°24,02'	E 002°03,75'	UK	0.06	0.43	Auk	OIL
2	1107	11:03	N 56°29,59'	E 002°09,19'	UK	0.06	0.45	Fulmar Alpha	OIL
3	1107	11:09	N 56°27,09'	E 002°17,16'	UK	0.03	0.21	Clyde Alpha	OIL
4	1107	11:37	N 57°43,54'	E 000°50,89'	UK	0.04	0.44	Forties Charlie	OIL
5	1107	11:40	N 57°43,21'	E 000°54,29'	UK	1.49	15.10	Forties Bravo	OIL
6	1107	11:43	N 57°43,87'	E 000°58,43'	UK	0.09	1.05	Forties Alpha	OIL
7	1207	12:37	N 58°52,69'	E 001°21,04'	UK	0.07	0.61	Brae Bravo	OIL
8	1207	14:30	N 57°52,1'	E 009°29,4'	DK	-	-	Unknown	Other subst.

- 7 detections/observations of mineral oil spills, of which 1 major spill (> 1 m³); 1 detection, with visual verification, of another substance than mineral oil.
- The aircrew reported that they were unable to get in contact with Humber or Aberdeen Coastguard stations on VHF and MAR VHF. Reporting was done post-flight my mail via the Danish NCP (SOK MAS) to the UK NCP.
- No first alerts via satellite reported.

2.5 UNITED KINGDOM: 23-25 October 2012

No	Date (dd.mm)	Time (UTC)	Position (N - E/W)		CP Area	Min. Quan.	Max. Quan.	Polluter ID	Pollution Type
						(m ³)	(m ³)		
1	2410	8:45	N 55°44,00'	E 005°51,00'	DK	0.23	1.62	Unknown	OIL

- 1 detection/observation of a minor mineral oil spill (min.vol. < 1m³), as verification of a satellite first alert. Spill described as 100% sheen with some emulsified oil spots which were unquantifiable.
- Post-flight reporting performed to DK and UK NCPs.

TOUR D'HORIZON 2011 – DETECTION INVESTIGATION SUMMARY

NETHERLANDS – MARCH 2012

Date (ddmm)	Time (UTC)	Platform	Reported quantity (m ³)		Government inspectors assessment
			Min.	Max.	
0503	14:00	Montrose-A	-	-	UK: No pollution incidents reported. No further UK inspector assessment possible due to late notice of flight results.
0503	14:12	Forties-D	0.13	1.39	UK: Operator contacted by UK inspector. Oil in produced water was within legal limit. No other issues were noted at the time of the flight. No further UK inspector assessment possible due to late notice of flight results.
0503	14:16	Forties-C	0.08	0.84	UK: Operator contacted by UK inspector. Oil in produced water was within legal limit. No other issues were noted at the time of the flight. No further UK inspector assessment possible due to late notice of flight results.
0603	10:24	Alba North	0.06	0.58	UK: No pollution incidents reported. No further UK inspector assessment possible due to late notice of flight results.
0603	10:26	Britannia	0.01	0.09	UK: Pollution incident reported on 06/03/12. Due to level control failure in the degasser, oil in produced water levels reached a maximum of 69mg/l and sheen extended beyond the 500m zone.
0603	15:10	Oseberg-C	-	-	NO: No data: no track of flight report from NL; cannot find that report/fax has been received. (Probable cause is error in reporting: NL crew stated that report was sent to UK authorities - instead of NO authorities)
0703	12:47	Grane Statoil	-	-	NO: No data: no track of flight report from NL; cannot find that report/fax has been received. (Cause unknown: NL crew stated that report was sent to NO authorities)
0803	11:00	DUC-DFE	-	-	DK: No platform operator reports on oil spills from Dan platforms on March 6 – 8, 2012. Oil in produced water: March 6: Dan FC 22 mg/l, FF 1 mg/l, FG 1 mg/l March 7: Dan FC no discharge, FF 7 mg/l, FG 1 mg/l March 8: Dan FC no discharge, FF 1 mg/l, FG 2 mg/l

NORWAY – MARCH 2012

Date (ddmm)	Time (UTC)	Platform	Reported quantity (m ³)		Government inspectors assessment
			Min.	Max.	
26.03	12:41	Fulmar Alpha	0.04	0.3	UK: No pollution incidents reported. No further UK inspector assessment possible due to late notice of flight results.

BELGIUM - JULY 2012

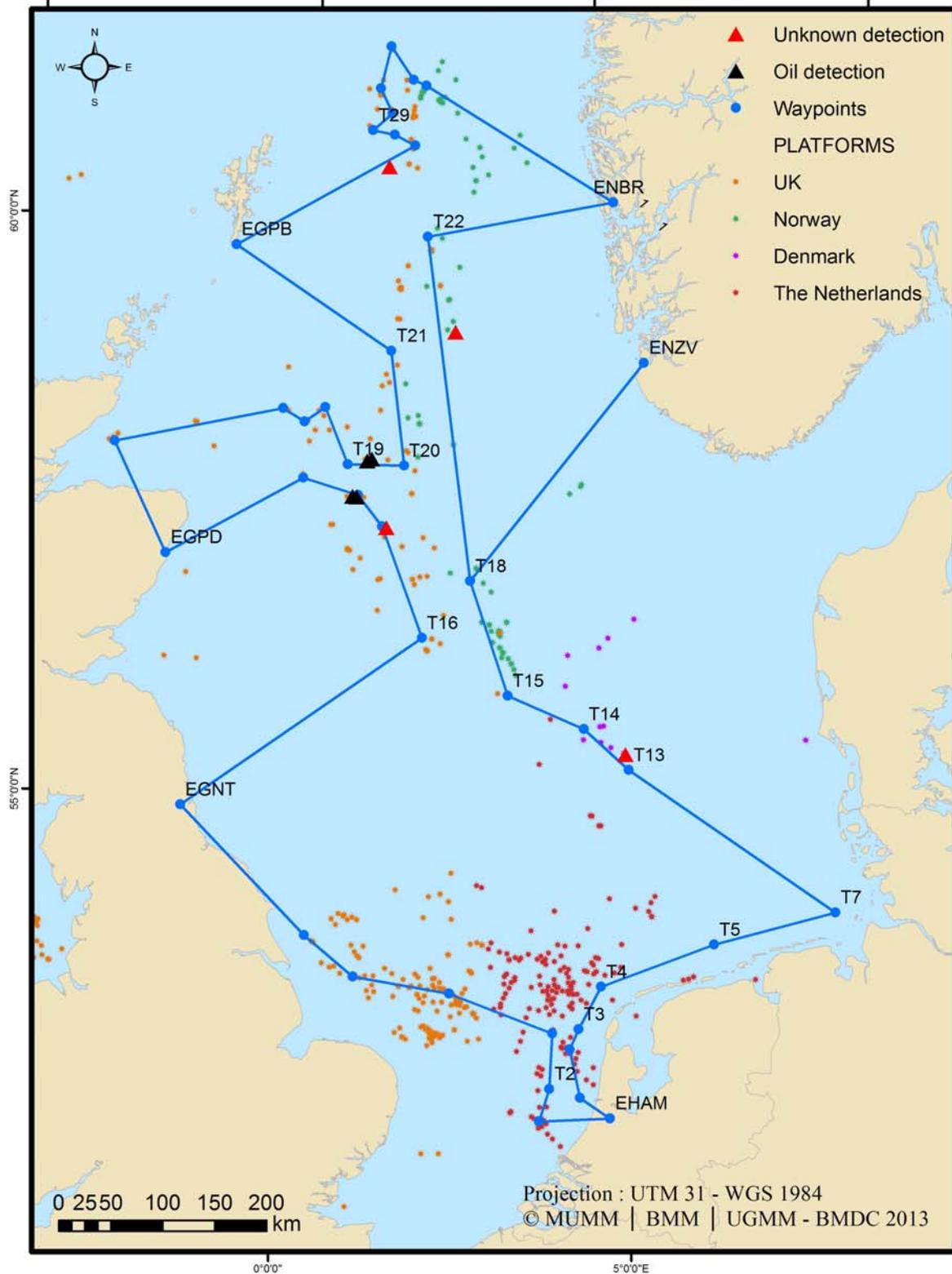
Date (ddmm)	Time (UTC)	Platform	Reported quantity (m ³)		Government inspectors assessment
			Min.	Max.	
0207	14:29	Balmoral	0.002	0.02	UK: Pollution incident reported on 01-04/07/12. Process start-up problems resulted in higher than normal oil in produced water. The maximum measured was 20mg/l which is within legal limits. A sheen extended beyond the 500m zone.
0307	12:50	Ninian	-	-	UK: No pollution incidents reported. No further UK inspector assessment possible due to late notice of flight results.
0307	12:55	Orphan	-	-	UK: No known installation at this location.
0307	13:05	Tern A	-	-	UK: No pollution incidents reported. No further UK inspector assessment possible due to late notice of flight results.
0307	13:32	Statsfjord	-	-	NO: No data - National surveillance aircraft cancelled own follow up due to bad weather conditions.

DENMARK - JULY 2012

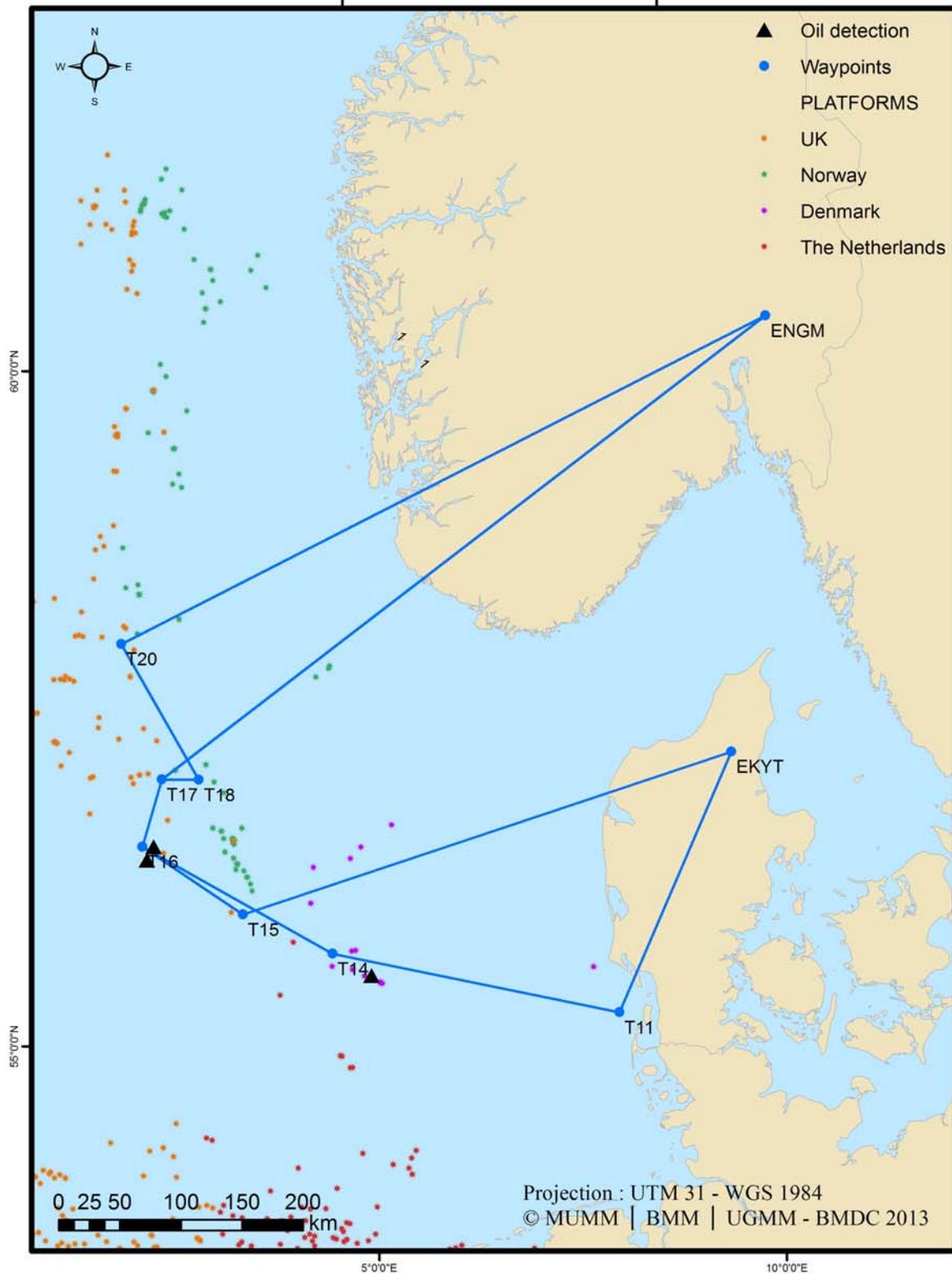
Date (ddmm)	Time (UTC)	Platform	Reported quantity (m ³)		Government inspectors assessment
			Min.	Max.	
1107	11:00	Auk	0.06	0.43	<u>UK</u> : No pollution incidents reported. No further UK inspector assessment possible due to late notice of flight results.
1107	11:03	Fulmar Alpha	0.06	0.45	<u>UK</u> : Third party pollution incident reported by Fulmar. Not attributed to the installation.
1107	11:09	Clyde Alpha	0.03	0.21	<u>UK</u> : No pollution incidents reported. No further UK inspector assessment possible due to late notice of flight results.
1107	11:37	Forties Charlie	0.04	0.44	<u>UK</u> : No pollution incidents reported. No further UK inspector assessment possible due to late notice of flight results.
1107	11:40	Forties Bravo	1.49	15.10	<u>UK</u> : No pollution incidents reported. No further UK inspector assessment possible due to late notice of flight results.
1107	11:43	Forties Alpha	0.09	1.05	<u>UK</u> : No pollution incidents reported. No further UK inspector assessment possible due to late notice of flight results.
1207	12:37	Brae Bravo	0.07	0.61	<u>UK</u> : No pollution incidents reported. No further UK inspector assessment possible due to late notice of flight results.

TOUR D'HORIZON 2012 – FLIGHT MAPS

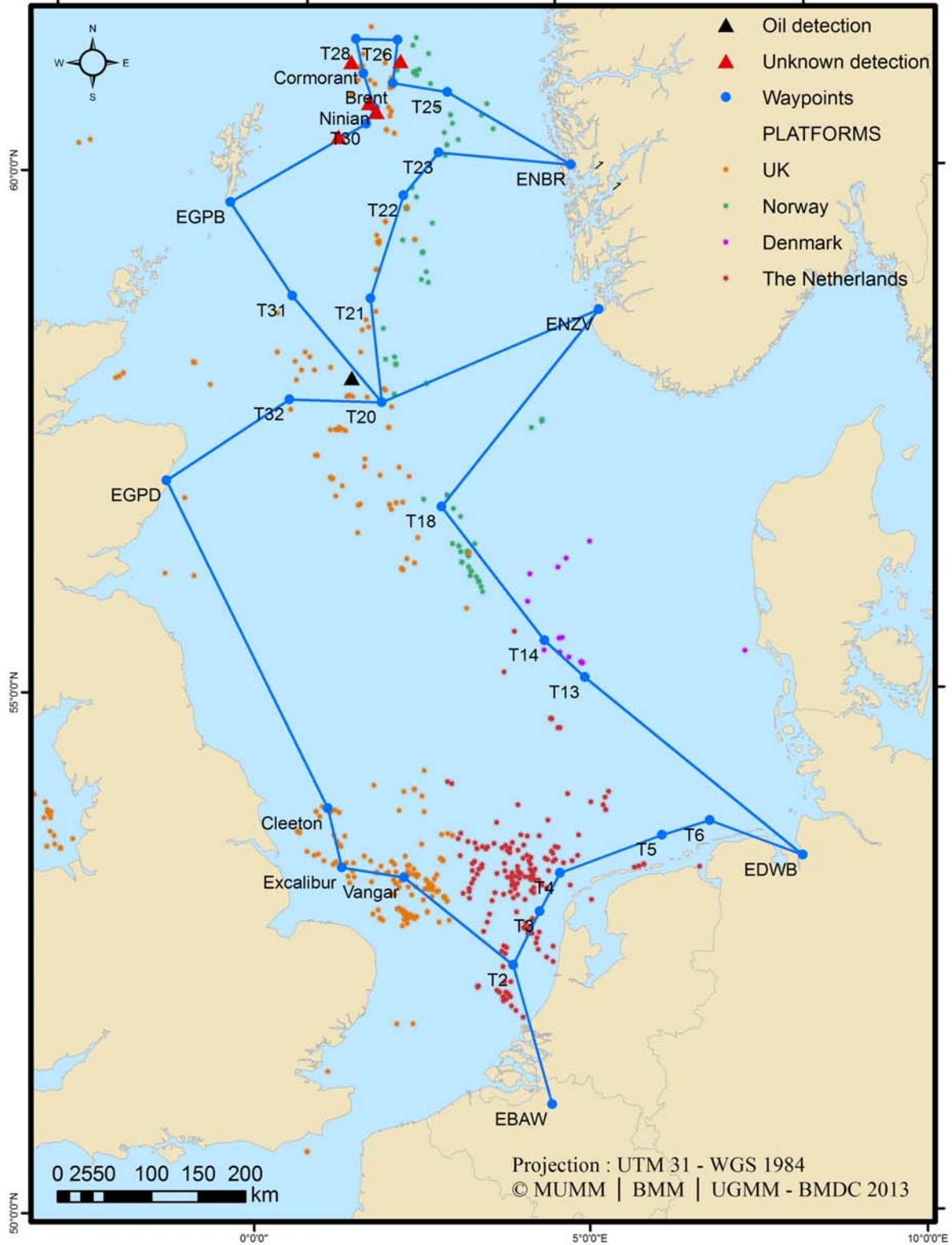
THE NETHERLANDS (05-08/03/2012)



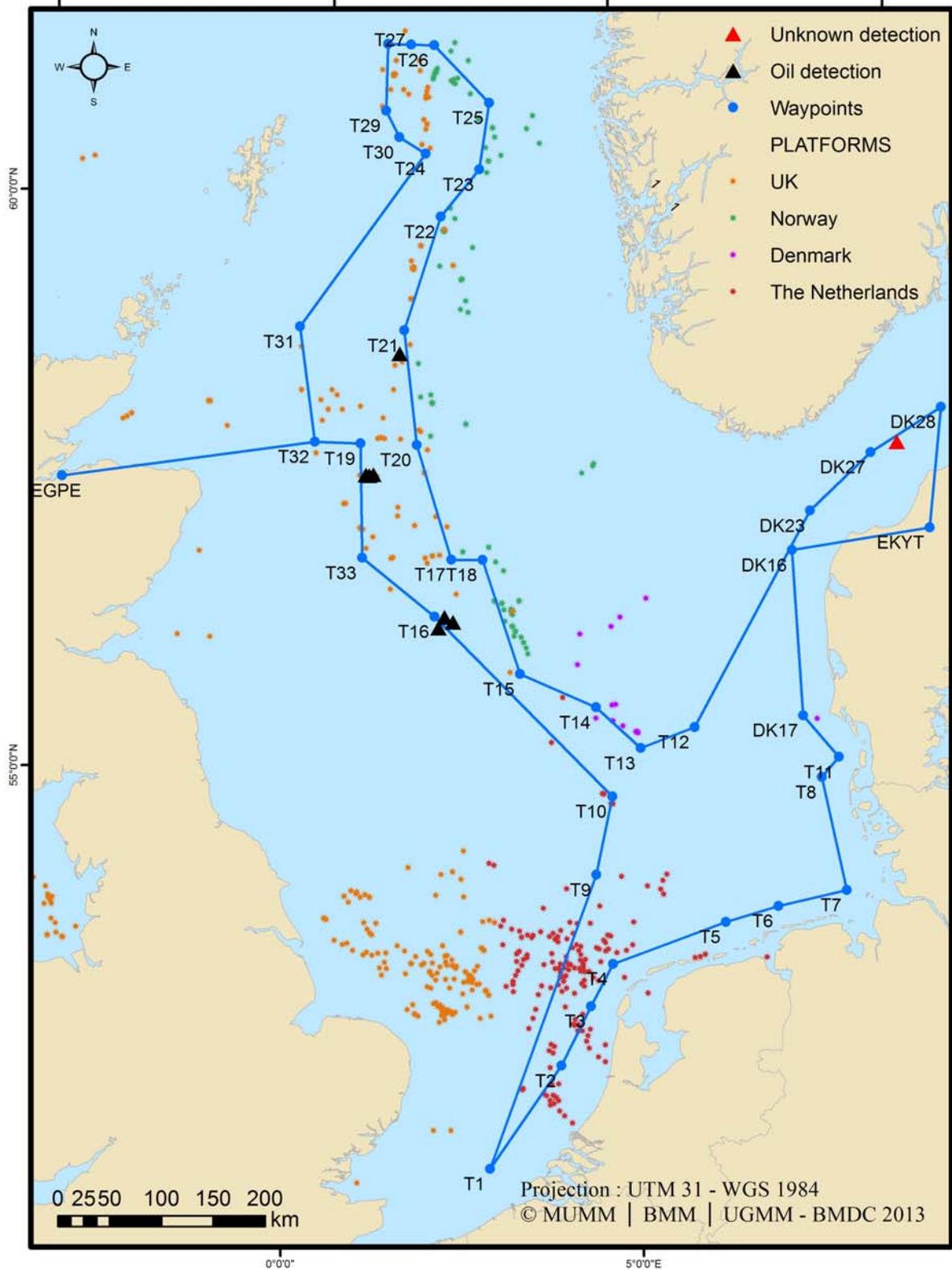
NORWAY (25-26/03/2012)



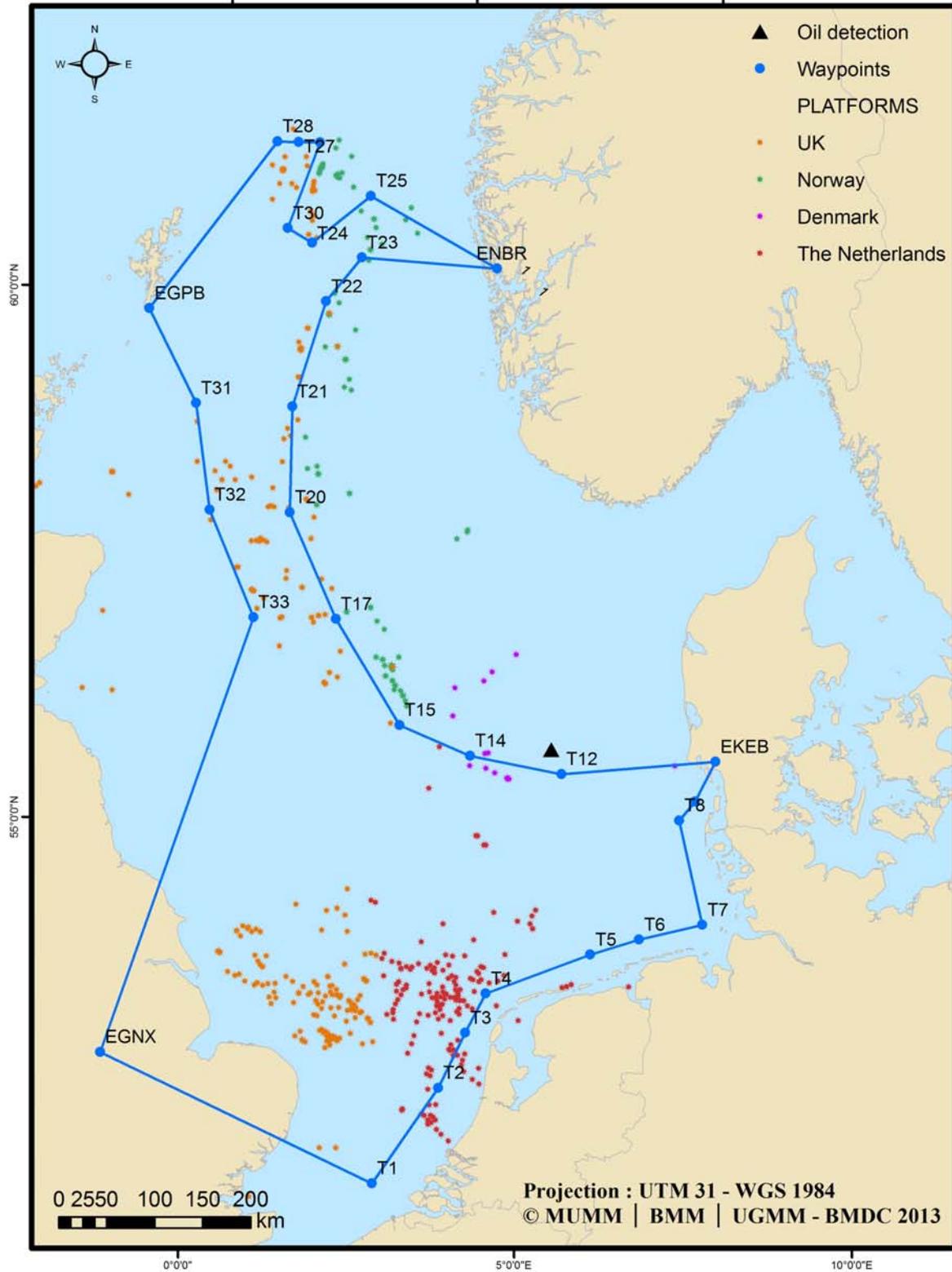
BELGIUM (02-06/07/2012)



DENMARK (11-12/07/2012)



UNITED KINGDOM (23-25/10/2012)



Summary of information provided by Contracting Parties on EEZs, major traffic routes, oil and gas installations and objectives of flights

Size of Contracting Parties' Exclusive Economic Zones (EEZs)

Belgium	3 500 km ²
Denmark	105 000 km ²
France	265 000 km ²
Germany	approximately 34 100 km ²
Netherlands	46 462 km ²
Norway	approximately 2 000 000 km ²
Sweden	approximately 70 000 km ²
UK	The UK has not declared an EEZ. The UK Pollution Control Zone covers more than 300 000 km ² .

Major traffic routes in Contracting Parties EEZs

Belgium	North Hinder Traffic Separation Scheme (TSS) and West Hinder TSS
Denmark	Route T (TANGO) , leading from the Skaw via the Great Belt to the Baltic. In 2003 a total of 23 240 ships passed the bridge in Great Belt. The Sound , leading from the Kattegat past Copenhagen into the Baltic. In 2003, a total of 37 161 ships passed Helsingør (Elsinore).
France	Major traffic route between Spain and Northern Europe .
Germany	The German Bight Western Approach and Terschelling/German Bight Traffic Separation Schemes.
Netherlands	See Figure 4
Norway	Along the northern coast of Norway and down the west coast. In addition to the normal coastal shipping traffic, there is an increasing traffic of oil/oil products from the north-western part of Russia. West coast of Norway . In addition to the normal coastal shipping traffic, there is much transport of crude oil from offshore installations to refineries in the Bergen area. Large amounts of oil products are also shipped out towards the European continent. Along the southern part of Norway there are major shipping routes from the Baltic-sea. There is also significant transport to and from refineries and industry along the Oslo Fjord.
Sweden	Along the Swedish south and east coasts there is increased transport of oil and oil products from the Gulf of Finland.
UK	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 terminals are Teesport, Sullom Voe, Flotta and Hound Point. 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 the busiest of all 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.

Number of oil/gas rigs in Contracting Parties' EEZs

Belgium	None
Denmark	9 fixed oil rigs 17 operative oil fields 29 productive sites (installations)
France	
Germany	1 Oil Rig (Mittelplate) and 3 Gas Rigs
Netherlands	151 gas offshore installations 16 oil offshore installations
Norway	77 oil/gas – fields in operation in the Norwegian EEZ. Many of these oil/gas-fields contain several platforms, satellites and sub-sea satellites. 11 PDO approved fields. These are fields for which the authorities have approved a plan for development and operation (PDO) or granted a PDO exemption.
Sweden	None
UK	255 oil- and gas-producing fields. Many of these oil/gas-fields contain several platforms, satellites, and sub-sea satellites.

For further details see the OSPAR Offshore Installation database on the OSPAR website: "2009 Biennial update of the Inventory of Oil and Gas Offshore Installations in the OSPAR Maritime Area", Publication No. 334 (2009). http://www.ospar.org/v_publications/download.asp?v1=p00334

Brief description of the objective of the flights

Belgium	<p>The tasks to be achieved during the flights are:</p> <ul style="list-style-type: none"> • Pollution Control - to detect deliberate pollution from ships using visual and remote sensing detection means; • Accidental Pollution Monitoring - to detect and evaluate accidental oil pollution from ships (in 2003, the Tricolor and Vicky incidents); • Fisheries Control, with the support of the relevant specialist service; • Traffic Control, with the support of the National Police; • Research and scientific observations.
Denmark	<p>The purposes are :</p> <ul style="list-style-type: none"> • Show of force • Investigation of possible oil-slicks • Investigation of possible polluters • Collection of evidence
France	<p>Flights are carried out by two types of aircraft</p> <ul style="list-style-type: none"> • Remote-sensing aircraft dedicated to pollution surveillance ; • General surveillance aircraft dedicated to multi-purpose missions, including pollution.
Germany	<p>Aerial surveillance flights are undertaken for pollution monitoring and, in case of pollution which can be combated at sea, to optimise the use of response vessels during the recovery operation at sea.</p>
Netherlands	<p>The objective of the flights is law enforcement, prevention of pollution, monitoring of shipping, 'eye in the sky' in case of disasters, and search and rescue.</p>
Norway	<p>The Norwegian Coastal Administration's fixed-wing surveillance mainly targets near-shore activities. The main objectives of surveillance are to identify acute pollution and illegal pollution from ships, and to monitor coastal industry and other coastal and near-coastal activities. Offshore installations are also monitored, but less frequently than in the past. This is because the offshore regulatory system requires the offshore industry to have its own system of monitoring spills from produced water and acute pollution. The Offshore Industry Pollution Law is enforced by the Norwegian Pollution Authorities (except for acute pollution). The Acute Pollution Law is enforced by the Norwegian Coastal Administration.</p> <p>Aims for fixed wing surveillance:</p> <ol style="list-style-type: none"> 1. The fixed-wing surveillance should constantly cover the Administration's needs for detection, classification, documentation and on-scene evaluation, so that the correct measures for dealing with any pollution are established. 2. The fixed-wing surveillance should have the effect of preventing illegal behaviour. 3. The fixed wing surveillance should at all times be aimed at high-risk activities.
Sweden	<p>Pollution, fishery, ship routings, border, customs-control and search-and-rescue.</p>
UK	<p>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.</p> <p>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 offshore installations.</p>

North Sea CleanSeaNet Service Statistics 2012

1. CleanSeaNet Service Deliveries: during the reporting period, CleanSeaNet delivered over the Bonn Agreement area a total of 649 services.

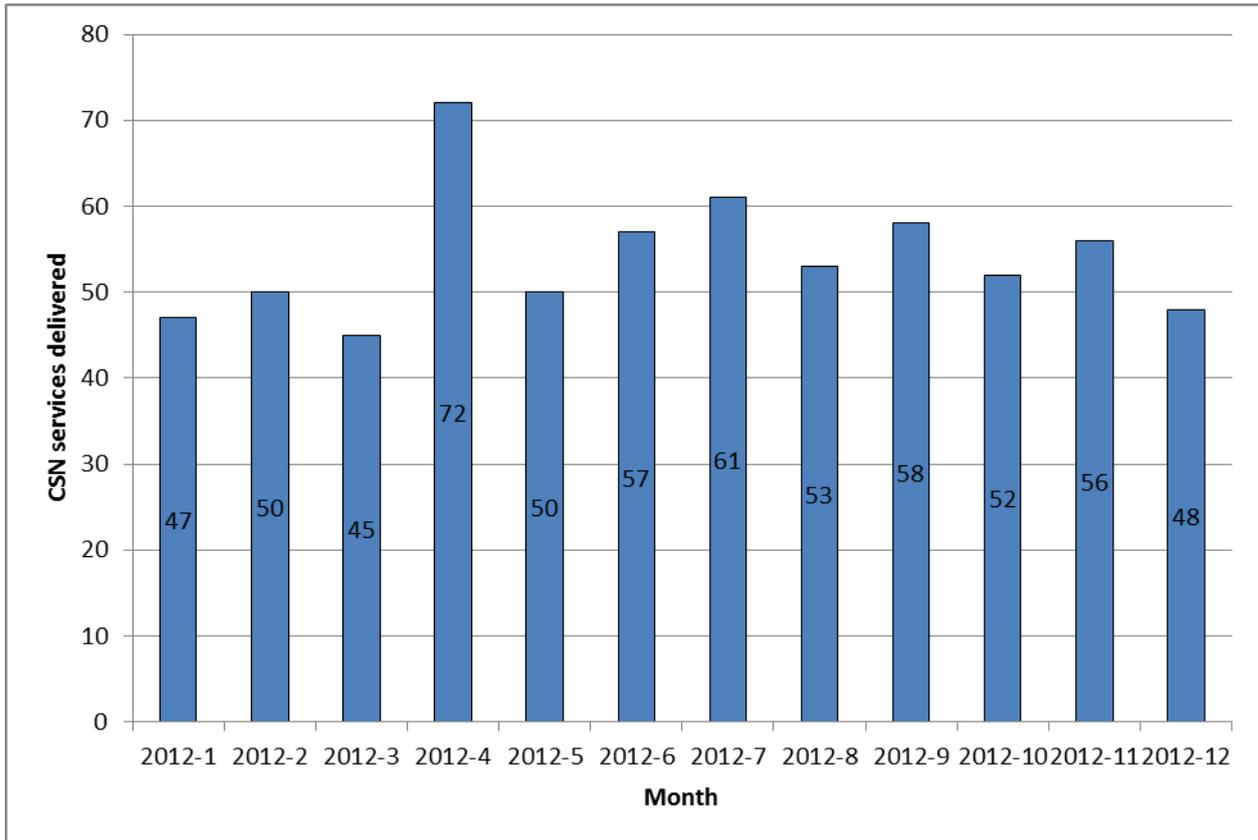


Figure 1 – CleanSeaNet delivered images

2. CleanSeaNet Detections: During the reporting period 588 possible oil spill detections have been reported 401 Classification A³, 187 Classification B⁴

The monthly distribution can be seen in figure 2.

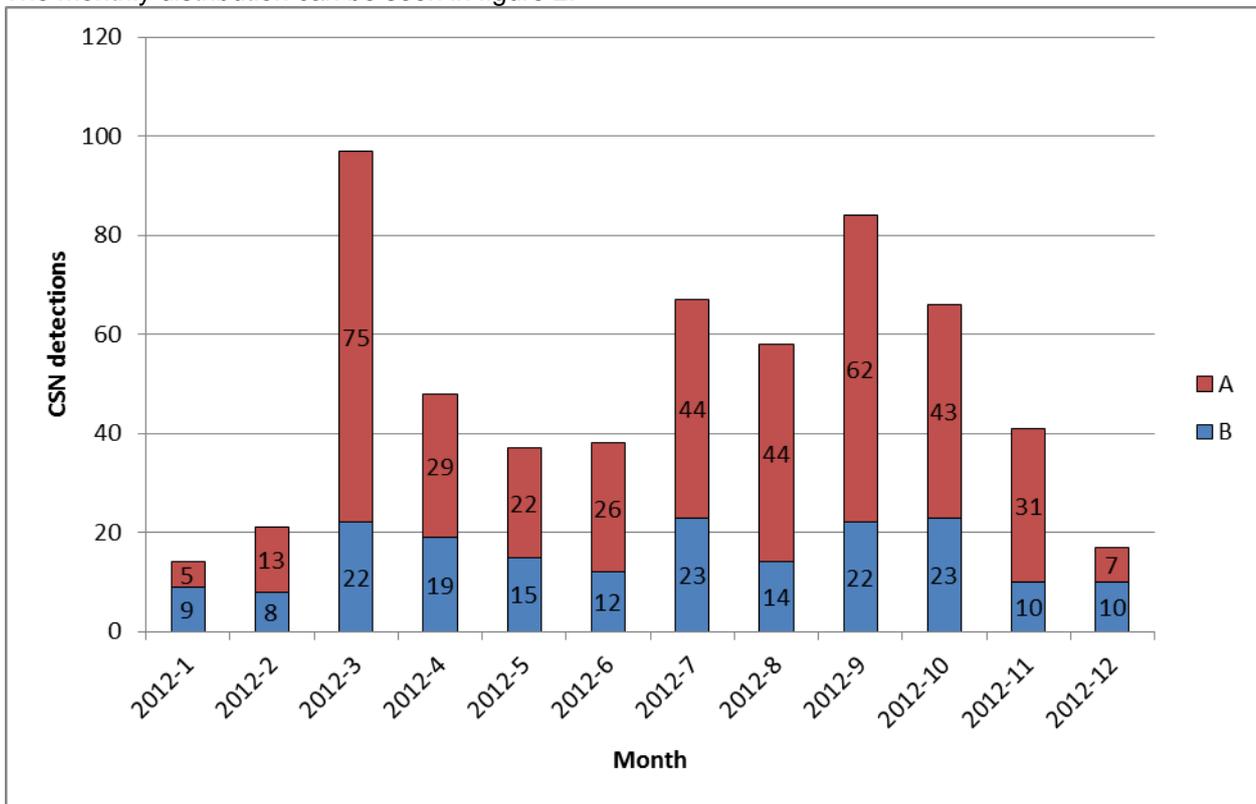


Figure 2 – Monthly distribution of CSN detections

³ Classification A - the detected spill is most probably oil (mineral or vegetable/fish oil) or a chemical product.

⁴ Classification B - the detected spill is less probably oil (mineral/vegetable/fish oil) or a chemical product.

3. Verification activities: During the reporting period, out of the 588 possible spills detected by CleanSeaNet 153 (26%) possible spills were checked of which 20 (7%) were confirmed as being mineral oil, 38 (25%) were reported as other substance or unknown feature, and 7 (5%) as natural phenomena. For 93 detections no feedback was provided (50%).

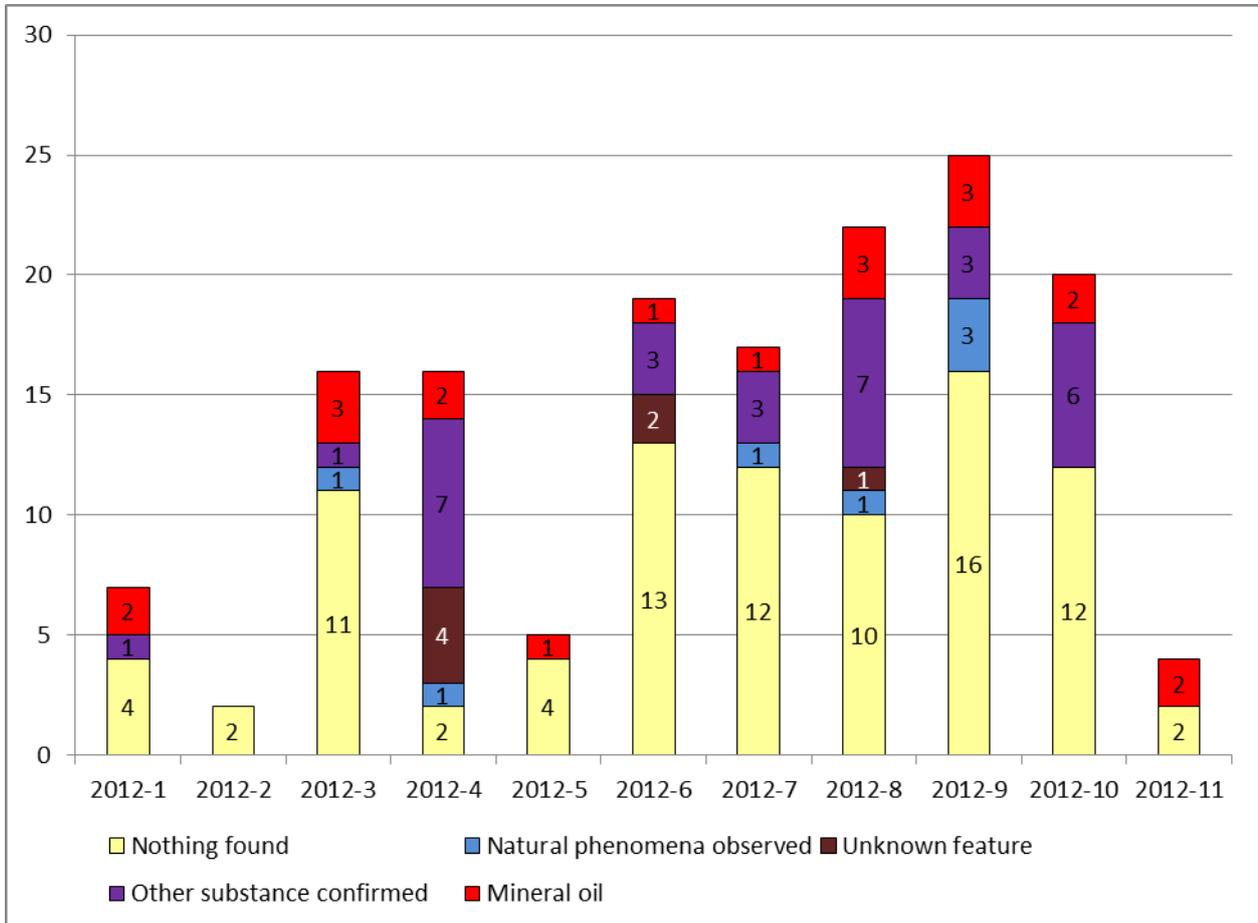


Figure 3 – Monthly distribution of checked and confirmed
 (Source: Feedback provided by Member States and stored in the CleanSeaNet database)

4. The map on the next page gives an overview of the distribution of possible spills detected by CleanSeaNet, and verification activities carried out by the Member States during the reporting period.

