



Bonn Agreement Accord de Bonn

Bonn Agreement Aerial Surveillance Programme

Draft Annual report on aerial surveillance for 2015

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Introduction

1. The nine countries bordering the North Sea work together within the Bonn Agreement to undertake aerial surveillance using specially equipped aircraft and specialised personnel to detect spills of oil and other harmful substances and enforce international environmental regulations.
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 cooperation 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 and other aerial surveillance undertaken for national purposes, the Bonn Agreement countries also coordinate 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. *Coordinated Extended Pollution Control Operations* (CEPCO), where some neighbouring countries cooperate 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 surveillance 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. 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.
5. 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.
6. Annex 3 includes a map of the Bonn Agreement responsibility zones, Traffic Separation Schemes and oil and gas installations.
7. 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 2015 – 31 December 2015.

Commentary

8. 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.

9. 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.

10. 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)¹ 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 the standard oil volume estimation method. The use of the BAOAC (just like the older Bonn Agreement 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](#).

11. 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.

12. 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 quantity of oil discharged from the offshore oil and gas industry into the OSPAR maritime area through discharges and spillages of oil in 2014 was 4 001 tonnes. 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.

13. In 2015 Contracting Parties observed 88 mineral oil slicks in the Bonn Agreement area and for all of these, volumes were estimated (as outlined in table 5). Figure 1 shows the percentage of slicks subdivided into different size categories.

¹ 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.

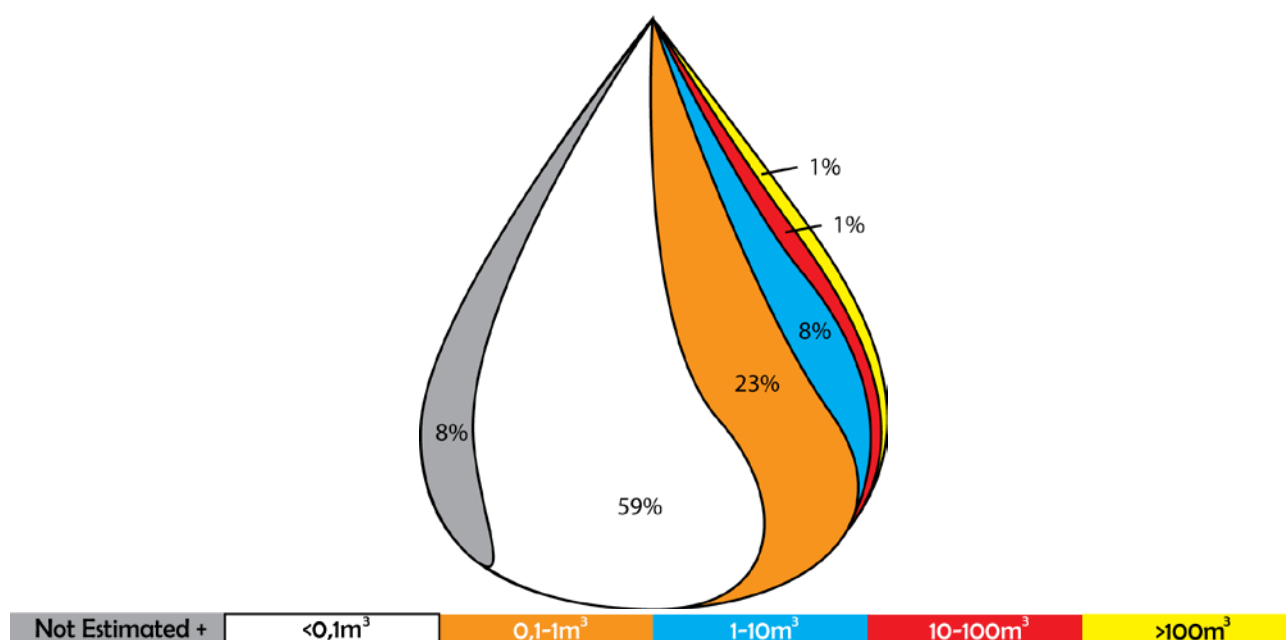


Figure 1: Percentage of mineral oil slicks in size categories observed in the Bonn Agreement area in 2015

14. There was only one mineral oil slick of over 100m³ reported, which was due to on-going releases from the wreck of the *Flinterstar*, which sank on Tuesday, October 6 2015 in North Sea 7 nautical miles northwest of Zeebrugge, Belgium. Most slicks were in the size-categories that did not warrant action to combat them, since they would evaporate, dissolve and disperse naturally.

15. Detections of other substances (including HNS) and unknown detections have also been reported as part of the annual aerial surveillance reporting. This has been included as national evidence and has pointed to an increase in spills of other substances and therefore it was agreed that this should be tracked at a regional level. In 2015 there were 55 detections of other substances and 147 detections of unknown substances. These have been outlined in Figure 4 (Map) and are mainly in the areas of highest shipping density.

16. An overview of the locations of oil slicks observed during 2015 is given in Figure 2 (Map). A common HELCOM / Bonn Agreement map showing the location of oil slicks observed by aerial surveillance and their estimated minimum volumes in the Baltic Sea and North Sea areas in 2015 is given in Figure 3. An overview of slicks observed during Bonn Agreement aerial surveillance activities during 2015 categorised by spill type is given in Figure 4. A common HELCOM/Bonn Agreement map showing spills observed in 2015 categorised by spill type (oil, other substance and unknown) 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, 2013 and 2014. 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. For 2015 there was a decrease in the number of flight hours and in the number of observed slicks over those in 2014. This decrease was mainly due to a reduction in flight hours from France. The ratio of slicks to flying hours has reduced again from 2014.

19. Figure 9 relates to the new additional data on other substances and unknowns, which has been collected at the regional level since 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.

Spanish Aerial Surveillance data for the Bay of Biscay

20. For the first time in 2015 Spain, as an observer country to the Bonn Agreement, submitted aerial surveillance data. As the data is not from within the Bonn Agreement area it has not been included in the long-term statistics but has been included below as it provides insight into the levels of pollution in the approaches to the south west of the Bonn Agreement area (see figure 10).

21. In 2015 there were 11 detections in the Spanish waters of the Bay of Biscay with 3 confirmed as mineral oil, 3 as other substances and 5 unknowns. All slicks were in the size-categories ($<1\text{m}^3$) that did not warrant action to combat them, since they would evaporate, dissolve and disperse naturally.

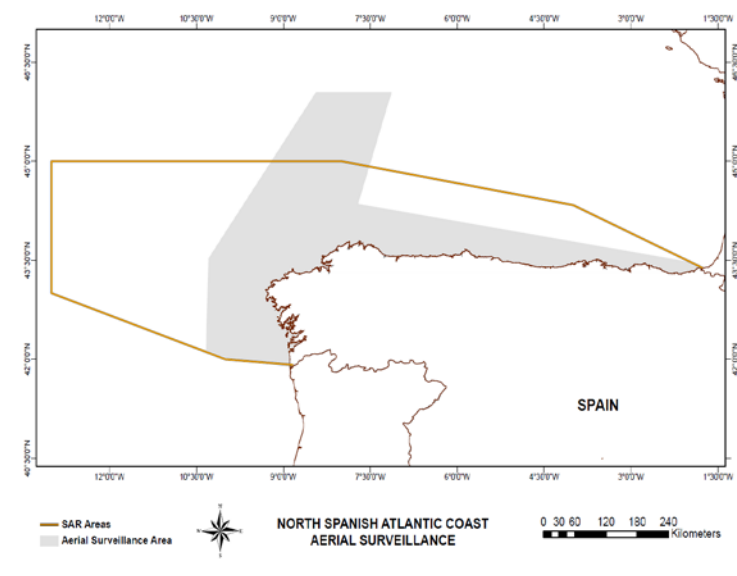


Figure 10: Spanish aerial surveillance area, Bay of Biscay

Table 1. Summary of data relating to National Flights during 2015 ^{2, 3}

| Country | No. of flight hours | | | No. of detections inside national EEZ | | | Detections confirmed / observed as mineral oil spills | | | No. of polluters (mineral oil) | | | | Estimated volume (m ³) | Detections confirmed / observed as other substances | No. of polluters (other substances) | | | | Unknown detections | No. of polluters (unknown detections) | | | |
|--------------|---------------------|---------------|----------------|---------------------------------------|-----------|------------|---|----------|-----------|--------------------------------|-------|-------|---------|------------------------------------|---|-------------------------------------|-------|-------|---------|--------------------|---------------------------------------|-------|-------|---------|
| | Daylight | Darkness | Total | Daylight | Darkness | Total | Daylight | Darkness | Total | Rigs | Ships | Other | Unknown | | | Rigs | Ships | Other | Unknown | | Rigs | Ships | Other | Unknown |
| Belgium | 206:00 | 24:00 | 230:00 | 4 | 0 | 4 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 435,66 | 3 | 0 | 2 | 0 | 1 | | 0 | 0 | 0 | |
| Denmark | 156:07 | 13:09 | 169:16 | 52 | 7 | 59 | 24 | 0 | 24 | 13 | 0 | 0 | 11 | 3,86 | 15 | 1 | 6 | 1 | 7 | 17 | 4 | 1 | 2 | 10 |
| France | 256:00 | 24:00 | 280:00 | 8 | 0 | 8 | 7 | 0 | 7 | 0 | 7 | 0 | 0 | 1,9158 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 |
| Germany | 463:21 | 344:50 | 808:11 | 20 | 4 | 24 | 5 | 1 | 6 | 0 | 0 | 0 | 6 | 6 | 5 | 0 | 0 | 0 | 5 | 13 | 0 | 0 | 0 | 13 |
| Ireland | 973:51 | 129:11 | 1103:02 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Netherlands | 680:00 | 150:00 | 830:00 | 128 | 21 | 149 | 19 | 2 | 21 | 1 | 4 | 0 | 16 | 33,53 | 27 | 1 | 12 | 0 | 14 | 101 | 1 | 1 | 0 | 99 |
| Norway | 304:00 | 0:00 | 304:00 | 25 | 0 | 25 | 19 | 0 | 19 | 9 | 4 | 0 | 6 | 7,50 | 4 | 0 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 1 |
| Sweden | 207:00 | 37:00 | 244:00 | 14 | 3 | 17 | 5 | 0 | 5 | | | | 5 | 0,0075 | 1 | | 1 | | 13 | | | | | 13 |
| UK | 138:25 | 0:00 | 138:25 | 6 | 0 | 6 | 5 | 0 | 5 | 4 | 1 | 0 | 0 | 2,3031 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |
| Total | 3384:44 | 722:10 | 4106:54 | 257 | 35 | 292 | 85 | 3 | 88 | | | | | 490,78 | 56 | | | | | 145 | | | | |

² BE - (i) The oil pollution is from the Flinterstar accident. The given volume (435,66 m³) is an order of magnitude estimation over the whole period of the accident and based on 69 spills observed between 6 October and the end of 2015. The given volume is the sum of min.vol. estimates from aerial surveillance, after subtraction of all double-counts. However it was also found that part of the HFO spills observed were in fact w/o emulsions. Therefore the total amount of oil released from the Flinterstar wreck in 2015 is estimated to be around 300 m³. Part of the accidental oil spills also drifted into nearby Dutch waters.

(ii) Flight time also includes 16 hours of 'on call' helicopter surveillance performed during the Flinterstar incident.

³ DK – Flight time over sea, 59obs includes 3 SATOBS (Nothing Found)

Table 2: Summary of data related to satellite detections in 2015

| Country | Satellite detections | | | | | |
|--------------|----------------------|-----------------------|----------------------------|----------------------------|-----------------------------|---------------|
| | Detected | Confirmed mineral oil | Confirmed other substances | Confirmed "unknown" spills | Confirmed natural phenomena | Nothing found |
| Belgium | | | | | | |
| Denmark | | | | | | |
| France | | | | | | |
| Germany | | | | | | |
| Netherlands | | | | | | |
| Norway | 189 | 117 | 5 | 0 | 1 | 10 |
| Sweden | | | | | | |
| UK | | | | | | |
| Total | 189 | 117 | 5 | 0 | 1 | 10 |

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 2015

| Country | No. of flights | No. of flight hours | | | No. of detections | | | Detections confirmed / observed as mineral oil spills | | | No. of polluters (mineral oil) | | | | Estimated volume (m ³) | Detections confirmed/observed as other substances | No. of polluters (other substances) | | | | Unknown Detections | No. of polluters (unknown detections) | | | |
|--------------|----------------|---------------------|-------------|--------------|-------------------|----------|----------|---|----------|----------|--------------------------------|----------|----------|----------|------------------------------------|---|-------------------------------------|----------|----------|----------|--------------------|---------------------------------------|----------|----------|----------|
| | | Daylight | Darkness | Sum | Daylight | Darkness | Sum | Daylight | Darkness | Sum | Rigs | Ships | Other | Unknown | | | Rigs | Ships | Other | Unknown | | Rigs | Ships | Other | Unknown |
| Belgium | 0 | 0:00 | 0:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Denmark | 0 | 22:24 | 8:01 | 30:25 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| France | 0 | 0:00 | 0:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Germany | 0 | 0:00 | 0:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Ireland | 0 | 0:00 | 0:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Netherlands | 0 | 0:00 | 0:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Norway | 0 | 0:00 | 0:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sweden | 0 | 0:00 | 0:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| UK | 0 | 0:00 | 0:00 | 0:00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 22:24 | 8:01 | 30:25 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 4. Summary of data relating to Tour d'Horizon (TdH) flights during 2015^{4, 5}

| Country | No. of flights | No. of flight hours | | | No. of detections in TdH area | | | No. of polluters (mineral oil) | | | | Estimated volume (m ³) | Detections confirmed/observed as other substances | No. of polluters (other substances) | | | | Unknown detections | No. of polluters (unknown detections) | | | |
|-------------|----------------|---------------------|----------|-------|-------------------------------|----------|-------|--------------------------------|-------|-------|---------|------------------------------------|---|-------------------------------------|-------|-------|---------|--------------------|---------------------------------------|-------|-------|---------|
| | | Daylight | Darkness | Total | Daylight | Darkness | Total | Rigs | Ships | Other | Unknown | | | Rigs | Ships | Other | Unknown | | Rigs | Ships | Other | Unknown |
| Belgium | | | | | | | | | | | | | | | | | | | | | | |
| Denmark | 2 | 6:41 | 0:00 | 6:41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| France | | | | | | | | | | | | | | | | | | | | | | |
| Germany | | | | | | | | | | | | | | | | | | | | | | |
| Ireland | | | | | | | | | | | | | | | | | | | | | | |
| Netherlands | | | | | | | | | | | | | | | | | | | | | | |
| Norway | 2 | 6:35 | 0:00 | 6:35 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sweden | 4 | 11:45 | | 11:45 | | | | | | | 0 | | | | | | | | | | | |
| UK | 4 | 17:35 | 0:00 | 17:35 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 2.09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 12 | 42:36 | 0:00 | 42:36 | 4 | 0 | 4 | 4 | 0 | 4 | 4 | 2.09 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

⁴ DK - No observation due to high wind (>40kts) and sea-state⁵ NO - TdH flight reduced due to snag on aircraft

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 | | | | | | 1 | 1 | 1 | 1,14 |
| Denmark | 7 | 9 | 8 | | | | 24 | 17 | 27,27 |
| France | | 3 | 4 | | | | 7 | 7 | 7,95 |
| Germany | | 5 | | 1 | | | 6 | 6 | 6,82 |
| Ireland | | | | | | | 0 | 0 | 0,00 |
| Netherlands | | 15 | 2 | 3 | 1 | | 21 | 21 | 23,86 |
| Norw ay | | 13 | 4 | 2 | | | 19 | 19 | 21,59 |
| Sw eden | | 5 | | | | | 5 | 5 | 5,68 |
| UK | | 2 | 2 | 1 | | | 5 | 5 | 5,68 |
| Total | 7 | 52 | 20 | 7 | 1 | 1 | 88 | 81 | 100 |
| % | 7,95 | 59,09 | 22,73 | 7,95 | 1,14 | 1,14 | 100,00 | | |

Figure 2: Overview of slicks observed during Bonn Agreement aerial surveillance activities during 2015

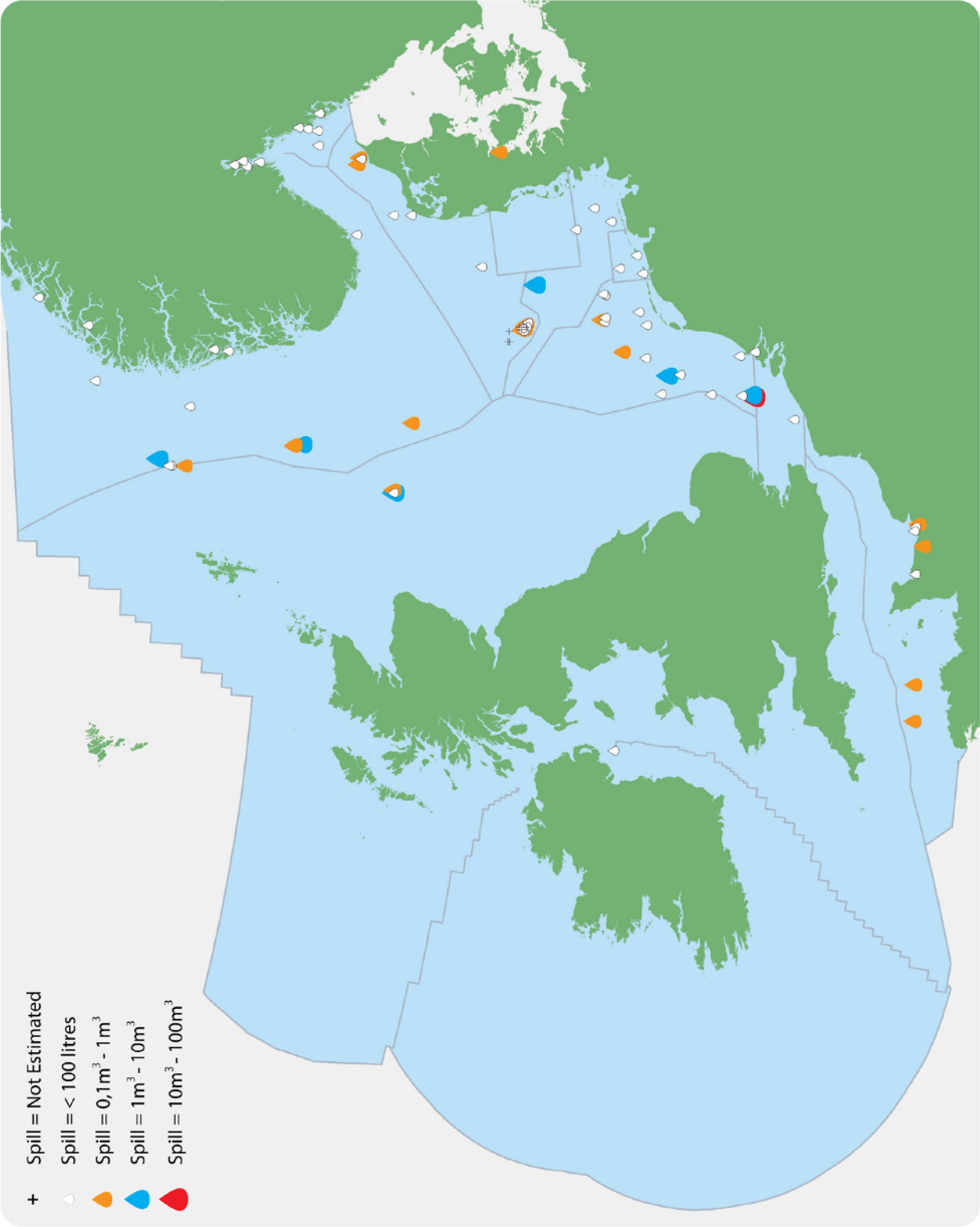


Figure 3: Common HELCOM / Bonn Agreement map showing the location of oil spills confirmed/observed by aerial surveillance within the Baltic Sea and North Sea areas in 2015

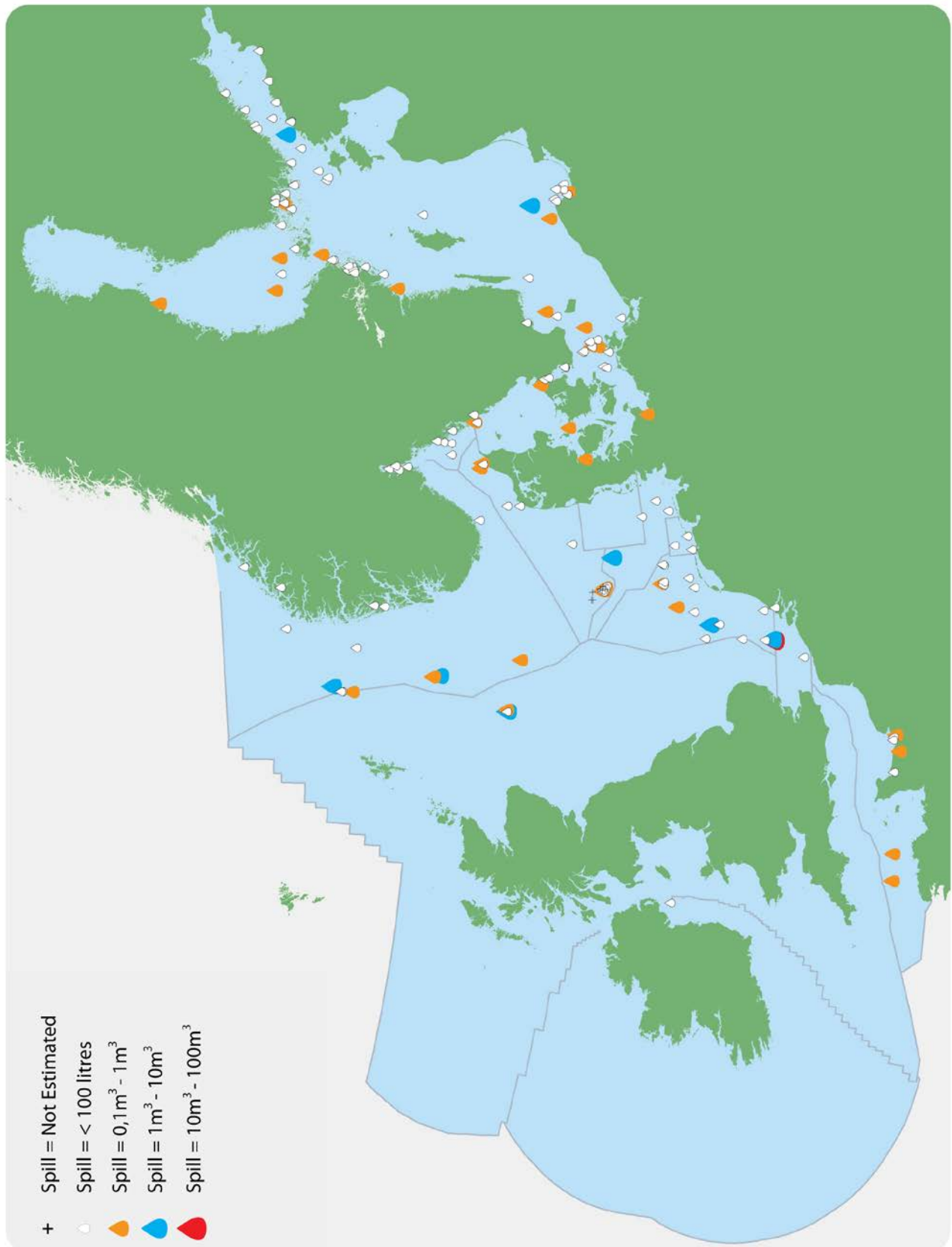


Figure 4: Overview of slicks observed during Bonn Agreement aerial surveillance activities during 2015 categorised by spill type

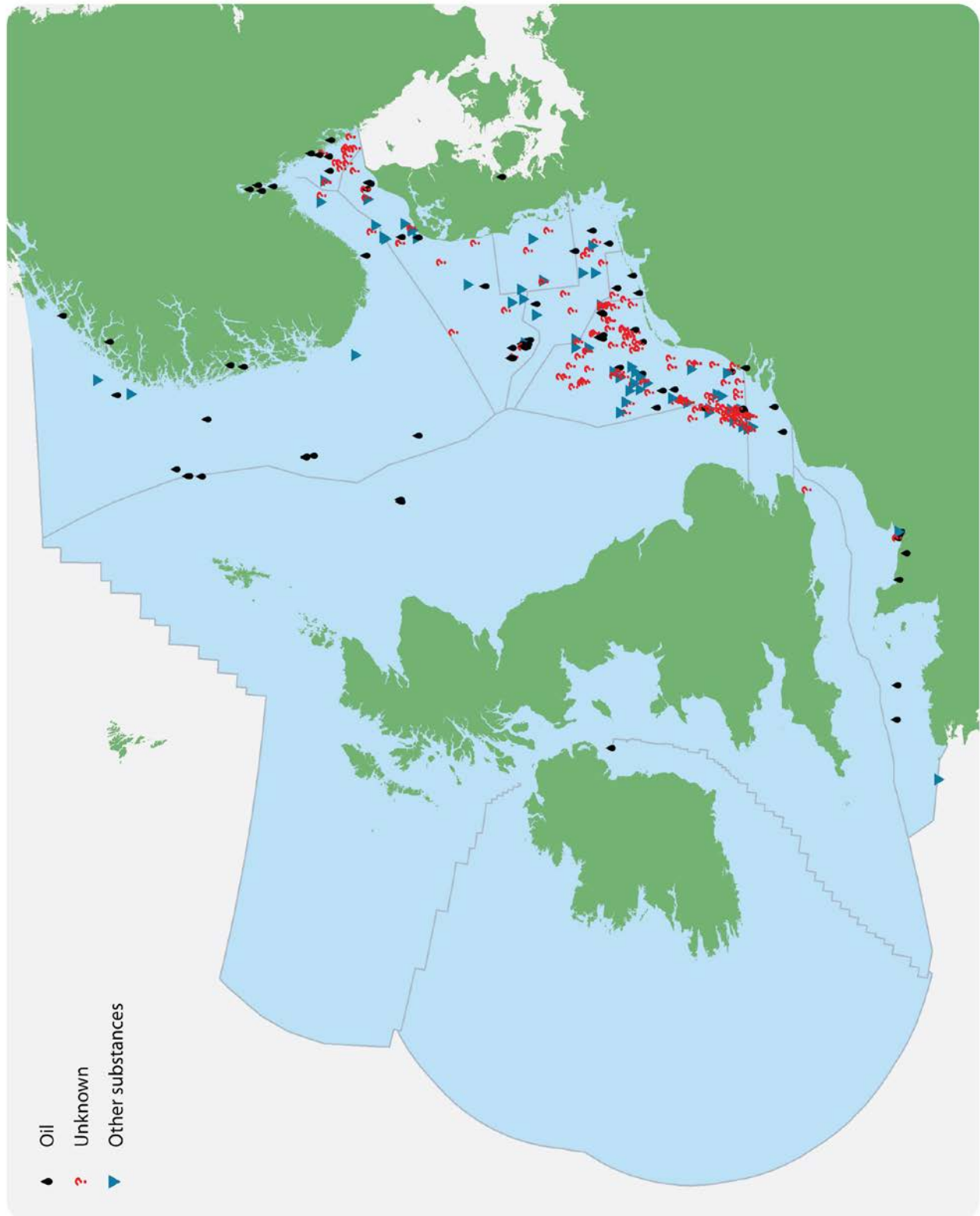


Figure 5: Common HELCOM / Bonn Agreement map showing slicks observed during HELCOM/Bonn Agreement aerial surveillance activities during 2015 categorised by spill type

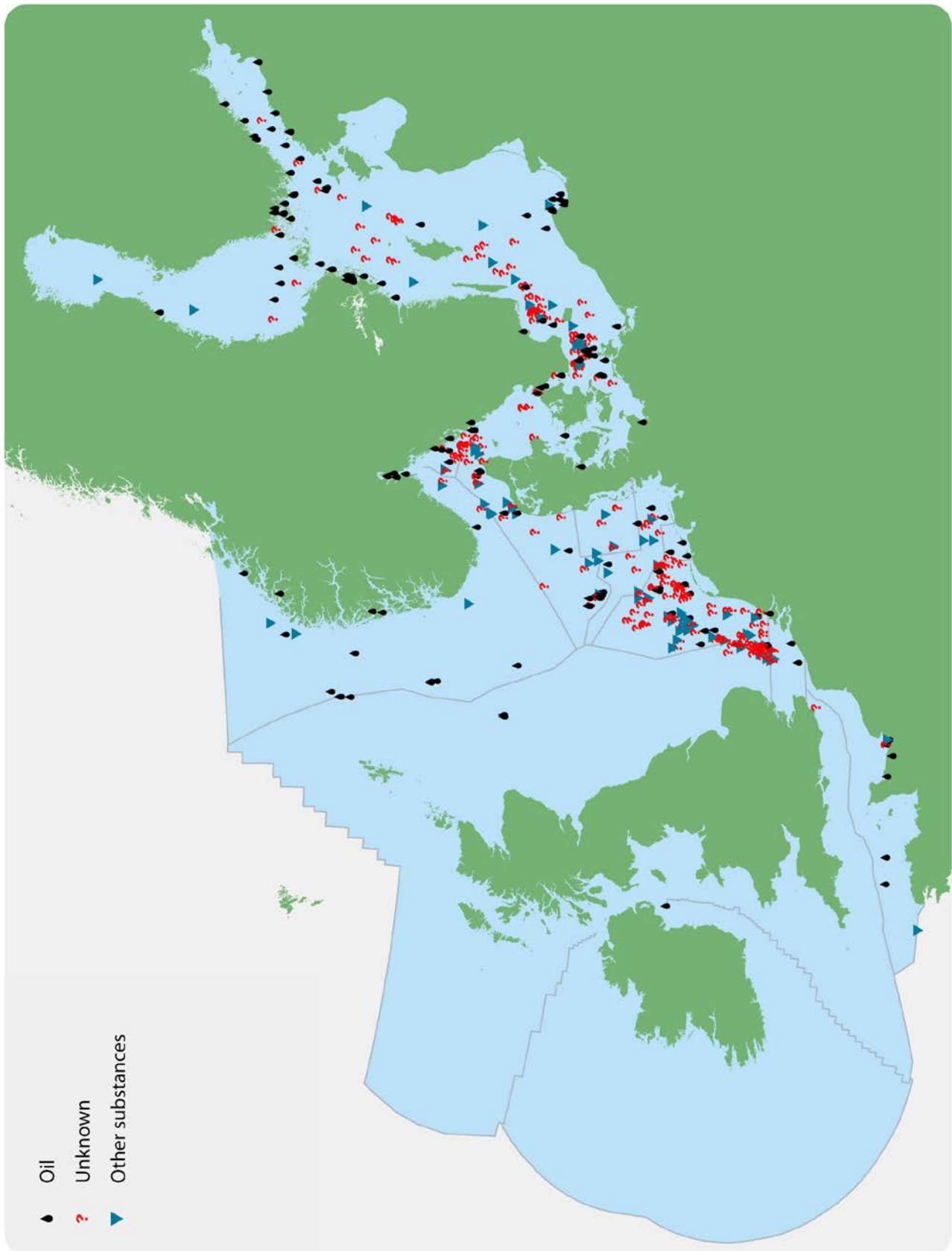


Figure 6: Number of flight hours per country 1990 – 2015

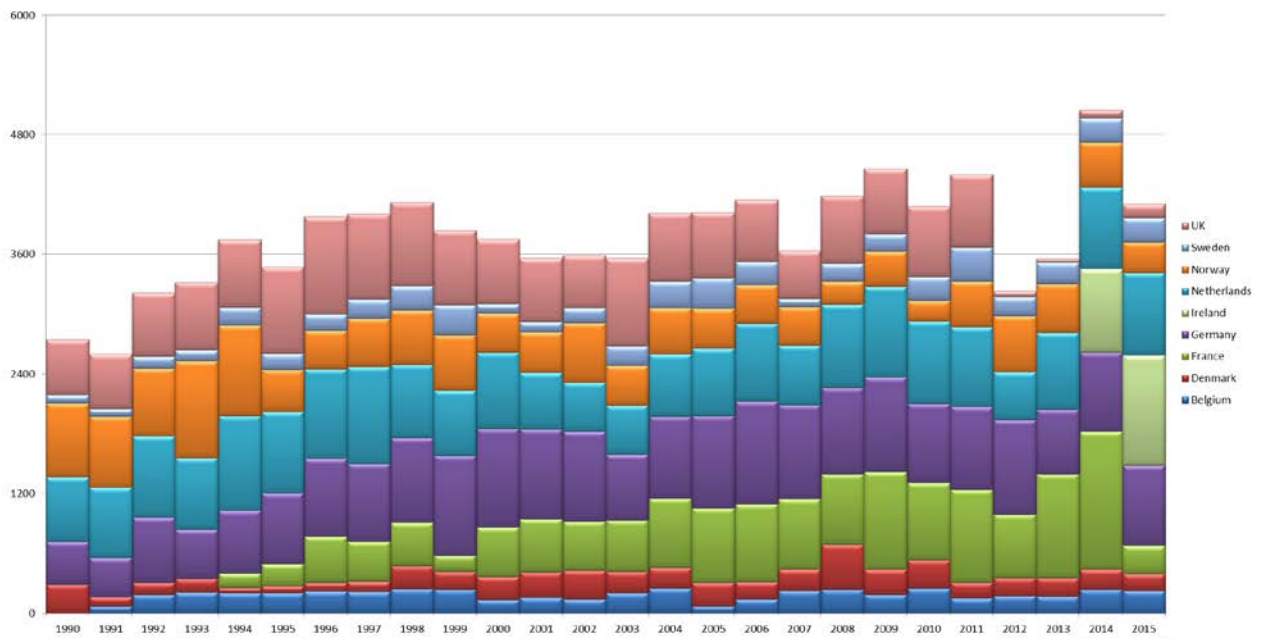


Figure 7: Number of slicks observed 1990 – 2015

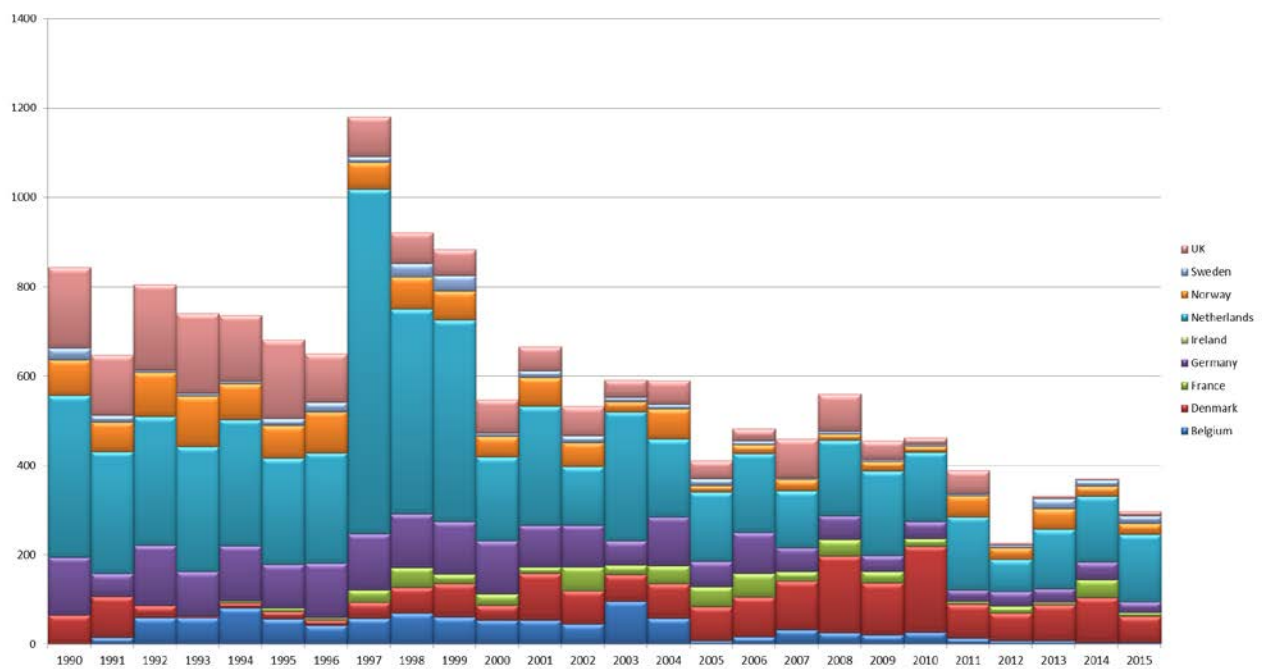


Figure 8: Total numbers: all flight hours and all observed slicks 1986 – 2015 and their ratio

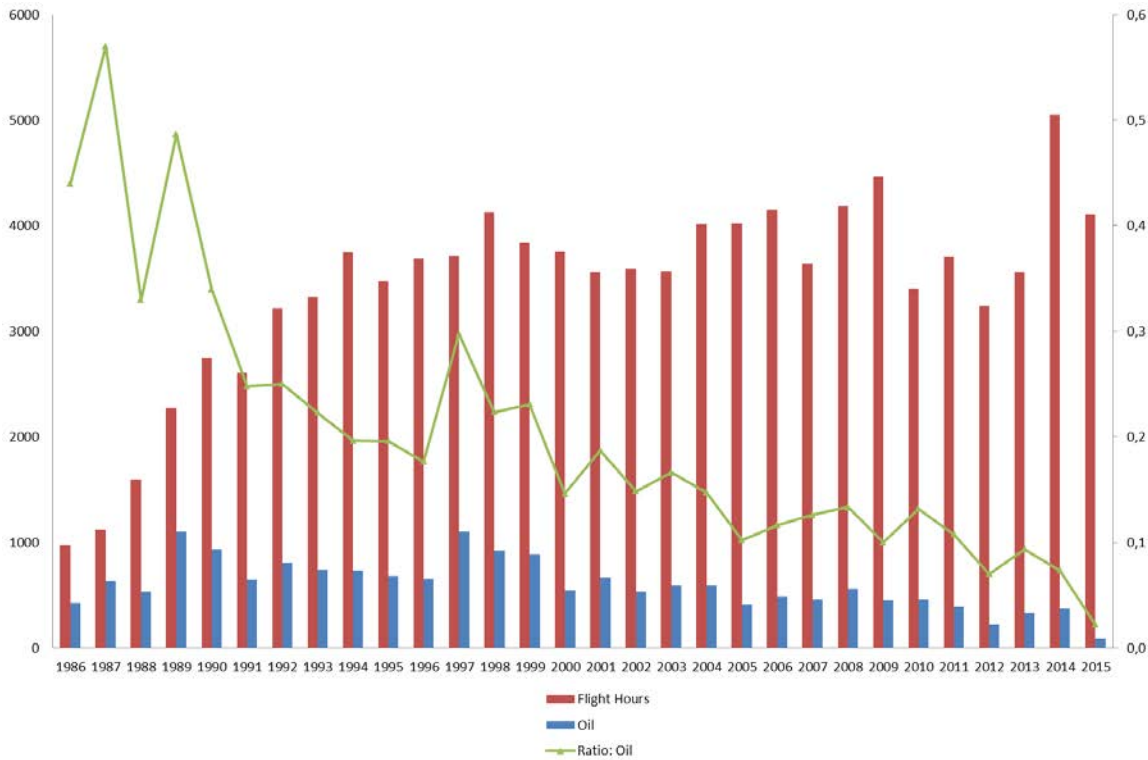
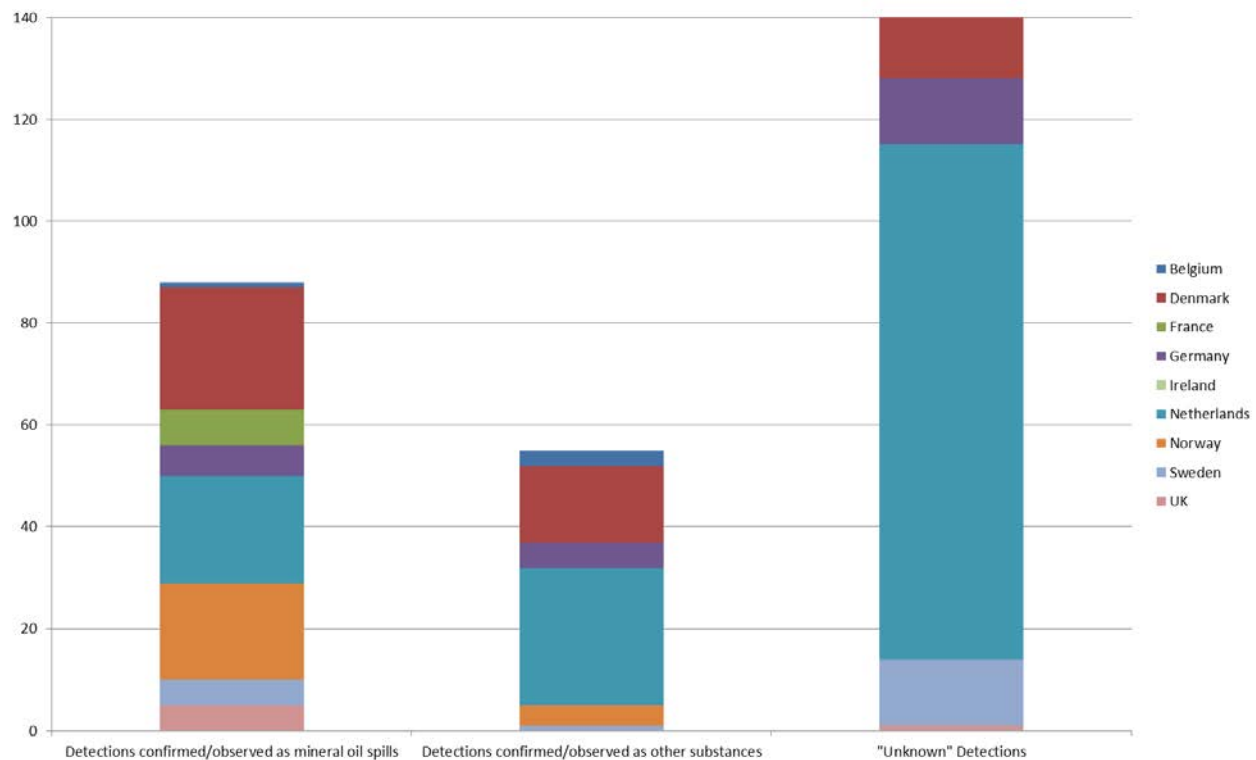


Figure 9: Number of mineral oil, other substances and unknown slicks observed 2015



ANNEX 1

Instructions for filling in the joint Bonn Agreement/HELCOM annual reporting form on illegal discharges observed during aerial surveillance

Reporting format

The Contracting Parties will report on their entire annual surveillance activity in the reporting year. This is data obtained during flights over their National Exclusive Economic Zone and outside their responsibility zone e.g. (Super) CEPCO or Tour de Horizon. The following format explanations and data standards should be used to complete the attached MS Excel reporting sheet – meeting the outlined standards is of the utmost importance to ensure inclusion of Contracting Parties data in the Bonn Agreement Aerial Surveillance database.

When reporting the annual data to the Bonn Agreement Secretariat, Table 1 should include only those spills that are inside the reporting Contracting Party's own national EEZ.

Each Contracting Party will send (using Table 6) a compilation of the spills detected in other Contracting Parties' EEZs to the Contracting Party in question at the end of February of the following year. The receiving Contracting Party will compare the data with their annual national data, delete any duplicates and complete their national data where needed. By doing so, all Contracting Parties will be able to obtain a full annual national dataset containing all spills inside their EEZ – inclusive of those detected by other Contracting Parties – and report this dataset (reflected in tables 1, 5 and 6) to the Bonn Agreement Secretariat by the end of March.

Once received by the Secretariat, Aerial Surveillance data will be quality controlled to ensure the data standards have been met- any queries will be forwarded to agreed contact points for resolution before the data is included in the database.

Where applicable, all values are to be presented using a comma as a decimal separator ("," , ") and a space as a thousand separator (" "). All coordinates are to be calculated using WGS84 and to be presented as decimal degrees.

Reporting deadlines

The deadlines for the submission of aerial surveillance data are:

- a. the end of February for reporting data on spills in the EEZs of other Contracting Parties to the Contracting Parties concerned; and
- b. the end of March for the submission of full national data sets to the Secretariat.

Please:

- do not remove, add or adjust any columns or calculations included in the MS Excel reporting sheet.
- only fill out the reporting sheet as it is delivered to you each year, do not use old versions. They may appear to be replicas but subtle variations are present due to the on-going streamlining of the reporting process at the Secretariat.

Table 1. National flights

This data should be completed for flights which were conducted in the EEZ of the reporting Contracting Party

| Country | Year | No. of flight hours | | | No. of detections inside national EEZ | | | Detections confirmed / observed as mineral oil spills | | | No. of polluters (mineral oil) | | | | Estimated volume (m³) | Detections confirmed/observed as other substances | No. of polluters (other substances) | | | | Unknown detections | No. of polluters (unknown detections) | | | | Remarks |
|--|------|---------------------|----------|---|---------------------------------------|----------|-------|---|----------|-------|--------------------------------|-------|-------|---------|-----------------------|---|-------------------------------------|-------|-------|---------|--------------------|---------------------------------------|-------|-------|---------|---------|
| | | Daylight | Darkness | Total | Daylight | Darkness | Total | Daylight | Darkness | Total | Rigs | Ships | Other | Unknown | | | Rigs | Ships | Other | Unknown | | Rigs | Ships | Other | Unknown | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Column Header | | Format Example | | Explanation | | | | | | | | | | | | | | | | | | | | | | |
| Country | | Netherlands | | Full country name the reported data applies to | | | | | | | | | | | | | | | | | | | | | | |
| Year | | 2013 | | The year that the reported data applies to | | | | | | | | | | | | | | | | | | | | | | |
| No. of flight hours – Daylight | | 136:24 | | The number of flight hours and minutes carried out in daylight - From 30 minutes after Morning Civil Twilight, until 30 minutes before Evening Civil Twilight as given in the Air Almanac – shown as a colon separated value. No decimal values | | | | | | | | | | | | | | | | | | | | | | |
| No. of flight hours – Darkness | | 86:23 | | The number of flight hours and minutes carried out in darkness - From 30 minutes before Evening Civil Twilight, until 30 minutes after Morning Civil Twilight as given in the Air Almanac – shown as a colon separated value. No decimal values | | | | | | | | | | | | | | | | | | | | | | |
| No. of flight hours – Total | | 222:47 | | = (No. of flight hours - Daylight) + (No. of flight hours – Darkness) – shown as a colon separated value. No decimal values | | | | | | | | | | | | | | | | | | | | | | |
| No. of detections inside national EEZ - Daylight | | 67 | | The number of detections in daylight, within the EEZ of the country reporting the data - From 30 minutes after Morning Civil Twilight, until 30 minutes before Evening Civil Twilight as given in the Air Almanac | | | | | | | | | | | | | | | | | | | | | | |
| No. of detections inside national EEZ – Darkness | | 23 | | The number of detections in darkness, within the EEZ of the country reporting the data - From 30 minutes before Evening Civil Twilight, until 30 minutes after Morning Civil Twilight as given in the Air Almanac | | | | | | | | | | | | | | | | | | | | | | |
| No. of detections inside national EEZ – Total | | 90 | | = (No. of detections inside own EEZ – Daylight) + (No. of detections inside own EEZ – Darkness) | | | | | | | | | | | | | | | | | | | | | | |

| | | |
|--|-------|--|
| Detections confirmed / observed as mineral oil spills – daylight | 12 | Of the “No. of detections inside own EEZ – Daylight” the total number of those detections observed as mineral oil and confirmed as mineral oil |
| Detections confirmed / observed as mineral oil spills – Darkness | 5 | Of the “No. of detections inside national EEZ – Darkness” the total number of those detections observed as mineral oil and confirmed as mineral oil |
| Detections confirmed / observed as mineral oil spills – Total | 17 | = (Detections confirmed / observed as mineral oil spills – Daylight) + (Detections confirmed / observed as mineral oil spills – Darkness) |
| No. of polluters (mineral oil) – Rigs | 2 | The number of offshore installations positively identified as the source of the oil detection |
| No. of polluters (mineral oil) – Ships | 2 | The number of ships positively identified as the source of the oil detection |
| No. of polluters (mineral oil) – Other | 90 | The number of oil detections which do not fit into either the “Rigs” or “Ships” category |
| No. of polluters (mineral oil) – Unknown | 86 | The number of oil detections which could not be associated with a source |
| Estimated Volume (m ³) | 27,36 | Volume of all spills confirmed/observed as mineral oil as calculated using the Bonn Agreement Oil Appearance Code using the lower figure (BAOAC minimum) – presented as a decimal value using a comma as a decimal separator |
| Detections confirmed/observed as other substances (‘OS’) | 3 | The number of detections observed as other substances or confirmed as other substances (‘OS’) – independent of the time of day the detection was made |
| No. of polluters (other substances) – Rigs | 2 | The number of offshore installations positively identified as the source of the OS detection |
| No. of polluters (other substances) – Ships | 2 | The number of ships positively identified as the source of the OS detection |
| No. of polluters (other substances) – Other | 90 | The number of OS detections which do not fit into either the “Rigs” or “Ships” category |

| | | |
|---|---------------------------------------|--|
| No. of polluters (other substances) – Unknown | 86 | The number of OS detections which could not be associated with a source |
| Unknown ('UNK') detections | 70 | The number of detections that could not be visually verified as mineral oil or other substances ('unknowns' or 'UNK') (((No. of UNK detections inside national EEZ – Total) – (Detections confirmed / observed as mineral oil spills – Total)) - Detections confirmed/observed as other substances) |
| No. of polluters (unknown detections) – Rigs | 2 | The number of offshore installations positively identified as the source of the UNK detection |
| No. of polluters (unknown detections) – Ships | 2 | The number of ships positively identified as the source of the UNK detection |
| No. of polluters (unknown detections) – Other | 90 | The number of UNK detections which do not fit into either the "Rigs" or "Ships" category |
| No. of polluters (unknown detections) – Unknown | 86 | The number of UNK detections which could not be associated with a source |
| Remarks | Source of rig spills identified as... | Any additional textual information to inform on particular situations |

Table 2. Satellite detections**To be completed by NORWAY only (satellite data for the other Bonn Agreement countries will be taken directly from the EMSA CleanSeaNet report)**

| Country | Year | Detected | Confirmed mineral oil | Confirmed other substances | Confirmed unknown spills | Confirmed natural phenomena | Nothing found |
|-----------------------------|-----------------------|--|-----------------------|----------------------------|--------------------------|-----------------------------|---------------|
| Column Header | Format Example | Explanation | | | | | |
| Country | France | Full country name the reported data applies to | | | | | |
| Year | 2013 | The year that the reported data applies to | | | | | |
| Detected | 215 | The number of satellite detections inside national EEZ | | | | | |
| Confirmed mineral oil | 7 | The number of satellite detections confirmed as mineral oil | | | | | |
| Confirmed other substances | 3 | The number of satellite detections confirmed as other substances | | | | | |
| Confirmed unknown spills | 2 | The number of satellite detections which could not be visually verified | | | | | |
| Confirmed natural phenomena | 1 | The number of satellite detections confirmed as natural phenomena | | | | | |
| Nothing found | 202 | The number of verified satellite detections where nothing could be found | | | | | |

Table 3. Coordinated Extended Pollution Control Operations (CEPCO)

| Country | Year | No. of flight hours | | | No. of detections inside CEPCO area | | | Detections confirmed / observed as mineral oil spills | | | No. of polluters (mineral oil) | | | | Estimated volume (m³) | Detections confirmed/observed as other substances | No. of polluters (other substances) | | | | Unknown detections | No. of polluters (unknown detections) | | | | Remarks |
|--|------|---------------------|----------|-------|-------------------------------------|----------|-------|---|----------|-------|--------------------------------|---|-------|---------|-----------------------|---|-------------------------------------|-------|-------|---------|--------------------|---------------------------------------|-------|-------|---------|---------|
| | | Daylight | Darkness | Total | Daylight | Darkness | Total | Daylight | Darkness | Total | Rigs | Ships | Other | Unknown | | | Rigs | Ships | Other | Unknown | | Rigs | Ships | Other | Unknown | |
| Column Header | | | | | | | | Format Example | | | | Explanation | | | | | | | | | | | | | | |
| Country | | | | | | | | Netherlands | | | | Full country name the reported data applies to | | | | | | | | | | | | | | |
| Year | | | | | | | | 2013 | | | | The year that the reported data applies to | | | | | | | | | | | | | | |
| No. of flight hours – Daylight | | | | | | | | 136:24 | | | | The number of flight hours and minutes carried out in daylight - From 30 minutes after Morning Civil Twilight, until 30 minutes before Evening Civil Twilight as given in the Air Almanac – shown as a colon separated value. No decimal values | | | | | | | | | | | | | | |
| No. of flight hours – Darkness | | | | | | | | 86:23 | | | | The number of flight hours and minutes carried out in darkness - From 30 minutes before Evening Civil Twilight, until 30 minutes after Morning Civil Twilight as given in the Air Almanac – shown as a colon separated value. No decimal values | | | | | | | | | | | | | | |
| No. of flight hours – Total | | | | | | | | 222:47 | | | | = (No. of flight hours - Daylight) + (No. of flight hours – Darkness) – shown as a colon separated value. No decimal values | | | | | | | | | | | | | | |
| No. of detections inside CEPCO area - Daylight | | | | | | | | 67 | | | | The number of detections in daylight, within the predefined CEPCO area - From 30 minutes after Morning Civil Twilight, until 30 minutes before Evening Civil Twilight as given in the Air Almanac | | | | | | | | | | | | | | |
| No. of detections inside CEPCO area – Darkness | | | | | | | | 23 | | | | The number of detections in darkness, within the predefined CEPCO area - From 30 minutes before Evening Civil Twilight, until 30 minutes after Morning Civil Twilight as given in the Air Almanac | | | | | | | | | | | | | | |
| No. of detections inside CEPCO – Total | | | | | | | | 90 | | | | = (No. of detections inside CEPCO area – Daylight) + (No. of detections inside CEPCO area – Darkness) within the predefined CEPCO area | | | | | | | | | | | | | | |
| Detections confirmed / observed as mineral oil spills – Daylight | | | | | | | | 12 | | | | Of the “No. of detections inside CEPCO area – Daylight” the total number of those detections observed as mineral oil and confirmed as mineral oil | | | | | | | | | | | | | | |
| Detections confirmed / observed as mineral oil spills – Darkness | | | | | | | | 5 | | | | Of the “No. of detections inside CEPCO area– Darkness” the total number of those detections observed as mineral oil and confirmed as mineral oil | | | | | | | | | | | | | | |
| Detections confirmed / observed as mineral oil spills – | | | | | | | | 17 | | | | =(Detections confirmed / observed as mineral oil spills – Daylight) + (Detections | | | | | | | | | | | | | | |

| | | |
|--|-------|---|
| Total | | confirmed / observed as mineral oil spills – Darkness) |
| No. of polluters (mineral oil) – Rigs | 2 | The number of offshore installations positively identified as the source of the oil detection |
| No. of polluters (mineral oil) – Ships | 2 | The number of ships positively identified as the source of the oil detection |
| No. of polluters (mineral oil) – Other | 90 | The number of oil detections which do not fit into either the “Rigs” or “Ships” category |
| No. of polluters (mineral oil) – Unknown | 86 | The number of oil detections which could not be associated with a source |
| Estimated Volume (m3) | 27,36 | Volume of all spills confirmed/observed as mineral oil as calculated using the Bonn Agreement Oil Appearance Code using the lower figure (BAOAC minimum) – presented as a decimal value using a comma as a decimal separator |
| Detections confirmed/observed as other substances (‘OS’) | 3 | The number of detections observed as other substances or confirmed as other substances (OS) – independent of the time of day the detection was made |
| No. of polluters (other substances) – Rigs | 2 | The number of offshore installations positively identified as the source of the OS detection |
| No. of polluters (other substances) – Ships | 2 | The number of ships positively identified as the source of the OS detection |
| No. of polluters (other substances) – Other | 90 | The number of OS detections which do not fit into either the “Rigs” or “Ships” category |
| No. of polluters (other substances) – Unknown | 86 | The number of OS detections which could not be associated with a source |
| Unknown (‘UNK’) detections | 70 | The number of detections which could not be visually verified as mineral oil or other substances (‘unknowns’ or ‘UNK’) (((No. of detections inside CEPCO area – Total) – (Detections confirmed / observed as mineral oil spills – Total)) - Detections confirmed/observed as other substances) |
| No. of polluters (unknown detections) – Rigs | 2 | The number of offshore installations positively identified as the source of the UNK detection |
| No. of polluters (unknown detections) – Ships | 2 | The number of ships positively identified as the source of the UNK detection |

| | | |
|---|---------------------------------------|--|
| No. of polluters (unknown detections) – Other | 90 | The number of UNK detections which do not fit into either the “Rigs” or “Ships” category |
| No. of polluters (unknown detections) – Unknown | 86 | The number of UNK detections which could not be associated with a source |
| Remarks | Source of rig spills identified as... | Any additional textual information to inform on particular situations |

Table 4. Tour d’horizon flights

| Country | Year | No. of flights | No. of flight hours | | | No. of detections in TdH area | | | No. of polluters (mineral oil) | | | | Estimated volume (m ³) | Detections confirmed/observed as other substances | No. of polluters (other substances) | | | | Unknown detections | No. of polluters (unknown detections) | | | | Remarks |
|---------|------|----------------|---------------------|----------|-------|-------------------------------|----------|-------|--------------------------------|-------|-------|---------|------------------------------------|---|-------------------------------------|-------|-------|---------|--------------------|---------------------------------------|-------|-------|---------|---------|
| | | | Daylight | Darkness | Total | Daylight | Darkness | Total | Rigs | Ships | Other | Unknown | | | Rigs | Ships | Other | Unknown | | Rigs | Ships | Other | Unknown | |

| Column Header | Format Example | Explanation |
|---|----------------|---|
| Country | Netherlands | Full country name the reported data applies to |
| Year | 2013 | The year that the reported data applies to |
| No. of flights | Number (Int) | The number of flights carried out by all Contracting Parties combined |
| No. of flight hours – Daylight | 136:24 | The number of flight hours and minutes carried out in daylight - From 30 minutes after Morning Civil Twilight, until 30 minutes before Evening Civil Twilight as given in the Air Almanac – shown as a colon separated value. No decimal values |
| No. of flight hours – Darkness | 86:23 | The number of flight hours and minutes carried out in darkness - From 30 minutes before Evening Civil Twilight, until 30 minutes after Morning Civil Twilight as given in the Air Almanac – shown as a colon separated value. No decimal values |
| No. of flight hours – Total | 222:47 | = (No. of flight hours - Daylight) + (No. of flight hours – Darkness) – shown as a colon separated value. No decimal values |
| No. of detections in TdH area- Daylight | 67 | The number of detections in daylight, during the TdH routing - From 30 minutes after Morning Civil Twilight, until 30 minutes before Evening Civil Twilight as given in the |

| | | |
|--|-------|--|
| | | Air Almanac |
| No. of detections in TdH area– Darkness | 23 | The number of detections in darkness, during the TdH routing - From 30 minutes before Evening Civil Twilight, until 30 minutes after Morning Civil Twilight as given in the Air Almanac |
| No. of detections in TdH area– Total | 90 | = (No. of detections during TdH routing - Daylight) + (No. of detections during TdH routing - Darkness) |
| Detections confirmed / observed as mineral oil spills – Daylight | 12 | Of the “No. of detections inside own EEZ – Daylight” the total number of those detections observed as mineral oil and confirmed as mineral oil |
| Detections confirmed / observed as mineral oil spills – Darkness | 5 | Of the “No. of detections inside national EEZ – Darkness” the total number of those detections observed as mineral oil and confirmed as mineral oil |
| Detections confirmed / observed as mineral oil spills – Total | 17 | = (Detections confirmed / observed as mineral oil spills – Daylight) + (Detections confirmed / observed as mineral oil spills – Darkness) |
| No. of polluters (mineral oil) – Rigs | 2 | The number of offshore installations positively identified as the source of the oil detection |
| No. of polluters (mineral oil) – Ships | 2 | The number of ships positively identified as the source of the oil detection |
| No. of polluters (mineral oil) – Other | 90 | The number of oil detections which do not fit into either the “Rigs” or “Ships” category |
| No. of polluters (mineral oil) – Unknown | 86 | The number of oil detections which could not be associated with a source |
| Estimated Volume (m ³) | 27,36 | Volume of all spills confirmed/observed as mineral oil as calculated using the Bonn Agreement Oil Appearance Code using the lower figure (BAOAC minimum) – presented as a decimal value using a comma as a decimal separator |
| Detections confirmed/observed as other substances | 3 | The number of detections observed as other substances or confirmed as other |

| | | |
|--|---------------------------------------|---|
| (OS) | | substances (OS) – independent of the time of day the detection was made |
| No. of polluters (other substances) – Rigs | 2 | The number of offshore installations positively identified as the source of the OS detection |
| No. of polluters (other substances) – Ships | 2 | The number of ships positively identified as the source of the OS detection |
| No. of polluters (other substances) – Other | 90 | The number of OS detections which do not fit into either the “Rigs” or “Ships” category |
| No. of polluters (other substances) – Unknown | 86 | The number of OS detections which could not be associated with a source |
| Unknown (UNK) detections | 70 | The number of detections which could not be visually verified as mineral oil or other substances (‘unknowns’ or ‘UNK’) (((No. of detections during TdH routing – Total) – (Detections confirmed / observed as mineral oil spills – Total)) - Detections confirmed/observed as other substances) |
| No. of polluters (unknown detections) – Rigs | 2 | The number of offshore installations positively identified as the source of the UNK detection |
| No. of polluters (unknown detections) – Ships | 2 | The number of ships positively identified as the source of the UNK detection |
| No. of polluters (unknown detections) – Other | 90 | The number of UNK detections which do not fit into either the “Rigs” or “Ships” category |
| No. of polluters (unknown detections) – Unknown | 86 | The number of UNK detections which could not be associated with a source |
| Remarks | Source of rig spills identified as .. | Any additional textual information to inform on particular situations |

Table 5. Spill statistics

| Volume category | | No. of spills detected | Spill IDs |
|-----------------------|---|------------------------|-----------|
| <0,1m ³ | 1 | | |
| <0,1-1m ³ | 2 | | |
| 1-10 m ³ | 3 | | |
| 10-100 m ³ | 4 | | |
| >100 m ³ | 5 | | |

| Column Header | Format | Explanation |
|------------------------|--|--|
| No. of spills detected | 7 | The total number of detected or observed mineral oil spills, where the volume was estimated, that fit into each category |
| Spill IDs | UK-01, UK-02, UK-08, UK-14, UK-21, UK-22, UK-55 | The Spill IDs (taken from Table 6 – Observed Spills) of all spills which have been counted towards each category |

Table 6. Observed spills

Multiple slicks obviously originating from a single spill should not be reported separately but should be combined and the centre point reported as the location.

| Country | Year | Spill ID | Flight Type | Date | Time | Wind speed | Wind direction | Latitude | Longitude | Length | Width | Area | Spill category | Estimated volume | Polluter | Category | Flight type | Casefile | Remarks |
|----------------------|------|----------|---------------|------|--|------------|----------------|----------|-----------|--------|-------|------|----------------|------------------|----------|----------|-------------|----------|---------|
| Column Header | | | Format | | Explanation | | | | | | | | | | | | | | |
| Country | | | Belgium | | Full country name the reported data applies to | | | | | | | | | | | | | | |
| Year | | | 2013 | | The year that the reported data applies to | | | | | | | | | | | | | | |
| Spill ID | | | BE-01 | | An unique code which will enable each individual spill to be individually identified (*) Note: in case of a spill consisting of several slicks (multiple slicks clearly originating from 1 spill), only 1 spill ID should be added (and not x '(partial) slick' IDs). In this case, the centre point should be reported as location. | | | | | | | | | | | | | | |
| Flight Type | | | N | | The type of flight the detection was made during: National = "N" CEPCO = "C" Super CEPCO = "S" | | | | | | | | | | | | | | |
| Date | | | 27/03/2013 | | The date of the individual detection | | | | | | | | | | | | | | |
| Time | | | 08:20 | | The time of the detection | | | | | | | | | | | | | | |
| Wind speed | | | 2 | | The wind speed in m/s at the time of the detection | | | | | | | | | | | | | | |
| Wind direction | | | 210 | | The wind direction in degrees at the time of the detection | | | | | | | | | | | | | | |
| Latitude | | | 51,3683 | | The latitude of the detection in decimal degrees, using WGS84 - See also Note under 'Spill ID' above for spill consisting of several slicks (*) | | | | | | | | | | | | | | |

| | | |
|------------------|--------------|--|
| Longitude | 2,6733 | The longitude of the detection in decimal degrees, using WGS84 - See also Note under 'Spill ID' above for spill consisting of several slicks (*) |
| Length | 2,3 | The length of the detection in kilometres |
| Width | 0,1 | The width of the detection in kilometres |
| Area | 0,092 | The area of the detection square kilometres ² |
| Spill category | OIL | The category the detection falls into from: "OIL", "OS", "UNKNOWN" |
| Estimated volume | 0,01564 | Volume of the detection confirmed/observed as mineral oil as calculated using the Bonn Agreement Oil Appearance Code using the lower figure (BAOAC minimum) in m ³ |
| Polluter | Other | Enter "rig", "ship", "other" or "unknown" |
| Category | 1 | The category (1, 2, 3, 4 or 5) that the detection falls into: $<0,1\text{m}^3 = "1"$ $<0,1-1\text{m}^3 = "2"$ $1-10\text{ m}^3 = "3"$ $10-100\text{ m}^3 = "4"$ $>100\text{ m}^3 = "5"$ |
| | | |
| Casefile | BE-0008 | The name of the casefile the detection refers to |
| Remarks | Case pending | Any additional information to inform on particular situations |

Table 7. Observed TdH Spills

Each country should report all observations from their Tour d'Horizon mission directly to the Bonn Agreement Secretariat, regardless of the location of the spills, at the same time as reporting their other surveillance data.

| Country | Year | Flight Type | Date | Time | Latitude | Longitude | CP Area | Area Cov | Daylight or Darkness? | Detection ID | If Oil: Min Volume | If Oil: Max Volume | Polluter Type | Polluter ID | Is detection a verification of (CSN) Sat alert? | In flight Report? | Post Flight Fax sent? | Post Flight email sent? | Reporting made to? | Remarks |
|---------|------|-------------|------|------|----------|-----------|---------|----------|-----------------------|--------------|--------------------|--------------------|---------------|-------------|---|-------------------|-----------------------|-------------------------|--------------------|---------|
|---------|------|-------------|------|------|----------|-----------|---------|----------|-----------------------|--------------|--------------------|--------------------|---------------|-------------|---|-------------------|-----------------------|-------------------------|--------------------|---------|

| Column Header | Format | Explanation |
|----------------------|------------|--|
| Country | Belgium | Full country name the reported data applies to |
| Year | 2013 | The year that the reported data applies to |
| Flight Type | TDH | The type of flight the detection was made during: TDH =Tour D'Horizon |
| Date | 27/03/2013 | The date of the individual detection |
| Time | 08:20 | The time of the detection |
| Latitude | 51,3683 | The latitude of the detection in decimal degrees, using WGS84 |
| Longitude | 2,6733 | The longitude of the detection in decimal degrees, using WGS84 |
| CP Area | Belgium | The Contracting pater EEZ in which the detection was made |
| Area covered | 0,092 | The area of the detection in square kilometres ² |
| Daylight or Darkness | Daylight | Detection in Daylight or darkness |
| Detection ID | Oil | The category the detection falls into from: "OIL", "OS", "UNKNOWN" |
| If Oil: Min Volume | 0.073 | Minimum spill volume in square kilometres |

| | | |
|---|------------------------|---|
| If Oil: Max Volume | 0.03 | Maximum spill volume in square kilometres |
| Polluter type | RIG | Type of Polluter either "RIG", "SHIP" or "UNKNOWN" |
| Polluter Id | Platform Alpha | The name of the Rig or Ship if identifiable |
| Is detection a verification of (CSN) Sat alert? | Y | Is detection a verification of (CSN) Sat alert Y or N |
| In Flight Report | Y | Has an in Flight Report been undertaken Y or N |
| Post flight Fax sent | N | Has a post flight fax report been sent Y or N |
| Post flight Email sent | Y | Has a post flight email report been sent Y or N |
| Reporting made to | National Contact Point | Who has the post flight report been sent to: national focal point or other? |
| Remarks | Case pending | Any additional information to inform on particular situations |

Table 8. TdH Flight Routing

| Date | Flight Number | Waypoint Code (Incl. Airports) | Position (only if waypoint not in Aerial Operations Handbook) |
|-------------------------------------|---------------|--|---|
| Column Header | | Format | Explanation |
| Date | | 27/03/2013 | The date of the start of the flight |
| Flight Number | | NL: 1046, BE: 13046, UK: Endurance 446, Etc. | The number of the TdH Flight |
| Way Point Code (Including Airports) | | T10, T11, T12, EGNT | The Waypoint codes for the flight taken from the Aerial Operations Handbook including Airports |
| Position | | N XX0 XX,XX' E/W XXX0 XX,XX' | The position of the flight route (only if different from the waypoints in the Aerial Operations Handbook) |

Report on Tour de Horizon flights carried out in 2015

Introduction

The Tour de Horizon (TdH) flights for 2015 were flown as follows: January: Denmark; April: United Kingdom; June: Sweden; November: Norway. The flights took place on 11 days between 14 January and 21 November 2015, more specifically:

- 14-15 January (DK);
- 23-25 April (UK);
- 2-5 June (SE);
- 17 and 21 November (NO).

All flight data have been sent to the BA Secretariat for compilation.

The TdH effort in 2015 is lower than in previous years, mainly because 3 TdH missions (of BE, NL and GE) were cancelled; moreover several aircraft that performed a TdH mission suffered adverse weather conditions. It can therefore be concluded that 2015 was a non-representative 'TdH' year with many operational problems, and that the results listed below should be interpreted with care (e.g. when evaluating long-term TdH trends).

Detections

Only 4 detections were made during the four TdH 15 campaigns: 3 detections in British area and 1 detection in the Norwegian area. All 4 detections were identified as mineral oil, and were found directly associated with offshore platforms in the respective areas. Only 1 of these detections had a major volume (i.e. min. volume estimate of more than 1m³). The three other spills concerned only very minor oil volumes. A more detailed overview of the number of oil detections per volume category (min. and max.vol. respectively) is given below.

| Volume category | N° of oil slicks (min. vol.) | N° of oil slicks (max. vol.) |
|------------------------|---------------------------------|---------------------------------|
| 10-100 m ³ | 0 | 1 |
| 1-10 m ³ | 1 | 0 |
| 0.5-1 m ³ | 0 | 0 |
| 0.1-0.5 m ³ | 0 | 2 |
| < 0.1 m ³ | 3 | 1 |

CSN SAT support

As in previous years, a CSN satellite surveillance support was given for the TdH15 missions. Of the 4 above-mentioned detections made, 2 were in fact verifications of a CSN satellite detection alert.

Flight routes

4 flight maps have also been added to this report, in order to visualize the flight routes of the performed TdH missions and the degree of coverage of the central part of the North Sea where most offshore installations are situated.

Detection investigation

All 4 detections were attributed to oil-in-water discharges within legal limits.

TOUR D'HORIZON 2015 RESULTS

1. SUMMARY OF RESULTS

Summary of data relating to Tour d'Horizon (TdH) flights during 2015

| Country | No. of flights | No. of flight hours | | | No. of detections | | | No of detections identified as oil | Estimated volume m ³ | No of 'other substance' detections | No of 'unknown' detections | No. of polluters | | | | Remarks |
|--------------|----------------|---------------------|-------------|--------------|-------------------|----------|----------|------------------------------------|---------------------------------|------------------------------------|----------------------------|------------------|----------|----------|----------|---------|
| | | Daylight | Darknes | Sum | Daylight | Darknes | Sum | | | | | Rigs | Ships | Unknown | Total | |
| Belgium | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | (1) |
| Denmark | 2 | 6:40 | 0 | 6:40 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | (3) |
| Germany | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | (1) |
| Netherlands | 0 | - | - | - | - | - | - | - | - | - | - | - | - | - | - | (1) |
| Norway | 2 | 6:35 | 0 | 6:35 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | (2) |
| Sweden | 4 | 11:45 | 0 | 11:45 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | (3) |
| UK | 4 | 17:35 | 0 | 17:35 | 4 | 0 | 4 | 4 | 2.09 | 0 | 0 | 4 | 0 | 0 | 4 | |
| Total | 12 | 42:35 | 0.00 | 42:35 | 4 | 0 | 4 | 4 | 2.09 | 0 | 0 | 4 | 0 | 0 | 4 | |

Remarks:

(1) Belgian TdH15 cancelled due to financial restraints and maintenance problems with aircraft; German and Dutch TdH15 cancelled due to unavailability (technical problems) aircraft.

(2) Norwegian TdH15 interrupted due to technical issues with the aircraft.

(3) Denmark reported high winds (>40kts) and sea state, and Sweden reported poor weather conditions (storm/poor SLAR conditions); this made it difficult to detect/observe oil spills during their TdH campaigns.

2. OVERVIEW OF DETECTIONS/OBSERVATIONS PER CONTRACTING PARTY**2.1 DENMARK: 14-15 January 2015.**

No detections/observations of marine pollution made.

2.2 : UNITED KINGDOM: 23-25 April 2015.

| No | Date (dd.mm) | Time (UTC) | Position (N - E/W) | | CP Area | Min. Quan. (m ³) | Max. Quan. (m ³) | Polluter ID | Pollution Type |
|----|--------------|------------|--------------------|----------|---------|---------------------------------|---------------------------------|-------------------|----------------|
| 1 | 2304 | 11:40 | 57.7263 N | 0.8458 E | UK | 0.02 | 0.14 | Forties C | Oil |
| 2 | 2304 | 11:44 | 57.7218 N | 0.9015 E | UK | 0.02 | 0.14 | Forties D | Oil |
| 3 | 2304 | 11:47 | 57.7313 N | 0.9712 E | UK | 0.01 | 0.07 | Forties A | Oil |
| 4 | 2304 | 17:00 | 60.5420 N | 3.0452 E | NO | 2.04 | 20.37 | Brage Wintershall | Oil |

- 2 of these detections were a verification of a CSN SAT alert.
- All detections reported post-flight by mail to the National Focal Points concerned (UK and NO resp.).

2.3 SWEDEN: 2-5 June 2015.

No detections/observations of marine pollution made.

2.4 NORWAY: 17 and 21 November 2015.

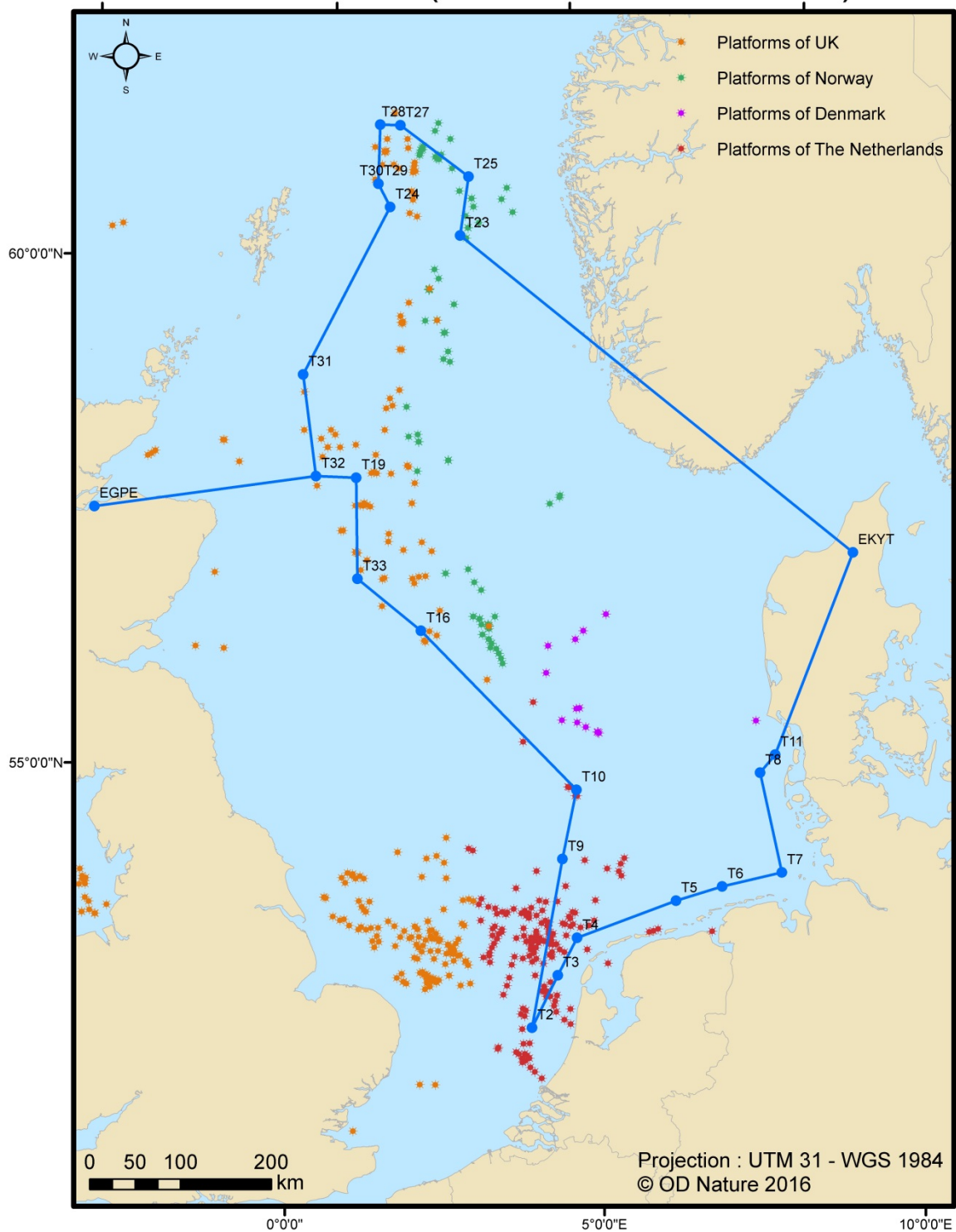
No detections/observations of marine pollution made.

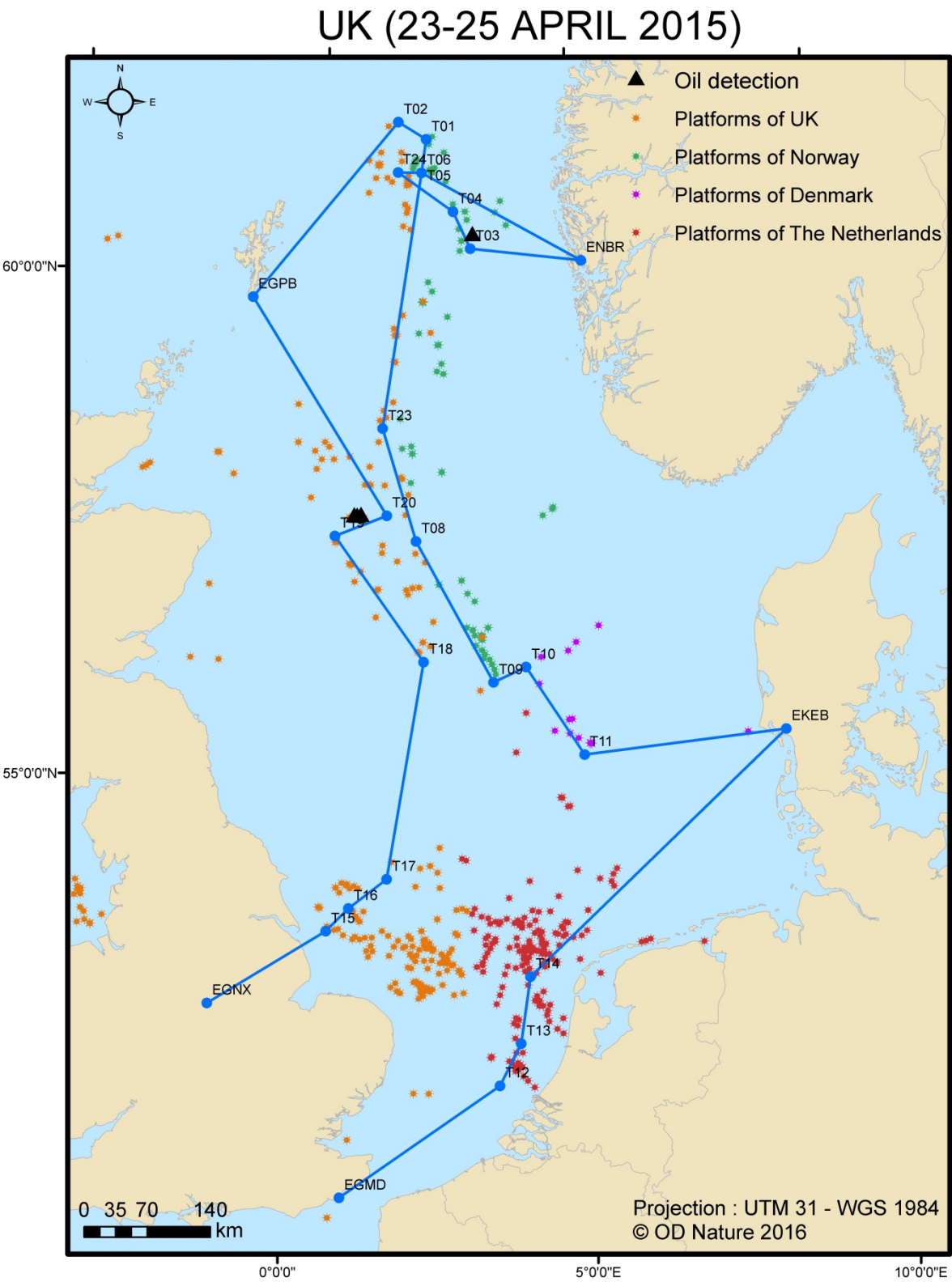
TOUR D'HORIZON 2015 – DETECTION INVESTIGATION SUMMARY**UNITED KINGDOM – April 2015.**

| Date (ddmm) | Time (UTC) | Platform | Reported quantity (m ³) | | Government inspectors assessment |
|----------------|---------------|-------------------|--|-------|---|
| | | | Min. | Max. | |
| 2304 | 11:40 | Forties C | 0.02 | 0.14 | UK: Produced water sheen. Oil-in-water discharge within legal limits. |
| 2304 | 11:44 | Forties D | 0.02 | 0.14 | UK: Produced water sheen. Oil-in-water discharge within legal limits. |
| 2304 | 11:47 | Forties A | 0.01 | 0.07 | UK: Produced water sheen. Oil-in-water discharge within legal limits. |
| 2304 | 17:00 | Brage Wintershall | 2.04 | 20.37 | NO: Oil in produced water within legal limits. |

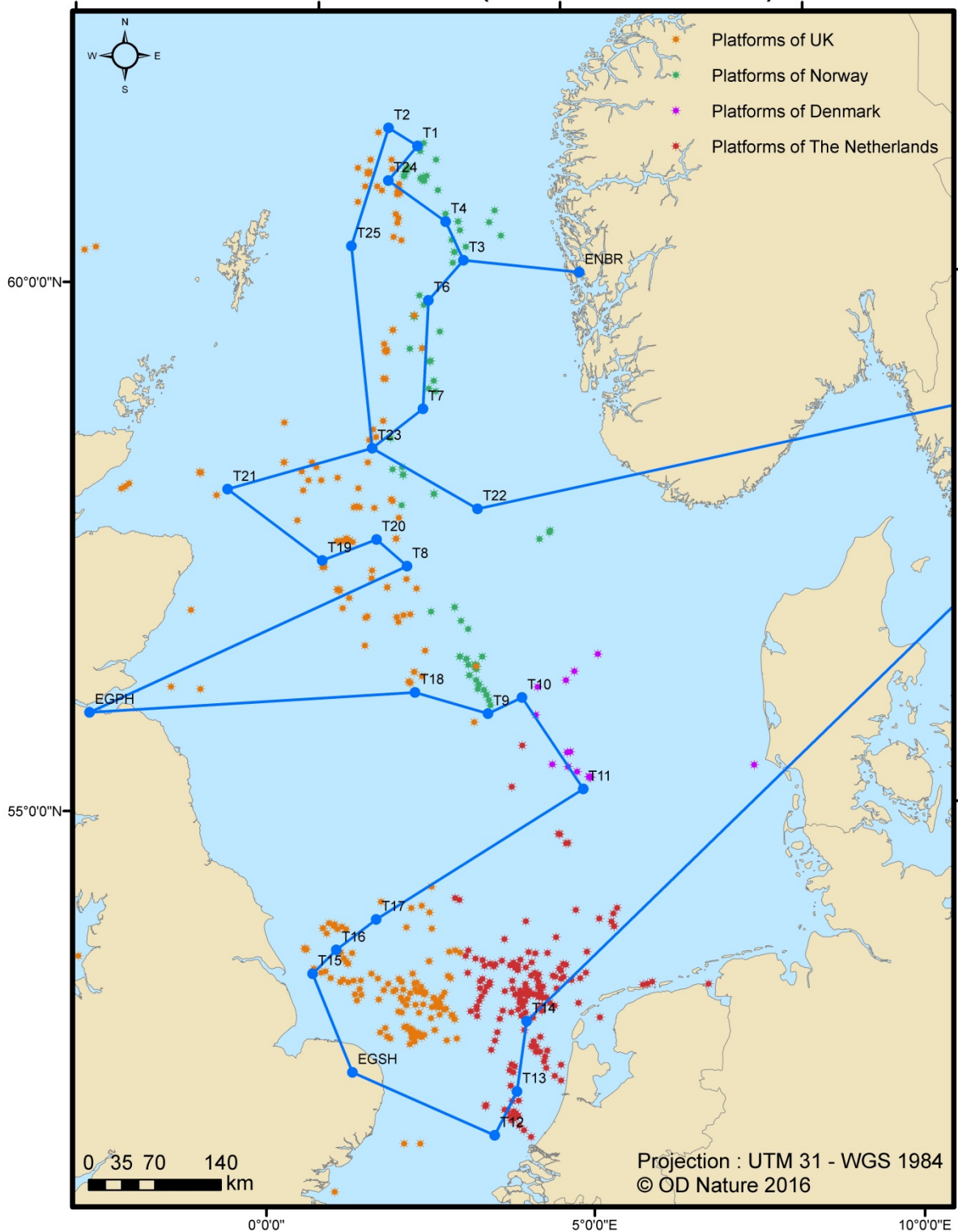
TOUR D'HORIZON 2015 - FLIGHT MAPS

DENMARK (14-15 JANUARY 2015)

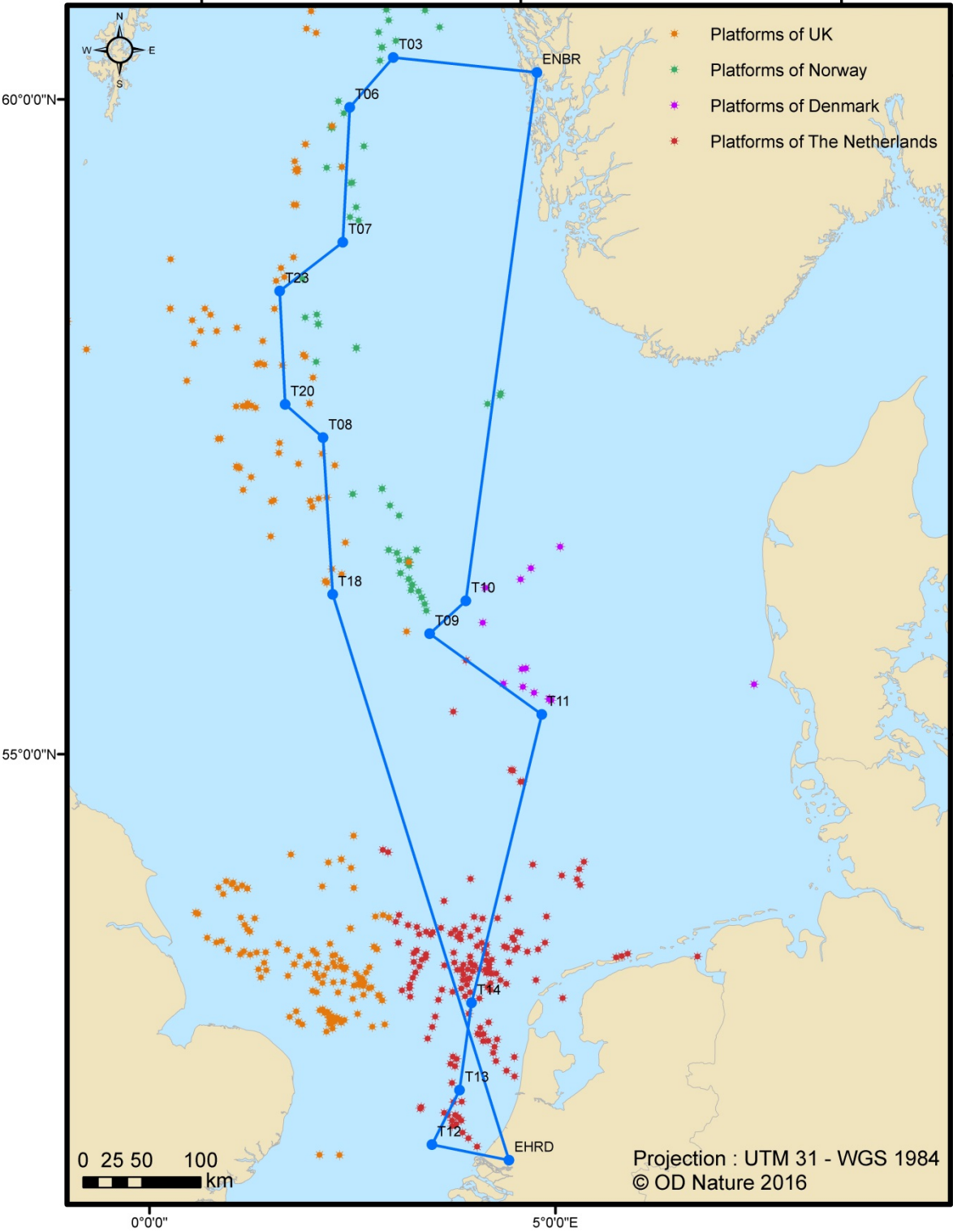




SWEDEN (2-5 JUNE 2015)

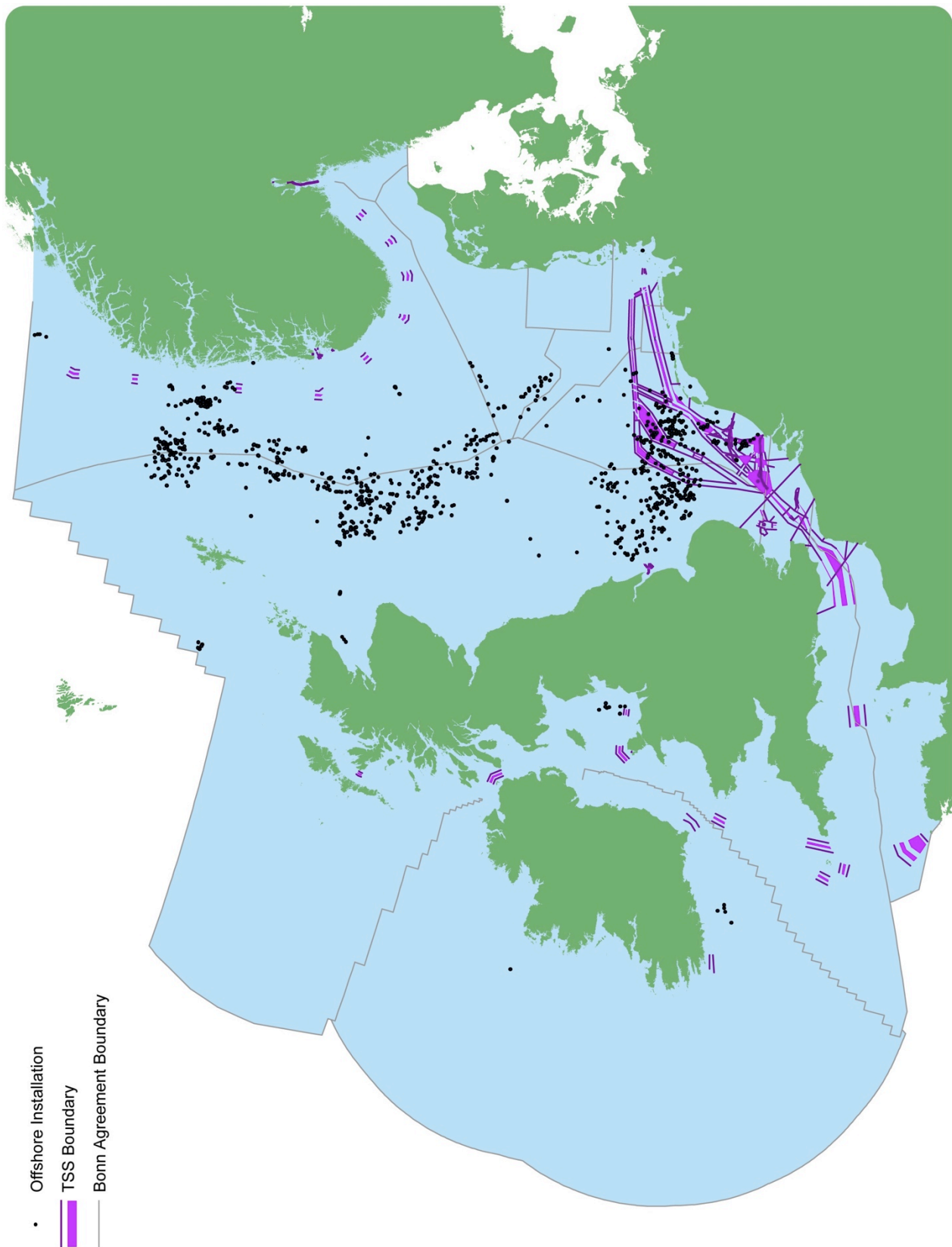


NORWAY (17 and 21 NOVEMBER 2015)



ANNEX 3

Bonn Agreement Areas of Responsibility, Traffic Separation Schemes and Oil and Gas Installations in the Bonn Agreement area



North Sea CleanSeaNet Service Statistics 2015

1. This document presents CleanSeaNet (CSN) Service Statistics for the Bonn Agreement covering 2015. Specifically, this report summarizes the results of CleanSeaNet service deliveries, CleanSeaNet detections and the Verification Activities carried out by the Coastal States.

CleanSeaNet Service Deliveries

2. During this period, CSN delivered for the Bonn Agreement region a total of 665 services. Figure 1, shows the monthly distribution of services. As of October the number of services based on Sentinel-1 images started to increase. The service suffered a high rate of Sentinel-1 acquisitions anomalies over the German and the Danish areas close to the Skagerrak strait. This is due to technical constraints specific to this satellite in this geographical area. This resulted in a number of delivered services in December 2015 being lower than initially planned. Mitigating measures have been implemented. The satellite operator ESA is currently working on reducing these technical constraints in order to enable full service by Q2 2016.

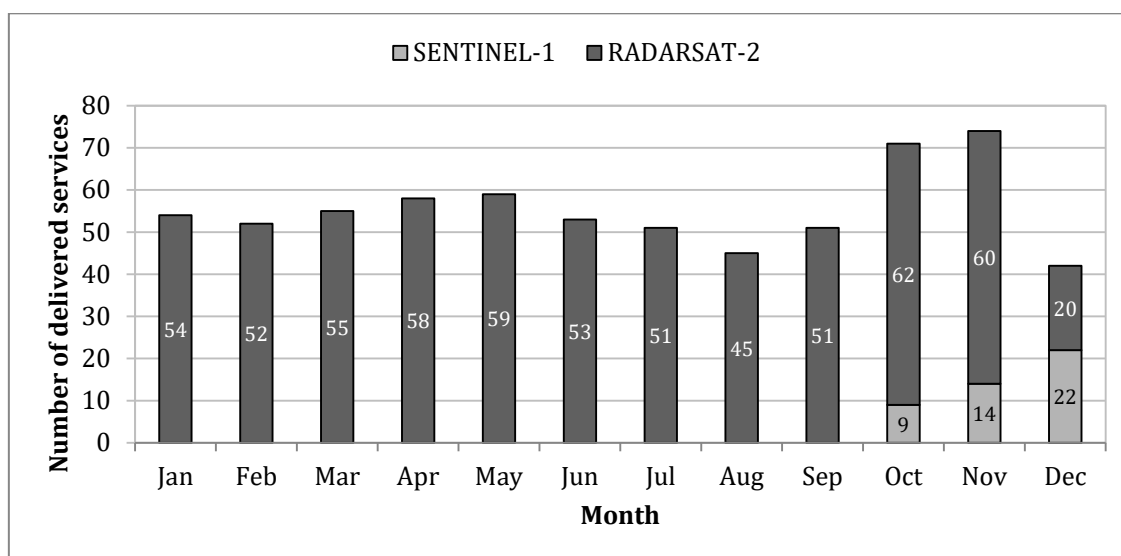


Figure 1: CleanSeaNet delivered services in 2015 for the Bonn Agreement region.

CleanSeaNet Detections

3. In 2015, 518 detections were reported: 290 Classification A⁶, 228 Classification B⁷. Figure 2, shows the monthly distribution of CSN detections classified as A and B.

⁶ Classification A - Detected spill is most probably oil (mineral, vegetable/fish oil) or a chemical.

⁷ Classification B - Detected spill is less probably oil (mineral/vegetable/fish oil) or a chemical.

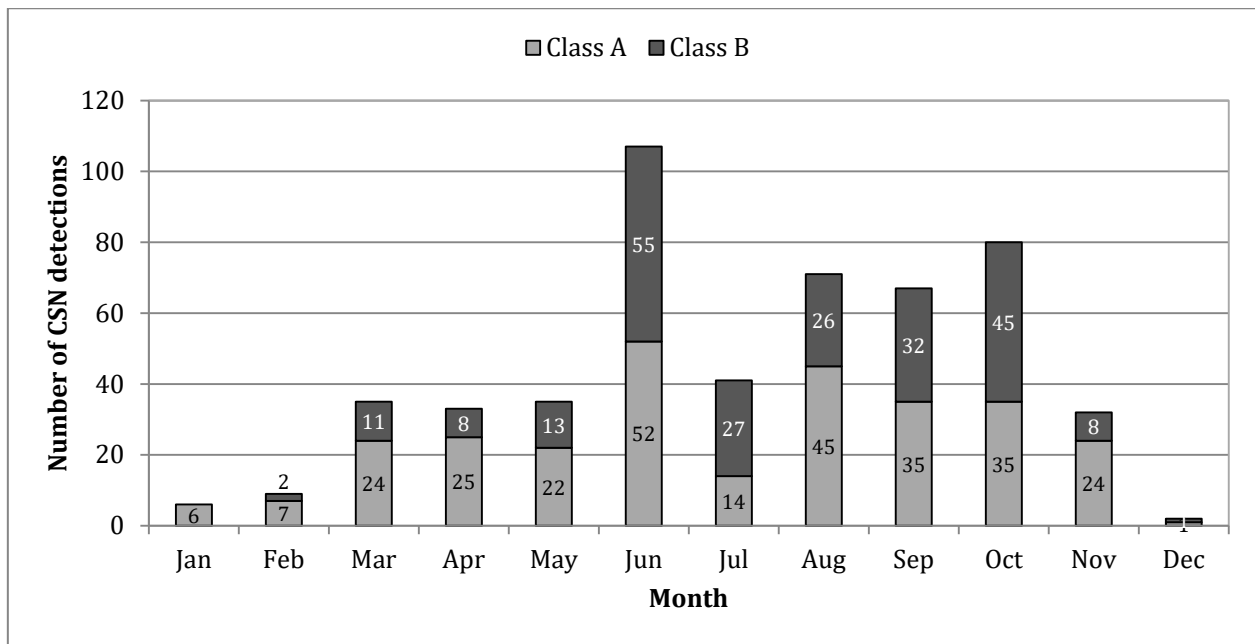


Figure 2: Monthly distribution of CSN detections (Classification A and B).

Verification activities

4. During the reporting period, out of the 518 detections, 330 were checked by the Coastal States. Of the 300, 115 (35%) were confirmed as being “Mineral oil confirmed”, 46 (14%) were reported as “other substance”, 8 (2%) were reported as “unknown feature” and 21 (7%) were reported as “natural phenomena”. Figure 3 below shows the monthly distribution of CSN checked detections and verification results.

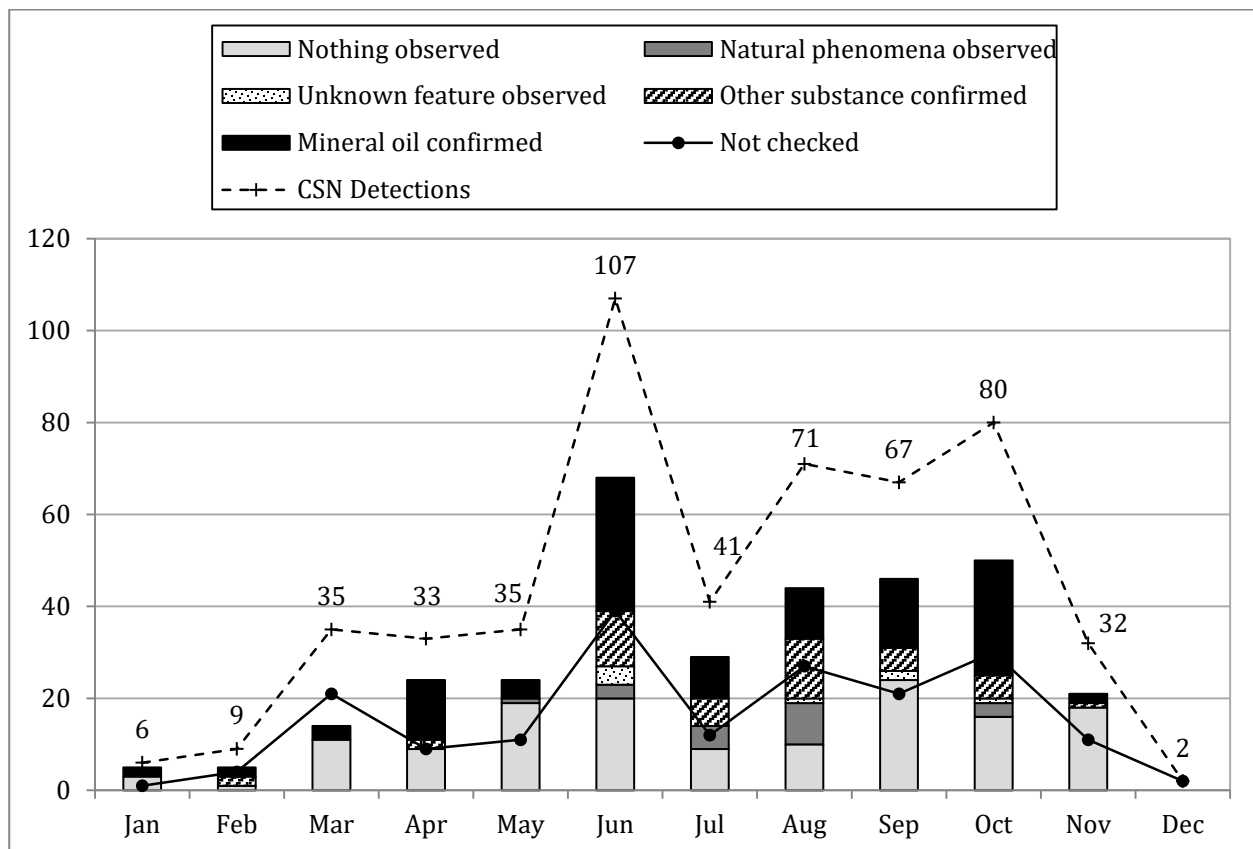


Figure 3: Monthly distribution of checked detections and verification results.
(Source: Feedback provided by Member States and stored in the CleanSeaNet database)

Table 1 below presents the annual distribution of checked detections and verification results per country.

| Country | Satellite detections | Satellite detections checked by coastal States | | | | | Not checked or no feedback |
|----------------|----------------------|--|---------------------------|--------------------------|----------------------------|------------------|----------------------------|
| | | Mineral oil confirmed | Other substance confirmed | Unknown feature observed | Natural phenomena observed | Nothing observed | |
| Belgium | 9 | | | | | | 9 |
| Denmark | 74 | 6 | 12 | 1 | | 13 | 42 |
| France | 6 | | | | | 3 | 3 |
| Germany | 40 | 2 | 9 | 3 | 16 | 7 | 3 |
| Ireland | 7 | | | | | 2 | 5 |
| Netherlands | 56 | | 10 | | 2 | 4 | 40 |
| Norway | 72 | 4 | 7 | 1 | 2 | 19 | 39 |
| Sweden | 10 | | | 1 | | 4 | 5 |
| United Kingdom | 244 | 103 | 8 | 2 | 1 | 88 | 42 |
| Total | 518 | 115 | 46 | 8 | 21 | 140 | 188 |

Table 1: CSN checked detections and verification results per country.

5. It should be noted that, in this table, CleanSeaNet detections are distributed between countries using national areas communicated to EMSA by the Bonn Agreement secretariat. The centre position of the spill is used to decide in which country's area CleanSeaNet detections shall fall.

6. It should also be noted that alert areas defined by each country are very often different from national areas used in this report. This could for example be due to the operational need to be alerted before a spill could affect national waters. In addition, an alert is generated each time a spill contour polygon intersects an alert area. Therefore the number of detections per country in this report and the number of CleanSeaNet oil spill notifications alerts for the same country are different.

7. A high number of CleanSeaNet detections in the Bonn Agreement region would appear to come from offshore installations. Many of the detections were confirmed as mineral oil nevertheless this does not mean these spills exceeded legal limits (e.g. Produced water discharged limits).

8. Finally, Figure 4 below shows the spatial distribution of CSN detections and verification activities carried out by the Coastal States in the Bonn Agreement region in 2015.

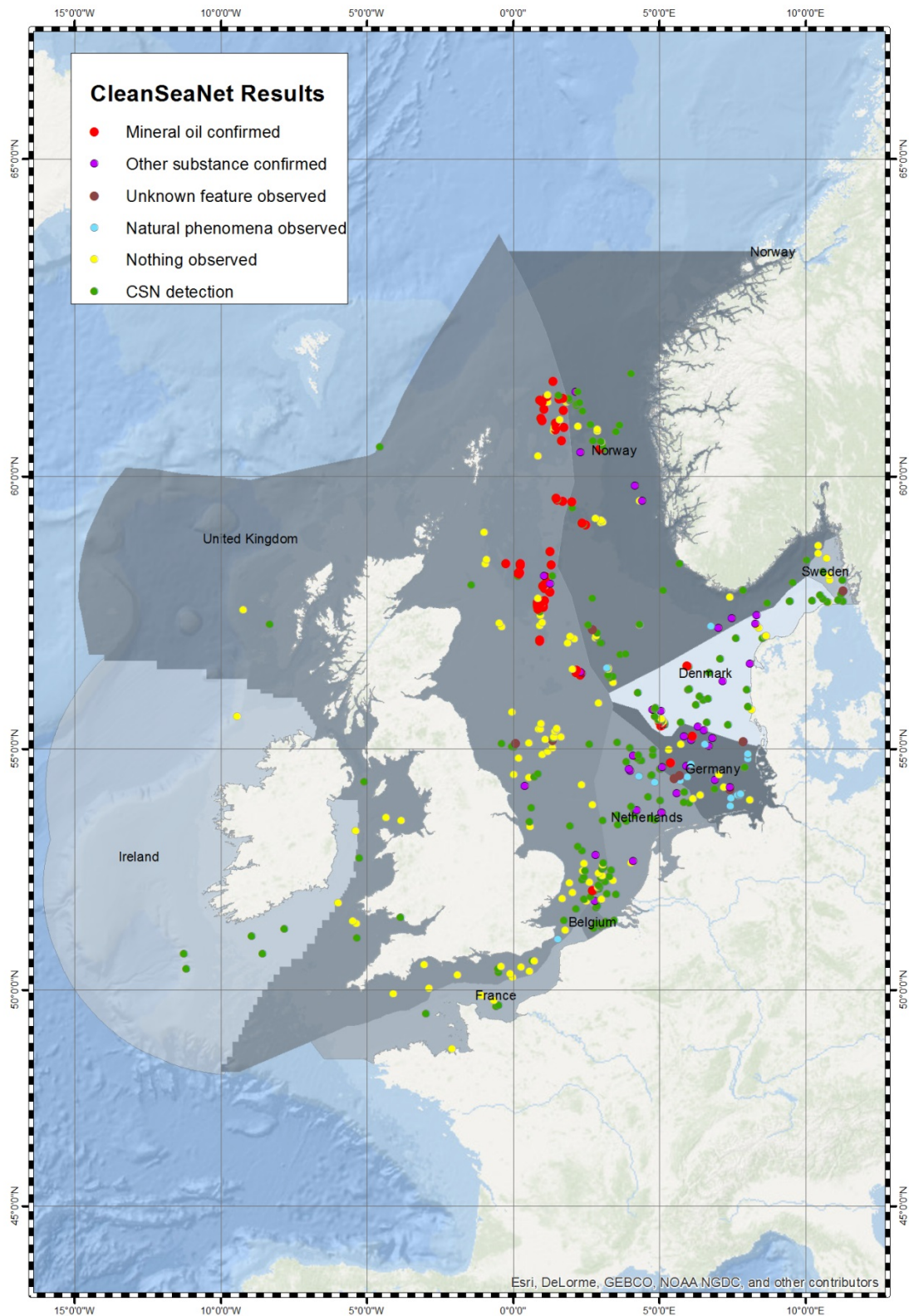


Figure 4. Spatial distribution of CSN detections and the verification activities carried out by the Coastal States in the Bonn Agreement region in 2015.