OSPAR COMMISSION

Discharges, Spills and Emissions from Offshore Oil and Gas Installations in 2017

Offshore Oil & Gas Industry Series

2019

OSPAR Convention
The Convention for the Protection of the Marine Environment of the North-East Atlantic (the "OSPAR Convention") was opened for signature at the Ministerial Meeting of the former Oslo and Paris Commissions in Paris on 22 September 1992. The Convention entered into force on 25 March 1998. The Contracting Parties are Belgium, Denmark, the European Union, Finland, France, Germany, Iceland, Ireland, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Convention OSPAR
La Convention pour la protection du milieu marin de l'Atlantique du Nord-Est, dite Convention OSPAR, a été ouverte à la signature à la réunion ministérielle des anciennes Commissions d'Oslo et de Paris, à Paris le 22 septembre 1992. La Convention est entrée en vigueur le 25 mars 1998.
Les Parties contractantes sont l'Allemagne, la Belgique, le Danemark, l'Espagne, la Finlande, la France, l'Irlande, l'Islande, le Luxembourg, la Norvège, les Pays-Bas, le Portugal, le Royaume-Uni de Grande Bretagne et d'Irlande du Nord, la Suède, la Suisse et l'Union européenne.

Acknowledgement

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with the support of the Secretariat of the OSPAR Commission.

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Executive Summary

Regular reporting is required in order to review progress in implementing the North-East Atlantic Environment Strategy and OSPAR measures (decisions, recommendations and other agreements) related to offshore oil and gas activities.

This report presents the discharges, spills and emissions from offshore installations in 2015. Part A of the report compiles data on the number of installations with emissions and discharges, discharges of produced water and displacement water contaminated with oil, and the use and discharge of drilling fluids, cuttings and chemicals. It also reports on accidental spills of oil and chemicals and emissions to air. Part B of the report presents the discharges and emissions over the period 2006-2017 to show the trends in discharges and emissions and use of chemicals.

Récapitulatif

Une notification régulière s'impose pour suivre la progression de la mise en œuvre de la Stratégie pour le milieu marin de l'Atlantique du Nord-est, ainsi que l'application de mesures OSPAR (décisions, recommandations et autres accords) qui visent les activités pétrolières et gazières en offshore.

Ce rapport présente les rejets, déversements et émissions provenant des installations offshore en 2015. Dans la partie A du rapport, sont collationnées les données sur le nombre d'installations procédant à des émissions et à des rejets, à des rejets d'eau de production et d'eau de déplacement contaminés par des hydrocarbures, sur la consommation et les rejets de fluides de forage, de déblais de forage et de produits chimiques utilisés et rejetés en offshore. Y sont également indiqués les déversements accidentels d'hydrocarbures et de produits chimiques, ainsi que les émissions dans l'atmosphère. Dans la partie B du rapport sont indiqués les rejets et les émissions au cours de la période allant de 2006 à 2017, afin de mettre en évidence les tendances des rejets et des émissions ainsi que la consommation des produits chimiques.

1. Introduction

1.1 Programmes and measures relevant to this report

At their meeting in Bergen (Norway) on 23-24 September 2010, OSPAR Ministers adopted the Strategy of the OSPAR Commission for the Protection of the Marine Environment of the North-East Atlantic 2010-2020 ("the North-East Atlantic Environment Strategy") (OSPAR Agreement 2010-3).

The North-East Atlantic Environment Strategy sets out OSPAR's vision, objectives, strategic directions and action for the period up to 2020. In Part I, the Strategy gives prominence to the overarching implementation of the ecosystem approach and the need for integration and coordination of OSPAR's work across themes and groups. Part II provides the thematic strategies for Biodiversity and Ecosystems, Eutrophication, Hazardous Substances, Offshore Oil and Gas Industry and Radioactive Substances.

The Offshore Oil and Gas Industry thematic Strategy (Offshore Strategy) sets the objective of preventing and eliminating pollution and taking the necessary measures to protect the OSPAR maritime area against the adverse effects of offshore activities so as to safeguard human health, conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected.

As its timeframe, the Offshore Strategy further declares that the OSPAR Commission will implement this Strategy progressively and, insofar as they apply, following on and consistent with the commitments made in the other OSPAR thematic Strategies.

The Offshore Strategy provides that the OSPAR Commission will keep under review and, where necessary, develop programmes and measures in respect of all phases of the offshore activities, in accordance with the provisions of the OSPAR Convention and the findings of the Quality Status Report 2010.

To this end, the Offshore Strategy requires the OSPAR Commission to continue the annual collection of data on use and discharges of offshore chemicals, emissions to air, spills, and discharges of oil and radioactive substances. Regular reporting is therefore required in order to review progress towards the targets of the Offshore Strategy.

Since 1978, discharges and waste handling from offshore oil and gas installations have been addressed and regularly reported under the former Paris Convention and under the OSPAR Convention. Since the beginning of the 1990s air emissions from these installations have been reported as well. The following measures[1] are relevant for this report:

Operational discharges of oil

- PARCOM Recommendation 86/1 of a 40 mg/l Emission Standard for Platforms;[2]
- OSPAR Reference Method of Analysis for the Determination of the Dispersed Oil Content in Produced Water (OSPAR Agreement number: 2005-15);
- OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations as amended by OSPAR Recommendation 2006/4 and OSPAR Recommendation 2011/8;

Use and discharge of drilling fluids and cuttings

- OSPAR Decision 2000/3 on the Use of Organic-phase Drilling Fluids (OPF) and the Discharge of OPF-contaminated Cuttings;
- Guidelines for the Consideration of the Best Environmental Option for the Management of OPF-Contaminated Cuttings Residue (OSPAR Agreement number: 2002-8);

Use and discharge of chemicals

- OSPAR Decision 2000/2 on a Harmonised Mandatory Control System for the Use and Reduction of the Discharge of Offshore Chemicals as amended by OSPAR Decision 2005/1;
- OSPAR Recommendation 2010/3 on a Harmonised Offshore Chemical Notification Format (HOCNF)
- OSPAR Recommendation 2016/4 on a Harmonised Pre-Screening Scheme for Offshore Chemicals (which superseded OSPAR Recommendation 2010/4 from 1 January 2017);

and a whole suite of Other Agreements concerning guidance on test methods and completing data sets, and lists of chemicals that will contribute to the implementation of these measures.

1.2 Annual reporting and assessments

In preparation for the Annual OSPAR Reports on Discharges, Spills and Emissions from Offshore Oil and Gas Installations, data are submitted by Contracting Parties, compiled by the Secretariat and, following examination by the relevant subsidiary bodies, published by the OSPAR Commission. At first annual reports were published as part of the OSPAR Commission's general Annual Report, and from 1992 onwards they

1 All measures referred to in this chapter can be downloaded from the OSPAR website www.ospar.org

2 PARCOM Recommendation of a 40 mg/l Emission Standard for Platforms, 1986 was revoked for produced water by OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations. However, this measure is still applicable in relation to ballast water, drainage water and displacement water from offshore installations.

are published in the form of Annual OSPAR Reports on Discharges, Spills and Emissions from Offshore Oil and Gas in the OSPAR maritime area. From 1999 onwards, annual reports also contained a biennial assessment of discharges, spills and emissions, which started in 1999 with the assessment of data reported in 1996 and 1997. With a view to harmonising the way in which data and information on offshore oil and gas activities are being established and reported, the former Programmes and Measures Committee of the OSPAR Commission adopted in 1995 a reporting format and procedures. Over time, the reporting requirements and format for data collection have regularly been reviewed and updated in the light of ongoing work under the OSPAR Commission as regards offshore installations. The reporting format was examined by the Offshore Industry Committee's Expert Assessment Panel in 2012 and revised to bring it in-line with the revised OSPAR Harmonised Mandatory Control System for the Use and Reduction of the Discharge of Offshore Chemicals (i.e. OSPAR Decision 2000/2, and Recommendations 2010/3 and 2016/4). The revised reporting format was adopted by OSPAR in 2012 (OSPAR Agreement 2012-08).

This report presents the discharges, spills and emissions data from offshore installations for 2017 in Part A and cumulative data in Part B.

2. Results

Part A: Report relating to 2017 data

Part B: Cumulative Report

2.1 General information

The continental decimal system is used throughout this report (with a space as 1000 separator and a comma as decimal separator) with one decimal number after the comma.

NI means No Information available, i.e. unknown or missing data (data different from 0).

NA means Not Applicable, i.e. that the criteria is not relevant. For sums and totals, it is equivalent to 0.

2.2 Glossary

OP is the acronym for organic phase.

Organic-phase drilling fluid (OPF) means an organic-phase drilling fluid, which is an emulsion of water and other additives in which the continuous phase is a water-immiscible organic fluid of animal, vegetable or mineral origin.

Base fluid means the water immiscible fluid which forms the major part of the continuous phase of the OPS.

Drilling fluid means base fluid together with those additional chemicals which constitute the drilling system.

Oil-based fluids (OBF) means low aromatic and paraffinic oils and those mineral oil-based fluids that are neither synthetic fluids nor fluids of a class whose use is otherwise prohibited.

Synthetic fluid means highly refined mineral oil-based fluids and fluids derived from vegetable and animal sources.

Cuttings means solid material removed from drilled rock together with any solids and liquids derived from any adherent drilling fluids.

Whole OPF means OPF not adhering to or mixed with cuttings.

WBM is the acronym for water-based muds.

Part A : Report relating to 2017 data

Table 1: Number of installations with emissions and discharges covered by OSPAR measures[a]

Year: 2017

Country	Production		Subsea[d]	Other[e]	Total	Number of wells drilled[f]
	Oil [b]	Gas[c]				
Denmark	21	0	0	0	**21**	4
Germany	1	1	0	0	**2**	2
Ireland	0	1	1	1	**3**	1
Netherlands	8	99	0	0	**107**	63
Norway	50	11	56	0	**117**	214
Spain	NI	NI	NI	NI	NI	NI
United Kingdom	88	172	216	1	**477**	206
Total	**168**	**284**	**273**	**2**	**727**	**490**

a. It should be noted that each CP records number of installations in accordance with its own accounting system.
b. Installations which produce oil and gas are considered as "oil installations".
c. Installations which produce gas and condensate are considered as "gas installations".
d. Subsea installations are determined differently by each Contracting Party.
e. Example: offshore underground storage and loading buoys.
f. Number of wells drilled are for wells completed in that calendar year.

Part A : Report relating to 2017 data

Table 2: Produced water and displacement water

This table refers to all waters discharged to the sea (except cooling and sewage water) the quality of which should fit with OSPAR measures (cf. OSPAR

Year: 2017

Table 2a: Produced water[a]

Country	Total number of installations[b]	Annual quantity of water discharged[c] (m^3)	Calculated annual average dispersed[d,g] oil concentration (mg/l)	Total amount of dispersed[d] oil discharged (tonnes)	Calculated annual average BTEX[e,g] concentration (mg/l)	Total amount of BTEX[e] discharged (tonnes)	Number of installations injecting water[f]	Annual quantity of water injected[f] (m^3)
Denmark	16	24,988,042	6.8	170.1	11.0	275.4	8	11,995,583
Germany	1	9,829	1.2	0.01	28.0	0.4	1	2,914
Ireland	1	739	22.8	0.02	345	0.3	0	0
Netherlands	64	5,871,399	14.5	85.0	7.7	45.0	14	7,942,000
Norway	44	134,202,747	12.1	1623	15.7	2106	24	40,942,535
Spain	NI	NI	NI	NI	NI	NI	NI	NI
United Kingdom	123	142,650,609	15.0	2139	18.6	2656	27	52,955,275
Total	**249**	**307,723,365**	**13.1**	**4,017**	**16.5**	**5,083**	**74**	**113,838,307**

a. "Produced water" means water which is produced in oil and/or gas production operations and includes formation water, condensation water and re-produced injection water; it also includes
b. Total number of installations discharging produced water.
c. Total quantity of produced water discharged to the sea during the year.
d. Dispersed oil is, by definition, the oil measured according to the method described in § 7.2 of the OSPAR Recommendation 2006/4 and specified in the OSPAR Agreement 2005-15
e. BTEX determined according to 1.1 of OSPAR Recommendation 2001/1, as amended by OSPAR Recommendation 2011/8, are considered as dissolved oil.
f. Produced water only (excluding sea water for pressure maintenance).

Part A : Report relating to 2017 data

Table 2: Produced water and displacement water

This table refers to all waters discharged to the sea (except cooling and sewage water) the quality of which should fit with OSPAR measures (cf. OSPAR

Year: 2017

Table 2b: Displacement water[a]

Country	Total number of installations[b]	Annual quantity of water discharged[c] (m^3)	Calculated annual average dispersed[d,g] oil concentration (mg/l)	Total amount of dispersed[d] oil discharged (tonnes)	Calculated annual average BTEX[e,g] concentration (mg/l)	Total amount of BTEX[e] discharged (tonnes)	Number of installations injecting water[f]	Annual quantity of water injected[f] (m^3)
Denmark	2	1,188,781	0.84	1.00	0.17	0.20	0	0
Germany	0	N/A	N/A	N/A	N/A	N/A	0	0
Ireland	0	0	0	0	0	0	0	0
Netherlands	2	295,237	2.49	0.735	2	0.55	0	0
Norway	6	28,714,703	1.10	31.68	N/A	N/A	0	0
Spain	NI	NI	NI	NI	NI	NI	NI	NI
United Kingdom	2	738,773	0.10	0.07	0.25	0.18	0	0
Total	**12**	**30,937,494**	**1.1**	**33**	**0.03**	**0.9**	**0**	**0**

a. "Displacement water" is the seawater which is used for ballasting the storage tanks of the offshore installations (when oil is loaded into the tanks, the water is displaced, and is discharged
b. Total number of installations discharging displacement water.
c. Total quantity of displacement water discharged to the sea during the year.
d. Dispersed oil is, by definition, the oil measured according to the method described in § 7.2 of the OSPAR Recommendation 2006/4 and specified in the OSPAR Agreement 2005-15
e. BTEX determined according to 1.1 of OSPAR Recommendation 2001/1, as amended by OSPAR Recommendation 2011/8, are considered as dissolved oil.
f. Displacement water only (excluding sea water for pressure maintenance).

Part A : Report relating to 2017 data

Table 3: Installations which fail to meet the 30 mg/l performance standard for dispersed oil

This table concerns installations for which the average annual oil content of the produced water discharged to the sea exceeds the 30 mg/l performance

Year: 2017

Country/Installation[a]	Type of installation[b]	Quantity of water discharged during the year (1000m^3)	Annual average concentration of dispersed oil[c] (mg/l)	Total amount of dispersed oil discharged (tonnes/yr)	Total amount of dispersed oil during the period exceeding the performance standard[d] (tonnes/yr)
Norway/Alvheim FPSO	Oil	610.8	32.5	19.85	1.53
Norway/Jotun A	Oil	2	66.0	0.2	0.09
Norway/Oseberg A	Oil	32.6	56.7	1.85	0.87
Norway/Oseberg SØR	Oil	25.9	51	1.32	0.54
Norway/Sleipner A	Gas	11.8	69	0.81	0.46
Norway/Sleipner T	Gas	1.3	94	0.13	0.09
UK/Rough BD Platform	Gas	0.9	486	0.42	0.40
UK/Cygnus B Platform	Gas	1.2	203	0.24	0.20
UK/Bruce PUQ Platform	Condensate	18.3	74.8	1.37	0.82
UK/Hyde Platform	Gas	19.4	71	1.38	0.80
UK/Inde AC Platform	Gas	24.6	71	1.77	1.01
UK/Alwyn North NAB Platform	Oil	16	54.1	0.84	0.37
UK/Malory Platform	Gas	0.1	49.6	0.001	0.001
UK/Ravenspurn North CPP Platform	Gas	29.9	45.2	1.35	0.45
UK/Cygnus A PU Platform	Gas	8.0	44.8	0.36	0.12
UK/Stella FPF-1	Oil	51.8	40.7	2.11	0.55
UK/Gryphon A	Oil	1,378.62	35	48.36	6.65
UK/Bleo Holm FPSO	Oil	1,013	32.0	32.38	1.99
UK/Global Producer III	Oil	367	31.2	11.5	0.45
Total		**2,967**	**42.5**	**126**	**17.4**

a. Name of the installation where the discharge takes place.

b. Same categories as in table 1: Oil (O), Gas (G), Other (oth) installations

c. The annual average concentration of dispersed oil content should be calculated on the basis of the total weight of oil discharged per year by the installation divided by the

d. To calculate this amount use the following formula: (annual average concentration of dispersed oil minus 30) * volume discharged

Part A : Report relating to 2017 data

Table 3a. Information on installations which fail to meet the 30 mg/l performance standard and discharging more than 2 tonnes of dispersed oil per year

This table concerns installations for which the average annual oil content of the produced water discharged to the sea exceeds the 30 mg/l performance standard as

Year: 2017

Country/Installation/Operator[a]	Type of installation	Annual average concentration of dispersed oil (mg/l)[b]	Treatment equipment installed	Reasons for not achieving the standard	Action being taken
NO/Avaheim/	Oil	32.5	hydrocyclones and degassing	challenging workovers and well start-ups. High concentration of particles during workovers have made reinjection impossible in certain periods.Four wells with comprehensive workovers caused high concentration of oil in produced water because particles from completion fluids reduced the effect on this separation.	optimalisation of process. Better routines when starting up wells
UK/Stella FPF-1/Ithaca	Other	1357.7	Inlet heater, HP & LP separators, hydroclones and finally degasser. Chemical treatment applied at various points in process.	Stricter oil in water permit limit – 20 mg/l (rather than 30 mg/l) as newer installation.Unstable power generation and wells in early days of production. Some affect due to poor winter weather hindering good gravity separation. Basically poor design of process to meet challenges of a floating platform and produced fluids seen.	Operator working through a series of chemical and process trials to find a solution.

Part A : Report relating to 2017 data

Country/Installation/Operator[a]	Type of installation	Annual average concentration of dispersed oil (mg/l)[b]	Treatment equipment installed	Reasons for not achieving the standard	Action being taken
UK/Gryphon A/Maersk	Oil	34.8	First stage separator - desanding cyclones (Krebs units) - 3 x deoiling Hydrocyclones - Downstream Enhancement Vessel (DEV) - Water from the DEV is either re-injected, discharged or routed to slops.	Following investigation the operator identified that the 2nd stage heater was not delivering the necessary heat to the process. Vessel motion continues to be a contributory factor when attempting to maximise separation efficiency.	2nd stage heat exchanger replaced in April 2018. Subsurface injection / overboard strategy has been reviewed with a view in increasing water injection rates. Deoiling hydrocyclones A & B cleaned in June 2018 to improve efficiency. Maintenance on larger Krebs vessel scheduled to be executed in October 2018 to improve performance.
UK/Ross FPSO Bleo Holm/Talisman	Oil	32.0	Hydrocyclones, Degasser, Slops Tank	During rough seas, vessel motion causes disturbance in slops tanks giving rise to poor OIW separation.	On identification of high OIW, overboard discharge stopped, levels in slops tank allowed to rise until vessel movement, and hence disturbance in slops tanks, subsides. Operator has instigated a produced water improvement programme.
UK/Global Producer III/Maersk	Oil	31.2	First stage separator, de-sanding hydrocyclones, deoiling hydrocyclones, Downstream Enhancement Vessel (DEV) then overboard/reinjected.	Challenges of vessel motion continue to impact ability of installation to meet standard. Annual average discharge concentration for 2017 is consistent with reported 2016 average discharge concentration (30.441 mg/l).	Continue to progress action to improve PWRI availability/uptime by: Optimising slops tank processing through a dedicated hydrocyclone; Monitoring the 1st stage separator and DEV for separation performance; and Optimising the application and dosing of production chemicals.

a. Name of the installation where the discharge takes place.
b. The annual average oil content should be calculated on the basis of the total weight of oil discharged per year by the installation, divided by the total volume of produced water discharged during the same period

Part A : Report relating to 2017 data

Table 3b. Information on installations which fail to meet the 30 mg/l performance standard and discharging less than 2 tonnes of dispersed oil per year

Year: 2017

Country/Installation/Operator [a]	Type of installation [b]	Annual average concentration of dispersed oil mg/l [c]	Treatment equipment installed
Norway/Jotun A/	Oil	66	hydrocyclones and degassing
Norway/Oseberg A/	Oil	56.7	separators and degassing
Norway/Oseberg SØR/	Oil	50.9	hydrocyclones and degassing
Norway/Sleipner A/	Gas	68.6	separators and degassing
Norway/Sleipner T/	Gas	95.3	separators and degassing
UK/Rough BD/Centrica	Gas	486.2	Inlet Separators, Injection Separators, Test Separator, Off-spec Condensate Vessel, De-sanding Package, Oily Water Separator.
UK/Cygnus B Platform/Neptune	Gas	202.7	Cygnus B is experiencing > 30mg/l when online. This is thought to be due to the return of methanol and other reservoir fluids. Neptune currently working on a solution. Cygnus B fluids are thought to be a cause in the elevated oil in water values on Cygnus A.
UK/Bruce PUQ Platform/Britoil	Other	74.8	The process trains consist of gravity separation (test, HP and LP), HP and LP hydrocyclone skids and final degassing and oil skimming.
UK/Hyde Platform/Perenco	Gas	71.5	Production Separator and Degasser Vessel.
UK/Inde AC Platform/Perenco	Gas	71.0	Gravity separation & filtration consisting of – slug catcher, Separator & Coalescers.
UK/Alwyn North NAB Platform/Total	Oil	54.1	First stage and Test separator, LP Flash Drum, HP and LP Plate Separators, Flotation Unit Flash drum.
UK/Malory Platform/Perenco	Gas	49.6	Normally unmanned installation with Gravity separation & filtration consisting of - Separator, Coalescer & degasser drum.
UK/Ravenspurn North CPP Platform/Perenco	Gas	45.2	Perenco UK Ltd installed a bespoke filtration system with coalescer within the Ravenspurn North CPP produced water system during 2017. Further to initial issued operating this equipment, the Company plan to install an additional separation vessel upstream of the new system during the 2018 shutdown.
UK/Cygnus A PU Platform/Neptune	Gas	44.8	A number of process modifications have been made to try and improve the situation. Neptune have identified the issue and working on a solution.

a. Name of the installation where the discharge takes place.

b. Same categories as in table 1: Oil (O), Gas (G), Other (oth) installations

c. The annual average oil content should be calculated on the basis of the total weight of oil discharged per year by the installation divided by the total volume of produced water discharged during the same period.

Part A : Report relating to 2017 data

Table 4a: Use and Discharges of Oil Based drilling Fluids (OBF) and cuttings [a]

Year: 2017

Country	Total amount of OBF (fluid only) used (tonnes)	Number of wells drilled with OBF[c]	Cuttings discharged to the sea after treatment				OBF cuttings injected		Cuttings transported to shore (tonnes)
			Number of wells concerned	Amount of cuttings discharged (tonnes)	Average OBF[d] concentration in cuttings (%)	Total amount of OBF discharged[e] (tonnes)	Number of wells concerned	Total amount of cuttings injected[f] (tonnes)	
Denmark	0	0	0	0	0	0	0	0	0
Germany	3707	2	0	0	0	0	0	0	3958
Ireland	1747	1	0	0	0	0	0	0	678
Netherlands	5133	4	0	0	0	0	0	0	1704
Norway	127693	144	0	0	0	0	49	22866	64685
United Kingdom	63214	73	13	8809	0.17	15.1	19	3027	20785
Total OBF	**201,494**	**224**	**13**	**8,809**	**0.17**	**15.1**	**68**	**25,893**	**91,809**

a. Any use of drilling fluids regulated by OSPAR Decision 2000/3 on the Use of Organic-Phase Drilling Fluids (OPF) and the Discharge of OPF-Contaminated Cuttings should be reported. It concerns all OPF
b. OP is the acronym for organic phase: it means oil in the case of OBF, the organic phase mixture for the other OPFs.
c. Report the estimated amount of OBF discharged to the sea, through the cuttings discharged.
d. As defined in OSPAR Decision 2000/3.
e. Report the amount of cuttings transported to shore, for treatment and/or disposal.
f. Report the estimated amount of cuttings injected into disposal wells, excluding the water added for slurryfication.

Part A : Report relating to 2017 data

Table 4b: Use and Discharges of other Organic Phase drilling Fluids (Other OPF)[b]

Year: 2017

Country	Total amount of OPF (fluid only) used (tnnes)	Number of wells drilled with OPF[c]	Cuttings discharged to the sea after treatment				OPF cuttings injected		Cuttings transported to shore[g] (tonnes)
			Number of wells concerned	Amount of cuttings discharged	Average OP[d] concentration in cuttings (%)	Total amount of OP discharged[e] (tonnes)	Number of wells concerned	Total amount of cuttings injected[f] (tonnes)	
Denmark	0	0	0	0	0	0	0	0	0
Germany	0	0	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0	0	0
Norway	0	0	0	0	0	0	0	0	0
United Kingdom	0	0	0	0	0	0	0	0	0
Total non-OBF OPF	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Grand Total OBF[h]	**201,494**	**224**	**13**	**8,809**	**0.17**	**15.1**	**68**	**25,893**	**91,809**

a. Any use of drilling fluids regulated by OSPAR Decision 2000/3 on the Use of Organic-Phase Drilling Fluids (OPF) and the Discharge of OPF-Contaminated Cuttings should be reported. It concerns all OPF
b. Other OBF OPF, including synthetics.
c. An OPF well is drilled with at least one section of the well with OPF
d. OP is the acronym for organic phase: it means oil in the case of OBF, the organic phase mixture for the other OPFs.
e. Report the estimated amount of OP discharged to the sea, through the cuttings discharged.
f. Report the estimated amount of cuttings injected into disposal wells, excluding the water added for slurryfication.
g. Report the amount of cuttings transported to shore, for treatment and/or disposal.
h. Total OBF + non-OBF OPF.

Part A : Report relating to 2017 data

Table 5: Accidental spillages

Year: 2017

Table 5a: Accidental spillages of oil [a]

Country	Number of oil spills			Total quantity of oil spills (tonnes)		
	≤ 1 tonne	> 1 tonne	Total number	≤ 1 tonne	> 1 tonne	Total Quantity
Denmark	35	1	36	1.1	2.1	3.2
Germany	0	0	0	0.0	0.0	0.0
Ireland	1	0	1	0.002	0.0	0.002
Netherlands	9	0	9	0.004	0.0	0.004
Norway [(1)]	44	3	47	5.1	7.1	12.2
United Kingdom	296	13	309	11.9	40.8	52.7
Total	**385**	**17**	**402**	**18.1**	**50.1**	**68**

a. Flaring spillages are included in oil spillages

[(1)] Norway - Reports m^3 rather than tonnes

Table 5b: Accidental spillages of chemicals [a, b]

Country	Number of chemical spillages			Total Quantity of chemicals spilled (tonnes)		
	≤ 1 tonne	> 1 tonne	Total number	≤ 1 tonne	> 1 tonne	Total Quantity
Denmark	25	2	27	1.1	2.6	3.7
Germany	0	0	0	0.0	0.0	0.0
Ireland	0	2	2	0.0	11.4	11.4
Netherlands	4	0	4	0.8	0.0	0.8
Norway [(1)]	111	29	140	16	899	915
United Kingdom	185	29	214	25.9	496.8	522.7
Total	**325**	**62**	**387**	**43.8**	**1409**	**1,453**

a. Chemical spills include all drilling fluids for all CPs except for the Netherlands in case of the oil in OBF which is reported as an oil spill

b. The total quantity of chemicals spilled are reported in these tables. The total quantities of specific components spilled are reported in Table 7c

[(1)] Norway - Reports m^3 rather than tonnes.

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Table 6: Emissions to air

Year: 2017

Country	CO_2[a] (10^3 tonnes)	NO_x[b] (tonnes)	nmVOCs[c] (tonnes)	CH_4[d] (tonnes)	SO_2 (tonnes)
Denmark	1,629	6,441	1,621	3,405	80
Germany	42	85	138	356	1
Ireland	38	290	8	379	15
Netherlands	1,350	3,385	3,031	8,562	59
Norway	13,190	42,900	35,248	16,285	516
United Kingdom	14,138	56,524	38,291	43,285	3,100
Total	**30,387**	**109,624**	**78,337**	**72,273**	**3,771**

a. CO_2 is carbon dioxide emitted, not the carbon dioxide equivalents of the various greenhouse gases. Carbon monoxide (CO) is not inc

b. NO_x is the sum of nitric oxide (NO) and nitrogen dioxide (NO_2) expressed as NO_2 equivalent. Nitrous oxide (N_20) is not included as a c

c. VOCs (Volatile Organic Compounds) comprise all hydrocarbons, other than methane, released to the atmosphere.

d. CH_4 corresponds to the methane released to the atmosphere, from any source.

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Table 7: The use and discharge of offshore chemicals [a, b]

Year: 2017

Table 7a: Quantity of offshore chemicals used in kg/year

Country	Prescreening Category							
	Plonor	LCPA	LC_{50} or EC_{50} < 1 mg/l	Biodegradation < 20 %	Substances meet two of three criteria	Inorganic, LC50 or EC50 > 1 mg/l	Ranking	Total
Denmark [3]	23,698,150	0	49,104	600	4,836	374,282	12,258,371	**36,385,343**
Germany	13,615	0	0	0	510	0	1,166	**14,853**
Ireland	1,784,962	0	0	4,346	0	3,588	934,791	**2,727,686**
Netherlands	13,436,194	0	0	59,975	35,127	259,501	2,808,238	**16,599,035**
Norway [1] [2]	238,399,889	0	102,232	2,324,256	719,249	0	99,720,887	**341,266,513**
United Kingdom [4]	165,314,789	247	298	1,417,466	1,576,541	2,179,745	72,200,124	**242,689,210**
Total	**442,647,599**	**247**	**151,634**	**3,806,644**	**2,336,263**	**2,817,116**	**187,923,576**	**639,682,640**

a. According to OSPAR Recommendation 2000/4 on a Harmonised Pre-screening Scheme for Offshore Chemicals (as amended) and the terminology used in this Recommendation.

b. The total quantities of specific components are reported in this table.

[1] Norway has changed classification of NaOCl from Ranking to LC50 or EC5<1mg/l

[2] Norway now reports firefighting chemicals

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Table 7b: Quantity of offshore chemicals discharged in kg/year [a, b]

Year: 2017

Country	Prescreening Category							
	Plonor	LCPA	LC_{50} or EC_{50} < 1 mg/l	Biodegradation < 20 %	Substances meet two of three criteria	Inorganic, LC50 or EC50 > 1 mg/l	Ranking	Total
Denmark [3]	10,118,377	0	30,306	114	3,544	112,930	5,605,816	**15,871,087**
Germany	10,212	0	0	0	0	0	1,022	**11,234**
Ireland	637,645	0	0	0	0	313	19,965	**657,923**
Netherlands	7,553,982	0	0	654	2,746	45,176	316,096	**7,918,654**
Norway [1] [2]	79,853,130	0	62,551	21,425	16,042	0	14,719,655	**94,672,803**
United Kingdom [4]	49,308,449	0	20	508,941	693,579	543,690	11,375,557	**62,430,235**
Total	**147,481,796**	**0**	**92,876**	**531,133**	**715,911**	**702,108**	**32,038,111**	**181,561,936**

a. According to OSPAR Recommendation 2000/4 on a Harmonised Pre-screening Scheme for Offshore Chemicals (as amended) and the terminology used in this Recommendation.

b. The total quantities of specific components are reported in this table.

[1] Norway has changed classification of NaOCl from Ranking to LC50 or EC5<1mg/l

[2] Norway now reports firefighting chemicals

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Table 7c: Quantity of offshore chemicals spilled in kg/year [a, b]

Year: 2017

Country	Prescreening Category							
	Plonor	LCPA	LC_{50} or EC_{50} < 1 mg/l	Biodegradation < 20 %	Substances meet two of three criteria	Inorganic, LC50 or EC50 > 1 mg/l	Ranking	Total
Denmark	1,006	0	122	0	0	0	0	**1,128**
Germany	0	0	0	0	0	0	0	**0**
Ireland	849	0	0	2,788	0	11	1,099	**4,747**
Netherlands	500	0	0	0	0	0	0	**500**
Norway	633,551	0	125	1,277	5,814	0	46,410	**687,178**
United Kingdom [(1)]	354,167	0	0	379	1	231	90,737	**445,515**
Total	**990,073**	**0**	**247**	**4,444**	**5,814**	**242**	**138,246**	**1,139,068**

a. According to OSPAR Recommendation 2000/4 on a Harmonised Pre-screening Scheme for Offshore Chemicals (as amended) and the terminology used in this Recommendation.

b. The total quantities of specific components are reported in this table.

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Table 8: Discharges of radioactive substances in produced water in terabecquerel (TBq)

Year: 2017

Country	OSPAR Region	Pb-210	Ra-226	Ra-228
Denmark	II	0.00E+00	3.06E-02	1.15E-02
Ireland	III	7.94E-07	9.37E-07	1.90E-07
Germany	II	<4E-06	1.64E-04	2.40E-05
Netherlands	II	7.34E-03	9.26E-02	1.13E-01
Norway	I	2.07E-03	3.52E-02	3.89E-02
Norway	II	1.66E-02	3.54E-01	3.54E-01
UK	II	1.69E-02	3.23E-01	2.43E-01
UK [(1)]	III	4.15E-03	3.11E-03	2.53E-03
Total		**0.05**	**0.84**	**0.76**

More information on this data is available in the annual OSPAR Report on draft discharges of radionuclides from the non-nuclear sectors.

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Table 9: Country reporting on RBA assessments

Year: 2017

Installation OSPAR Inventory ID	Name or Identifier of Installation	Operator	Predominant Hydrocarbon (Gas/Cond/Oil)	Produced water assessment (Y/N)			
				Chemical Analysis	Whole Effluent Toxicity	Whole Effluent Assessment	Substance Level
DK09	DAN FC	Total E&P Denmark Limited	Oil	Y	Optional	N	Y
DK12	DAN FF	Total E&P Denmark Limited	Oil	Y	Optional	N	Y
DK15	GORM C	Total E&P Denmark Limited	Oil	Y	Optional	N	Y
DK18	GORM F	Total E&P Denmark Limited	Oil	Y	Optional	N	Y
DK19	HARALD WA	Total E&P Denmark Limited	Oil	Y	Optional	N	Y
DK24,25 or 26	SKJOLD	Total E&P Denmark Limited	Oil	Y	Optional	N	Y
DK32	TYRA EF1	Total E&P Denmark Limited	GAS	Y	Optional	N	Y
DK32	TYRA EF2	Total E&P Denmark Limited	GAS	Y	Optional	N	Y
DK33	TYRA WA-CPI	Total E&P Denmark Limited	GAS	Y	Optional	N	Y
DK33	TYRA WA-IPF	Total E&P Denmark Limited	GAS	Y	Optional	N	Y
DK39	TYRA EA	Total E&P Denmark Limited	GAS	Y	Optional	N	Y

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DK41	HALFDAN DA	Total E&P Denmark Limited	Oil	Y	Optional	N	Y
DK42	SIRI	INEOS Oil & Gas Denmark	Oil	Y	Optional	N	Y
DK47	South Arne	Hess Limited	Oil	Y	Optional	N	Y
DK52	DAN FG	Total E&P Denmark Limited	Oil	Y	Optional	N	Y
DK58	HALFDAN BD	Total E&P Denmark Limited	Oil	Y	Optional	N	Y
NL??	B13	Petrogas E&P Netherlands B.V.	Gas	N	Y[1]	N	
NL??	D18-A - V-1110	ENGIE E&P Nederland B.V.	Gas	N	Y[1]	N	
NL??	E17a-A - V-1110	ENGIE E&P Nederland B.V.	Gas	N	Y[1]	N	
NL??	E18-A	Wintershall Noordzee B.V.	Gas	N	Y[1]	N	
NL??	F3-FA	Centrica Production Nederland B.V.	Gas	N	Y[1]	N	
NL??	G14-B - V-1110	ENGIE E&P Nederland B.V.	Gas	N	Y[1]	N	
NL??	G16a-B - V-1110	ENGIE E&P Nederland B.V.	Gas	N	Y[1]	N	
NL??	K5A/B	Total E&P Nederland b.v.	Gas	N	Y[1]	N	
NL??	K5-CU	Total E&P Nederland b.v.	Gas	N	Y[1]	N	
NL??	K9ab-A - T-1308	ENGIE E&P Nederland B.V.	Gas	N	Y[1]	N	
NL??	K9ab-B	ENGIE E&P Nederland B.V.	Gas	N	Y[1]	N	
NL??	L10-A - T-1305A	ENGIE E&P Nederland B.V.	Gas	N	Y	N	
NL??	L11B	TAQA Energy B.V.	Gas	N	Y[1]	N	
NL??	L15b-A - T-4602	ENGIE E&P Nederland B.V.	Gas	N	Y[1]	N	
NL??	L5a-A - V-4602	ENGIE E&P Nederland B.V.	Gas	N	Y[1]	N	
NL??	L5a-D - V-1110	ENGIE E&P Nederland B.V.	Gas	N	Y[1]	N	
NL??	M7	Oranje-Nassau Energie BV	Gas	N	Y[1]	N	
NL011	F15A	Total E&P Nederland b.v.	Gas	N	Y[1]	N	
NL013	J6-A	Centrica Production Nederland B.V.	Gas	N	Y[1]	N	
NL020	K12-BD - T-1308	ENGIE E&P Nederland B.V.	Gas	N	Y	N	
NL031	K15-FB-1	Nederlandse Aardolie Maatschappij BV	Gas	Y	Y	N	Y
NL037	K5D	Total E&P Nederland b.v.	Gas	N	Y[1]	N	
NL038	K5P	Total E&P Nederland b.v.	Gas	N	Y	N	
NL039	K6C	Total E&P Nederland b.v.	Gas	N	Y[1]	N	

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Key substances or group of substances identifed in PW likely to pose the greatest risk to the marine environment, if	Field monitoring (Y/N)	Criteria Used to assess risk	Risk adequately controlled (Y/N)	BAT/BEP assessment undertaken (Y/N)	Chemical substitution, measure or technology implemented	Comments
PAH's, C6-C8	N	DREAM	N	N	N	Further management measures to be considered when more results available
Corrosion control, PAH's	N	DREAM	N	N	N	Further management measures to be considered when more results available
Scavenger, Corrosion control	N	DREAM	N	N	N	Further management measures to be considered when more results available
Biocides, Scavenger	N	DREAM	N	N	N	Further management measures to be considered when more results available
Corrosion control	N	DREAM	N	N	N	Further management measures to be considered when more results available
Biocides, Corrosion control	N	DREAM	N	N	N	Further management measures to be considered when more results available
Corrosion control	N	DREAM	N	N	N	Further management measures to be considered when more results available
Corrosion control	N	DREAM	N	N	N	Further management measures to be considered when more results available
Corrosion control	N	DREAM	N	N	N	Further management measures to be considered when more results available
Corrosion control	N	DREAM	N	N	N	Further management measures to be considered when more results available
Corrosion control	N	DREAM	N	N	N	Further management measures to be considered when more results available

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PAH's, C6-C8, Biocides	N	DREAM	N	N	N	Further management measures to be considered when more results available
Biocides	N	DREAM	Y	N	N	Risk adequately controlled
HS + Biocides	N	DREAM	N	N	N	Further management measures to be considered when more results available
Scavenger	N	DREAM	N	N	N	Further management measures to be considered when more results available
Scavenger, Corrosion conmtrol	N	DREAM	N	N	N	Further management measures to be considered when more results available
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
Benzene	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	
	N	PEC/PNEC at 500m	Y	not applicable	not applicable	

Part B: Cumulative Report relating to 2017 data

Table 1: Number of installations in the OSPAR maritime area

Table 1a: Number of installations in the OSPAR maritime area with discharges to the sea, or emissions to the air 2009-2017*

Country	2009	2010	2011[3]	2012	2013	2014	2015	2016	2017
Denmark [1]	20	20	18	15	14	20	20	20	21
Germany	3	2	2	2	2	2	2	2	2
Ireland	1	2	2	2	2	2	2	3	3
Netherlands	135	138	128	127	127	127	127	107	107
Norway	143	136	103	115	114	114	115	116	117
Spain	2	2	2	1	2	2	NI	NI	NI
UK [2]	439	484	487	489	496	495	500	505	477
Total[5]	**743**	**784**	**742**	**751**	**757**	**762**	**766**	**753**	**727**

[1] Part of the Danish reports contain the reports on number of installations from Faroe Islands: for 2006: 0,3 for 2010: 0,3 installation.

[2] UK revised its criteria for counting subsea installations in 2010.

[3] From 2011 drilling activity has been excluded from this total.

* These data are taken from Table 1 of Part A of the report.

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Table 1 (cont'd): Number of installations in the OSPAR maritime area in accordance with OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations

Table 1b: Total number of installations as detailed in the "Inventory of oil and gas offshore installations in the OSPAR maritime area" (1)

	2003	2005	2007	2009	2011	2013	2015	2016	2017
Total	1167	1131	1281	1340	1495	1545	1751	1741	

(1) The total number of installations includes all current and historic infrastructure in the OSPAR maritime area as defined by OSPAR decision 98/3

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Table 1c: Number of installations by type of installation in the OSPAR maritime area with discharges to the sea, or emissions to the air, 2009-2017*

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Oil Installat	158	169	160	162	162	169	170	167	168
Gas Installa	280	318	316	329	330	324	323	307	284
Subsea Inst	221	230	262	257	262	265	272	277	273
Other Insta	9	9	4	3	3	1	1	2	2
Total	**668**	**726**	**742**	**751**	**757**	**759**	**766**	**753**	**727**

Drilling[1]	74	57	2011	2012	2013	2014	2015	2016	2017
Wells[2]	-	-	380	402	416	366	381	467	490

[1] From 2011 number of wells drilled is reported rather than 'drilling years' as in previous years

[2] From 2011, the number of wells completed in that calendar year are reported.

* These data are taken from Table 1 of Part A of the report.

Table 1d: Number of installations injecting produced or displacement water, 2008-2017*

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark	6	8	8	8	8	8	8	8	8
Germany	0	0	1	0	1	1	1	1	1
Ireland	0	0	0	0	0	0	0	0	0
Netherland	5	8	7	8	6	9	9	14	14
Norway	22	22	20	22	21	21	21	24	24
Spain	0	0	0	0	0	0	NI	NI	NI
UK	26	28	28	28	26	24	22	27	27
Total	59	66	64	66	62	63	61	74	74

* These data are taken from Table 1 of Part A of the report.

Part B: Cumulative Report relating to 2017 data

Table 2: Oily aqueous discharges to the maritime area*

Table 2a: Oil discharged in produced and displacement water (in tonnes), 2009-2017

Country	2009 (IR)	2010 (IR)	2011 (IR)	2012 (IR)	2013 (IR)	2014 (IR)	2015 (IR)	2016 (IR)	2017 (IR)
	Dispersed[(2)]	Dispersed[(2)]	Dispersed[(2)]	Dispersed[(2)]	Dispersed[(2)]	Dispersed[(2)]	Dispersed[(2)]	Dispersed[(2)]	Dispersed[(2)]
Denmark	340	NA	NA	NA	NA	NA	NA	NA	NA
Germany	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ireland	0.01	0.01	0.02	0.02	0.02	0.03	NA	NA	NA
Netherlands	54	NA	NA	NA	NA	NA	NA	NA	NA
Norway	NA	NA	NA	NA	NA	NA	NA	NA	NA
Spain	NA	NA	NA	NA	NA	NA	NA	NA	NA
UK	NA	NA	NA	NA	NA	NA	NA	NA	NA
Total	**394**	**0.01**	**0.02**	**0.02**	**0.02**	**0.03**	**0.00**	**0.00**	**0.00**

Country	2009 (GC-FID)	2010 (GC-FID)	2011 (GC-FID)	2012 (GC-FID)	2013 (GC-FID)	2014 (GC-FID)	2015 (GC-FID)	2016 (GC-FID)	2017 (GC-FID)
	Dispersed	Dispersed	Dispersed	Dispersed	Dispersed	Dispersed	Dispersed	Dispersed	Dispersed
Denmark	NA	214	165	116	178	162	195	200	171
Germany	0.16	0.19	0.29	0.40	0.20	0.10	0.17	0.04	0.01
Ireland	NA	NA	NA	NA	NA	NA	0.01	0.02	0.02
Netherlands	54	83	56	75	60	37	57	62	86
Norway	1,542	1,490	1,529	1,593	1,595	1,805	1,859	1,736	1,655
Spain	NA	NA	NA	NA	NA	NA	NI	NI	NI
UK	2,900	3,008	2,493	2,267	2,176	1,997	2,412	2,017	2,139
Total	**4,496**	**4,795**	**4,244**	**4,052**	**4,009**	**4,001**	**4,523**	**4,014**	**4,051**

(1) The Netherlands have reported on IR in 2007 and on a mixture of IR and GC in 2009.
(2) The Netherlands went over to the new GC-FID on 1st July 2009.

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Dissolved from 2009

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
	Dissolved	Dissolved	BTEX	BTEX	BTEX	BTEX	BTEX	BTEX	BTEX
Denmark	195	216	165	136	89	93	145	99	276
Germany	0.395	0.672	0.78	0.8	0.6	0.6	0.3	0.5	0.0
Ireland	0.025	0.290	0.37	0.3	0.1	0.1	0.2	0.1	0.3
Netherlands	61.649	75.59	67.7	64.4	54.5	49	48	73	45.55
Norway	1,954	1,820	1,675	1,855	1,920	1,910	2,269	2,221	2,106
Spain	NA	NA	NA	NA	NA	NA	NI	NI	NI
UK[(1)]	2,619	2,115	2,477	2,178	4,010	2,432	2,508	2,140	2,656
Total	**4,830**	**4,228**	**4,386**	**4,235**	**6,074**	**4,485**	**4,971**	**4,534**	**5,084**

Please note that the Netherlands are not in favour of splitting Table 2a data from 2007 into IR and GC-FID, as they believe that insufficient evidence is presented.

[(1)] The UK data for 2013 is high due to sampling & analysis error for one installation, however it is not possible to provide corrected data.

*These data are taken from Tables 2a & 2b in Part A.

NI - No Information

NA - Not Applicable

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Table 2: Oily aqueous discharges to the maritime area *

Table 2b: Annual quantity of produced and displacement water discharged to the sea (in m^3), 2009-2017

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark	27,607,788	26,948,864	26,125,942	25,148,540	24,747,426	25,317,353	24,855,270	24,179,336	26,176,823
Germany	12,139	15,706	18,182	19,182	15,283	9,595	6,238	7,887	9,829
Ireland	1,286	1,577	1,538	1,696	1,359	1,126	827	1,070	739
Netherlands	30,373	9,646,665	8,479,610	9,490,079	4,123,842	2,710,189	2,555,797	8,998,656	6,166,636
Norway	166,337,259	162,796,616	155,576,354	162,401,528	159,533,151	174,237,224	182,012,250	168,612,674	162,917,450
Spain	0	0	0	0	0	0	NI	NI	NI
UK	196,622,027	197,379,720	174,871,616	155,833,156	149,964,142	156,734,693	165,286,189	155,463,057	143,389,382
Total	**390,610,872**	**396,789,148**	**365,073,242**	**352,894,181**	**338,385,203**	**359,010,180**	**374,716,571**	**357,262,680**	**338,660,859**

* These data are taken from table 2 of Part A of the report

Comment referencing earlier years removed

Table 2c: Total volume of produced water and displacement water discharged, and produced water injected (in m^3/year), 2009-20

	2009	2010	2011	2012	2013	2014	2015	2016	2017
PW*	365,677,026	361,133,229	335,320,487	318,496,588	304,073,595	323,650,889	339,234,298	322,236,467	307,723,365
DPW**	35,989,804	35,655,541	29,752,755	34,397,593	34,311,608	35,359,291	35,482,273	35,026,213	30,938,354
IPW***	88,027,421	86,744,890	91,006,849	98,399,905	91,227,430	90,182,176	103,401,193	110,720,198	113,838,307
Total	**489,694,251**	**483,533,660**	**456,080,091**	**451,294,086**	**429,612,633**	**449,192,356**	**478,117,764**	**467,982,878**	**452,500,026**

* Produced water as mentioned in Table 2a in Part A

** Displacement water as mentioned in Table 2b in Part A

*** Injected produced and displacement water as mentioned in Table 2a & Table 2b in Part A

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Table 3: Installations which do not meet OSPAR performance standard for dispersed oil in aqueous discharges[a*]

Table 3a[a]: Number of installations with discharges exceeding the 30 mg oil/l performance standard, valid from 2009 onwards, and quantity discharged by these installations (in tonnes)

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total number of installations with	743	811	742	752	756	759	766	753	727
Number of installations exceeding 30 mg/l	31	20	20	17	19	16	19	17	19
Quantity of dispersed oil discharged	340	276	101	206	244	94	112	109	126

"Dispersed oil", or aliphatics, as measured according to the PARCOM Procedure described in the "Methods of sampling and analysis for implementing the provisional target
a. Data in Table 3a refers to dispersed oil only.

The figures for Contracting Parties' total amount of oil discharged have been rounded up. The overall total value is the exact figure and may differ slightly from the sum of t
* These data are taken from table 3 of Part A of the report.

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Table 3: Installations which do not meet OSPAR performance standard for dispersed oil in aqueous discharges*

Table 3b: Number of installations with discharges exceeding the 30 mg oil/l performance standard, valid from 2009 onwards and quantity of oil discharged by these installations (in tonnes), in excess of the 30 mg/l performance standard

Country	2009		2010		2011		2012		2013	
	Number of installations	Amount discharged	Number of installations	Amount discharged	Number of installations	Amount discharged	Number of installations	Amount discharged	Number of installations	Amount discharged
Denmark	2	7	1	1	0	0	1	0.3	0	0
Germany	0	0	0	0	0	0	0	0.0	0	0
Ireland	0	0	0	0	0	0	0	0.0	0	0
Netherlands	7	4	0	0	3	0.1	1	0.0	2	0.3
Norway	0	0	3	1.6	4	1.1	4	3.0	3	3.3
Spain	0	0	0	0	0	0	0	0.0	0	0.0
UK	22	99.4	16	130.4	13	33.9	11	44.1	14	77.3
Total	**31**	**110**	**20**	**133**	**20**	**35**	**17**	**47**	**19**	**81**

* These data are taken from table 3 of Part A of the report.

Country	2014		2015		2016		2017	
	Number of installations	Amount discharged	Number of installations	Amount discharged	Number of installations	Amount discharged	Number of installations	Amount discharged
Denmark	1	0.006	2	0.3	0	0	0	0
Germany	0	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	0	0	0
Netherlands	0	0	2	0.014	1	0.03	0	0.00
Norway	4	10.5	4	3.1	5	15.7	6	3.6
Spain	0	0	NI	NI	NI	NI	NI	NI
UK	11	14.5	11	15.2	11	5.7	13	13.8
Total	**16**	**25**	**19**	**19**	**17**	**21**	**19**	**17**

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Table 4: Use and discharges of organic-phase drilling fluids (OPF) and cuttings

Table 4a: Quantities of oil and other organic-phase fluids discharged via cuttings (in tonnes), 2009-2017*

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
	Total OPF[1]	Total OPF[1]	Total OPF[1]	Total OPF[1]	Total OPF[1]	Total OPF[1]	Total OPF[1]	Total OPF[1]	Total OPF[2]
Denmark	0	0	0	0	0	0	0	0	0
Germany	0	0	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0	0	0
Norway	0	0	0	0	0	0	9	0	0
Spain	0	0	0	0	0	0	NI	NI	NI
UK	0.3	1	4	5	3	2	14	23	15
Total	0.3	1	4	5	3	2	23	23	15

[1] Total OPF is the sum of OBF and non-OBF OPF. No oil-based mud contaminated cuttings have been discharged since 1996 except in accordance with OSPA

* These data are taken from tables 4a & 4b of Part A of the report.

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Table 4b: Number of wells drilled with OBF & OPF, with discharge of contaminated cuttings to the maritime area, 2009-20

Wells for which all cuttings are re-injected or brought to shore are not taken into account in this table.

	2009		2010		2011		2012		2013	
Country	OBF	non-OBF OPF	OBF	non-OBF OPF	OBF	non-OBF OPF	OBF	Other OPF	OBF	Other OPF
Denmark	0	0	0	0	0	0	0	0	0	0
Germany	0	0	0	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0	0	0	0
Norway	0	0	0	0	0	0	0	0	0	0
Spain	0	0	0	0	0	0	0	0	0	0
United Kingdom	1	0	11	0	11	0	8	0	9	0
Total	**1**	**0**	**11**	**0**	**11**	**0**	**8**	**0**	**8**	**0**

	2014		2015		2016		2017	
Country	OBF	Other OPF	OBF	Other OPF	OBF	Other OPF	OBF	Other OPF
Denmark	1	0	0	0	0	0	0	0
Germany	0	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0	0
Norway	0	0	4	0	0	0	0	0
Spain	0	0	NI	NI	NI	NI	NI	NI
United Kingdom	9	0	16	0	17	0	13	0
Total	**10**	**0**	**20**	**0**	**17**	**0**	**13**	**0**

* The data in tables 4b are taken from table 4a of Part A.

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Table 5: Spillage of oil and chemicals *

Table 5a: Number of oil spills, 2009-2017 - Spills less than 1 tonne (≤ 1 T) and spills above 1 tonne (> 1 T) [a]

Country	2009		2010		2011		2012		2013	
	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T
Denmark [(1)]	23	2	21	0	30	0	42	0	47	1
Germany	0	0	0	0	0	0	0	0	0	0
Ireland	0	0	1	0	1	0	4	0	1	0
Netherlands[(2)]	14	1	34	0	13	1	12	0	10	0
Norway[(3)]	142	4	133	7	129	1	118	4	112	5
Spain	0	0	0	0	0	0	0	0	0	0
United Kingdom[(4)]	291	8	265	6	270	10	239	8	299	9
Total	**470**	**15**	**454**	**13**	**443**	**12**	**415**	**12**	**469**	**15**

Country	2014		2015		2016		2017	
	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T
Denmark [(1)]	74	3	54	0	43	0	35	1
Germany	0	0	0	0	0	0	0	0
Ireland	0	0	0	0	3	0	1	0
Netherlands[(2)]	17	0	13	0	22	0	9	0
Norway[(3)]	60	8	41	6	36	3	44	3
Spain	0	0	NI	NI	NI	NI	NI	NI
United Kingdom[(4)]	404	6	350	8	348	5	296	13
Total	**555**	**17**	**458**	**14**	**452**	**8**	**385**	**17**

[(1)] Part of the Danish reports contain the reports on number of oil spills from Faroe Islands: for 2012, 1 spill.

[(2)]Netherlands - oil spills include spills of OBF

[(3)] Norway - Reports m^3 rather than tonnes

[(4)]UK - UK quantity data now includes one incident from 2011 and two incidents in 2012 which had previously been under investigation

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* These data are taken from Table 5 in Part A

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Table 5: Spillage of oil and chemicals *

Table 5b: Total quantity of oil spilled, in tonnes, 2009-2017

Country	2009		2010		2011		2012		2013	
	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T
Denmark	2	4	2	0	1	0	2	0	0	3
Germany	0	0	0	0	0	0	0	0	0	0
Ireland	0	0	0.001	0	0.01	0	0.8	0	0.001	0
Netherlands[(1)]	0.6	22	0.1	0	0.1	1	0.4	0	0.7	0
Norway[(2)]	8	88	6	105	8.7	10	7.0	9	6.2	34
Spain	0	0	0	0	0	0	0	0	0	0
United Kingdom	15.0	39	9.8	14	12.8	249	11.4	510	17.3	111
Total	**26**	**154**	**18**	**119**	**23**	**260**	**22**	**519**	**24**	**148**

Country	2014		2015		2016		2017	
	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T
Denmark	2	43	1.9	0	1	0	1.09	2
Germany	0	0	0	0	0	0	0	0
Ireland	0	0	0	0	0.001	0	0.002	0
Netherlands[(1)]	0.3	0	0.8	0	0.8	0	0.004	0
Norway[(2)]	9.4	134	6.0	34	2.0	15	5.1	7
Spain	0	0	NI	NI	NI	NI	NI	NI
United Kingdom [(3)]	22.5	19	14.1	25	11.6	14	11.9	41
Total	**34**	**196**	**23**	**59**	**15**	**29**	**18**	**50**

[(1)]Netherlands - oil spills include spills of OBF

[(2)] Norway - Reports m^3 rather than tonnes.

[(3)] UK - UK quantity data now includes two incidents from 2011 (Gannet 218,19T & Banff 1,57T) and two incidents from 2012 (Elgin 405,3T & Osprey 15,1T) which had previously been under investigation, as well as updated data for 2013.

* These data are taken from table 5a of Part A of the report.

Part B: Cumulative Report relating to 2017 data

Table 5: Spillage of oil and chemicals *

Table 5c: Number of chemical spills, 2013-2017 - Spills less than 1 tonne (≤ 1 T) and spills above 1 tonne (> 1 T) [a]

Country	2013		2014		2015		2016		2017	
	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T
Denmark [(1)]	36	4	28	2	38	1	35	2	25	2
Germany	0	0	0	0	0	0	0	0	0	0
Ireland	2	1	0	0	0	0	0	0	0	2
Netherlands	6	1	16	3	5	2	8	4	4	0
Norway[(2)]	126	31	203	19	130	43	138	25	111	29
Spain	0	0	0	0	NI	NI	NI	NI	NI	NI
United Kingdom[(3)]	169	48	182	35	177	25	206	40	185	29
Total	**339**	**85**	**429**	**59**	**350**	**71**	**387**	**71**	**325**	**62**

a. Chemical spills include all drilling fluids for all CPs except for the Netherlands where the oil in OBF is reported as an oil spill.

[(1)] Part of the Danish reports contain the reports on number of oil spills from Faroe Islands: for 2012, 1 spill.

[(2)] Norway - Reports m^3 rather than tonnes.

[(3)] UK - UK data now includes data from two incidents in 2012 and one incident in 2014 which had previously been under investigation.

* These data are taken from table 5a of Part A of the report.

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Table 5: Spillage of oil and chemicals *

Table 5d: Total quantity of chemical spills, in tonnes, 2013-2017

Country	2013		2014		2015		2016		2017	
	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T	≤ 1 T	> 1 T
Denmark	2	26	2	9	1.33	116	1.1	42.2	1.1	2.6
Germany	0	0	0	0	0	0	0	0	0	0
Ireland	0.1	5.1	0	0	0	0	0	0	0	11.41
Netherlands	13.3	7.7	0.2	3.9	0.7	5.6	1.5	57.4	0.8	0.0
Norway[(1)]	18.4	1,267	22.0	736	16.0	1,563	19.0	313	16.0	899
Spain	0	0	0	0	NI	NI	NI	NI	NI	NI
United Kingdom[(2)]	29.4	493	41.3	285	25.1	425	65.1	510	25.9	497
Total	**63**	**1799**	**66**	**1,034**	**43**	**2109**	**87**	**923**	**44**	**1409**

a. Chemical spills include all drilling fluids for all CPs except for the Netherlands where the oil in OBF is reported as an oil spill.

[(1)] Norway - Reports m^3 rather than tonnes.

[(2)] UK - UK data now includes one incident in 2013 and 2014 which had previously been under investigation. One incident in 2014 is still under investigation and is excluded.

* These data are taken from table 5a of Part A of the report.

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Table 5e: Total of dispersed oil discharged and oil spilled to the sea, in tonnes

Year: 2009-2017

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark	346	216	166	118	181	207	196	201	174
Germany	0.2	0.2	0.3	0.4	0.2	0.10	0.2	0.04	0.01
Ireland	0.01	0.03	0.03	0.80	0.00	0.03	0.01	0.02	0.02
Netherlands[(1)]	131	83	57	76	61	38	57	62	86
Norway[(2)]	1,639	1,601	1,548	1,609	1,635	1948	1899	1753	1667
Spain	0	0	0	0	0	0	NI	NI	NI
United Kingdom	2,954	3,031	2,991	2,789	2,304	2038	2451	2042	2192
Total	**5,070**	**4,931**	**4,763**	**4,593**	**4,180**	**4,231**	**4,604**	**4,058**	**4,119**

[(1)]Netherlands - oil spills include spills of OBF

[(2)] Norway - Data for spills are supplied in m^3.

These data are taken from Table 2a Part A, Table 2b Part A and Table 5a of Part A.

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Table 6: Emissions to air, 2009-2017*

CO_2 (in million of tonnes)

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark[(1)]	2.20	1.94	1.76	1.84	1.78	1.77	1.80	1.77	1.63
Germany	0.04	0.05	0.05	0.05	0.05	0.04	0.03	0.03	0.04
Ireland	0.04	0.05	0.05	0.05	0.06	0.04	0.03	0.03	0.04
Netherlands	1.49	1.39	1.54	1.96	2.43	2.27	1.93	1.40	1.35
Norway	12.44	12.00	12.28	12.44	11.57	12.06	13.85	13.34	13.19
Spain	0.00	2.00	0.001	0.001	0.001	0.001	NI	NI	NI
United Kingdom	15.44	15.00	14.02	13.08	13.17	12.59	13.77	13.40	14.14
Total	**32**	**32**	**30**	**29**	**29**	**29**	**31**	**30**	**30**

NO_x (in thousand of tonnes)

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark[(1)]	8.10	7.00	6.32	7.22	7.28	7.81	7.64	8.71	6.44
Germany	0.05	0.05	0.04	0.08	0.05	0.04	0.06	0.07	0.09
Ireland	0.12	0.21	0.16	0.18	0.58	0.14	0.08	0.10	0.29
Netherlands	4.17	3.70	5.27	4.97	5.22	4.17	3.95	3.75	3.39
Norway	50.00	50.00	51.49	50.44	50.45	51.78	46.76	44.71	42.90
Spain	0.01	0.00	0.01	0.01	0.01	0.01	NI	NI	NI
United Kingdom	49.50	53.00	47.49	47.01	46.40	46.07	52.81	51.86	56.52
Total	**112**	**114**	**111**	**110**	**110**	**110**	**111**	**109**	**110**

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nmVOCs (in thousands of tonnes)

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark[(1)]	2.00	2.61	1.22	1.89	1.77	2.17	2.25	2.43	1.62
Germany	0.12	0.12	0.30	0.39	0.14	0.15	0.06	0.08	0.14
Ireland	0.001	0.05	0.003	0.00	0.02	0.003	0.001	0.002	0.01
Netherlands	5.00	4.16	4.12	3.23	5.14	3.67	3.02	3.45	3.03
Norway[(2)]	45.61	37.00	30.58	33.02	32.76	48.18	47.34	42.50	35.25
Spain	0.00	0.00	0.01	N/D	0.01	0.01	NI	NI	NI
United Kingdom	41.30	33.30	35.43	37.96	38.08	38.10	37.31	32.12	38.29
Total	**94**	**77**	**72**	**76**	**78**	**92**	**90**	**81**	**78**

* These data are taken from table 6 of Part A of the report.

(1) Part of the Danish reports contains the reports on the emissions to air from Faroe Islands:
18 tonnes of nmVOC; For 2008: 10 000 tonnes of CO_2, 10 tonnes of NOx, 0,2 tonne of nmVOC; For 2010: 16 000 tonnes of CO_2, 14 tonnes of NOx, 0,3 tonne of nmVOC. For 2012, 15 000 tonnes of CO_2, 0,5 tonne of No_x, 0,002 tonne of nmVOC. For 2014: 6000 tonnes of CO_2, 130 tonnes of NO_x,

(2) Norway: The Norwegian emissions of CH_4 which were reported for 2009 and 2010 and were incorrect.
Therefore the figures presented here do not agree with the reports from these two years.

Part B: Cumulative Report relating to 2017 data

Table 6: Emissions to air, 2009-2017* (cont'd)

CH_4 (in thousand of tonnes)

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark	3.00	4.96	3.19	4.11	4.01	3.72	3.85	3.86	3.41
Germany	3.13	1.34	0.55	0.72	0.24	0.29	0.12	0.15	0.36
Ireland	0.45	0.37	0.40	0.37	0.36	0.36	0.34	0.34	0.38
Netherlands	14.48	13.04	12.41	9.67	14.33	12.74	7.88	9.56	8.56
Norway[(1)]	29.63	28.04	28.58	25.66	23.47	28.25	29.05	19.47	16.29
Spain	0.00	0.00	0.11	0.14	0.12	0.12	NI	NI	NI
United Kingdom	45.30	47.90	44.86	44.12	45.69	43.08	41.70	42.15	43.29
Total	**96**	**96**	**90**	**85**	**88**	**89**	**83**	**76**	**72**

SO_2 (in tonnes)

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark	100	112.0	86.0	92.0	116	145	99	160	80
Germany	0.20	0.0	0.0	4.0	0.5	0.3	0.8	1.0	1.4
Ireland	1.77	6.0	6.9	1.4	29	2.6	0.9	1.5	14.6
Netherlands	103	112	133	253	350	290	263	42	59
Norway	500	600	899	822	914	862	736	584	516
Spain	0.0	0.0	N/D	N/D	N/D	N/D	NI	NI	NI
United Kingdom	2,170	2,600	1,923	2,561	2,208	2,241	2,864	2,506	3,100
Total	**2,875**	**3,430**	**3,048**	**3,733**	**3,617**	**3,540**	**3,964**	**3,295**	**3,771**

[(1)] The Norwegian emissions of CH4 which were reported for 2009 and 2010 were incorrect. Therefore the figures present the reports from these two years.

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Table 7: The use and discharge of offshore chemicals

Year: 2009-2017

Table 7a: Quantity of offshore chemicals on the PLONOR* List used and discharged in kg/year

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark [1]	45,732,541	32,364,501	31,661,190	34,759,511	26,031,851	32,965,260	31,824,783	47,972,604	23,698,150
Germany	2,425	1,565,002	478	252,562	1,387	1,522,980	6,795	13,666	13,666
Ireland	1,020,082	1,904,711	836,841	936,836	2,783,230	878,846	540,229	62,995	1,784,962
Netherlands	29,127,105	41,713,369	36,110,148	46,550,994	34,616,138	42,614,129	49,608,209	17,848,041	13,436,194
Norway	289,681,616	286,277,021	273,273,649	282,848,186	346,516,261	322,304,630	311,861,617	283,520,496	238,399,889
Spain	0	0	0	0	0	0	NI	NI	NI
United Kingdom	255,518,585	188,510,604	155,542,997	189,057,474	207,602,076	185,467,972	211,799,667	150,546,941	165,314,789
Total	**621,082,354**	**552,335,208**	**497,425,302**	**554,405,563**	**617,550,942**	**585,753,816**	**605,641,300**	**499,964,744**	**442,647,650**

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark [2]	24,603,595	11,838,770	13,966,161	12,334,663	7,978,977	8,694,006	8,806,814	12,160,682	10,118,377
Germany	2,220	1,059,928	478	6,573	1,275	130,691	6,116	12,299	12,299
Ireland	125,905	754,568	423,274	604,132	1,040,237	673,680	376,623	13,839	637,645
Netherlands	8,989,344	17,462,642	12,281,563	17,441,780	16,144,242	18,269,435	16,128,611	8,313,274	7,553,982
Norway	111,268,937	111,268,937	99,503,072	104,495,858	114,256,578	107,667,490	94,071,979	89,022,868	79,853,130
Spain	0	0	0	0	0	0	NI	NI	NI
United Kingdom	113,184,172	69,422,728	52,216,290	56,070,241	70,139,373	58,222,340	52,492,691	47,614,750	49,308,449
Total	**258,174,174**	**211,807,573**	**178,390,838**	**190,953,247**	**209,560,682**	**193,657,642**	**171,882,834**	**157,137,712**	**147,483,883**

* Substance on OSPAR List of Substances Used and Discharged Offshore which are Considered to Pose Little or no Risk to the Environment (PLONOR).
(Agreement Number: 2004-10, udpate 2008).

[1] Part of the Danish report contains the report on the use of offshore chemicals from Faroe Islands: For 2008: 2 202 480 kg; For 2010: 1 145 498 kg.
For 2012: 3007 003 kg; For 2014: 977583 kg.

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(2) Part of the Danish reports contains the reports on the discharge of offshore chemicals from Faroe Islands: For 2008: 1 670 557 kg; For 2010: 1 057 980 kg. For 2012: 1 103 867 kg; For 2014: 654086 kg.

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Table 7: The use and discharge of offshore chemicals

Year: 2009-2017

Table 7b: Quantity of inorganic substances with LC50 or EC50 > 1 mg/l used and discharged in kg/year

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark [1]	11,660,616	3,992,862	2,207,877	1,663,514	1,386,349	2,367,795	816,411	2,105,204	374,282
Germany	0	33,406	0	77	0	450	0	0	0
Ireland	138	3,944	0	0	53,685	0	300	0	3,588
Netherlands	817,256	277,442	784,501	459,251	309,021	950,654	1,009,744	147,130	259,501
Norway [3]	0	0	0	0	0	0	0	0	0
Spain	0	0	0	0	0	0	NI	NI	NI
United Kingdom [4]	1,657,961	2,478,527	1,181,268	2,313,743	3,146,799	2,116,846	2,494,697	1,342,891	2,179,745
Total	**14,135,971**	**6,786,181**	**4,173,646**	**4,436,585**	**4,895,854**	**5,435,745**	**4,321,152**	**3,595,224**	**2,817,115**

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark [2]	431,845	304,808	146,321	123,525	142,595	522,361	233,232	223,153	112,930
Germany	0	2,408	0	53	0	0	0	0	0
Ireland	110	2,207	0	0	4,697	0	290	0	313
Netherlands	105,070	112,448	41,875	79,976	50,794	81,835	119,708	62,314	45,176
Norway [3]	0	0	0	0	0	0	0	0	0
Spain	0	0	0	0	0	0	NI	NI	NI
United Kingdom [4]	594,504	676,648	439,121	384,226	858,274	463,057	475,932	365,463	543,690
Total	**1,131,529**	**1,098,519**	**627,317**	**587,780**	**1,056,360**	**1,067,253**	**829,162**	**650,930**	**702,108**

[1] Part of the Danish reports contains the report on the use of offshore chemicals from Faroe Islands: For 2008: 178 401 kg; For 2014: 183 977 kg.

[2] Part of the Danish reports contains the reports on the discharge of offshore chemicals from Faroe Islands: For 2008: 168 270 kg; For 2014: 167 804 kg.

[3] Norway - "Inorganic, LC50 or EC50 >1 mg/l" is included in "Ranking".

Part B: Cumulative Report relating to 2017 data

Table 7: The use and discharge of offshore chemicals

Year: 2009-2017

Table 7c: Quantity of ranking substances used and discharged in kg/year*

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark[1]	15,781,594	13,053,202	13,372,128	19,414,662	12,578,135	15,602,959	14,630,468	18,138,083	12,258,371
Germany	2,993	2,318	1,527	3,690	4,471	60,926	1,808	1,177	1,177
Ireland	358,021	572,265	12,992	88,555	1,509	20,915	23,213	21	934,791
Netherlands	6,388,029	9,901,488	11,563,870	12,289,133	8,731,380	12,819,428	17,814,944	4,422,648	2,808,238
Norway [3]	92,409,851	103,061,375	80,140,772	82,880,656	101,039,980	95,147,120	104,211,550	111,064,657	99,720,887
Spain	0	0	0	0	0	0			
United Kingdom	75,977,678	70,401,312	63,098,455	69,690,462	79,106,416	78,631,851	84,134,667	62,469,981	72,200,124
Total	**190,918,166**	**196,991,960**	**168,189,744**	**184,367,158**	**201,461,891**	**202,283,199**	**220,816,650**	**196,096,567**	**187,923,587**

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark[2]	4,980,606	1,503,163	4,500,000	4,751,780	5,148,251	4,786,125	4,556,915	4,664,838	5,605,816
Germany	0	0	24	349	12	1,174	71	339	339
Ireland	1,827	8,752	8,534	24,555	1,509	15,577	20,987	22	19,965
Netherlands	584,237	694,870	819,255	955,649	595,553	578,461	460,649	272,207	316,096
Norway[3]	14,700,303	11,727,338	12,304,885	13,532,911	14,022,764	14,551,415	14,417,695	14,231,540	14,719,655
Spain	0	0	0	0	0	0			
United Kingdom	12,074,628	11,446,089	10,005,461	10,609,116	10,341,731	10,074,380	11,571,081	10,033,343	11,375,557
Total	**32,341,601**	**25,380,212**	**27,638,159**	**29,874,360**	**30,109,820**	**30,007,132**	**31,027,398**	**29,202,289**	**32,037,428**

*Includes substances ranked according to OSPAR Recommendation 2000/4 and which do not fulfill the criteria of tables 7 a, b, d, e, f, g

[1] Part of the Danish report contains the report on the use of offshore chemicals from Faroe Islands: For 2008: 120 906 kg; For 2010: 265 277 kg. For 2012: 486 757 kg; For 201

[2] Part of the Danish reports contains the reports on the discharge of offshore chemicals from Faroe Islands: For 2008: 54 581 kg; For 2010: 113 804 kg. For 2012: 55 910 kg; Fo

[3] For Norway these figures include inorganic chemicals having a LC50 or a EC50 > 1mg/l.

Part B: Cumulative Report relating to 2017 data

Table 7: The use and discharge of offshore chemicals

Year: 2009-2017

Table 7d: Quantity of chemicals on the List of Chemicals for Priority Action (LCPA), used and discharged in kg/year*

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark [1]	0	0	0	0	0	0	22	0	0
Germany	0	1,273	0	0	0	0	0	0	0
Ireland	0	0	0	0	2	0	0	0	0
Netherlands	0	0	0	0	0	0	0	0	0
Norway	20	6	0	3	6	0	0	0	0
Spain	0	0	0	0	0	0	NI	NI	NI
United Kingdom	1,267	974	783	440	496	108	88	223	247
Total	**1,287**	**2,253**	**783**	**443**	**504**	**108**	**110**	**223**	**247**

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark [2]	0	0	0	0	0	0	0	0	0
Germany	0	0	0	0	0	0	0	0	0
Ireland	0	0	0	0	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0	0	0
Norway	58	0	0	3	6	0	0	0	0
Spain	0	0	0	0	0	0	NI	NI	NI
United Kingdom	89	21	9	0	0	0	0	3	0
Total	**147**	**21**	**9**	**3**	**6**	**0**	**0**	**3**	**0**

* Substance listed in the OSPAR List of Chemicals for Priority Action (LCPA) (including its updates). (Reference number: 2004-12).

[1] Part of the Danish report contains the report on the use of offshore chemicals from Faroe Islands: For 2008: 10 kg.

[2] Part of the Danish reports contains the reports on the discharge of offshore chemicals from Faroe Islands: For 2008: 1 kg.

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Part B: Cumulative Report relating to 2017 data

Table 7: The use and discharge of offshore chemicals

Year: 2009-2017

Table 7e: Quantity of inorganic substances with LC50 or EC50 < 1 mg/l, used and discharged in kg/year

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark [1, 3]	8,550	0	0	0	0	0	9	29,425	49,104
Germany	0	0	0	0	0	0	0	0	0
Ireland	0	0	0	8	400	0	0	0	0
Netherlands	0	0	0	0	0	0	0	0	0
Norway [3]	53	0	0	30	92	120	49,672	134,810	102,232
Spain	0	0	0	0	0	0	NI	NI	NI
United Kingdom	856	1,155	365	1,848	253	546	294	291	298
Total	**9,459**	**1,155**	**365**	**1,886**	**746**	**666**	**49,976**	**164,526**	**151,634**

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark [2, 3]	0	0	0	0	0	0	0	18,247	30,306
Germany	0	0	0	0	0	0	0	0	0
Ireland	0	0	0	1	0	0	0	0	0
Netherlands	0	0	0	0	0	0	0	0	0
Norway [3]	0	0	0	21	0	30	43,684	74,639	62,551
Spain	0	0	0	0	0	0	NI	NI	NI
United Kingdom	0	137	345	1,643	90	79	179	120	20
Total	**0**	**137**	**345**	**1,665**	**90**	**109**	**43,863**	**93,006**	**92,876**

(1) Part of the Danish report contains the report on the use of offshore chemicals from Faroe Islands: For 2008: 2 kg.

(2) Part of the Danish reports contains the reports on the discharge of offshore chemicals from Faroe Islands: For 2008: 2 kg.

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Table 7: The use and discharge of offshore chemicals

Year: 2009-2017

Table 7f: Quantity of substances where the biodegradation is less than 20% during 28 days, used and discharged in kg/year

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark[1]	515,528	538,181	178,803	351,620	110,595	168,585	176,849	226,188	600
Germany	5,906	6,932	0	0	0	19,570	0	0	0
Ireland	3,498	22,790	0	300	2,275	6	375	0	4,346
Netherlands	162,510	244,482	349,002	231,545	150,205	203,370	464,791	155,040	59,975
Norway	2,144,671	2,386,670	1,493,063	1,287,072	1,636,733	1,820,950	2,330,299	2,397,250	2,324,256
Spain	0	0	0	0	0	0	NI	NI	NI
United Kingdom	2,581,413	1,924,708	2,881,197	1,784,069	2,042,658	1,644,336	3,504,469	1,170,337	1,417,466
Total	**5,413,526**	**5,123,763**	**4,902,065**	**3,654,606**	**3,942,466**	**3,856,817**	**6,476,783**	**3,948,815**	**3,806,644**

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark[2]	1,061	7,852	4,244	357	42	360	0	460	114
Germany	37	750	0	0	0	1,898	0	0	0
Ireland	0	64	0	100	11	6	375	0	0
Netherlands	19,730	19,179	4,542	3,627	913	1,094	1,235	261	654
Norway	16,318	14,455	6,403	3,600	2,957	5,220	14,083	20,316	21,425
Spain	0	0	0	0	0	0	NI	NI	NI
United Kingdom	608,549	404,545	375,566	305,385	576,846	345,846	294,371	472,358	508,941
Total	**645,695**	**446,845**	**390,754**	**313,068**	**580,769**	**354,424**	**310,065**	**493,395**	**531,133**

[1] Part of the Danish report contains the report on the use of offshore chemicals from Faroe Islands: For 2008: 2000 kg; For 2010: 11 596 kg. For 2012: 17 881 kg.

[2] Part of the Danish reports contains the reports on the discharge of offshore chemicals from Faroe Islands: For 2008: 1950 kg; For 2010: 1 207 kg. For 2012: 0 kg.

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Part B: Cumulative Report relating to 2017 data

Table 7: The use and discharge of offshore chemicals

Year: 2009-2017

Table 7g: Quantity of substances which meet two of three PBT-criteria* used and discharged in kg/year

Country	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark[(1)]	241,892	281,108	293,815	172,230	42,840	29,135	21,028	84,478	4,836
Germany	0	0	6,355	5,582	0	24,437	863	510	0
Ireland	1,271	3,340	3,317	3,400	815,176	107	0	18	0
Netherlands	979,280	770,136	1,566,448	452,277	531,900	116,197	114,339	52,088	35,127
Norway	1,061,115	506,942	348,519	1,506,167	1,326,315	1,351,210	1,410,717	1,040,438	719,249
Spain	0	0	0	0	0	0	NI	NI	NI
United Kingdom	3,142,275	2,862,101	2,685,217	2,370,810	2,826,647	2,204,106	2,064,376	1,481,436	1,576,541
Total	**5,425,833**	**4,413,085**	**4,903,671**	**4,510,466**	**5,542,878**	**3,725,192**	**3,611,322**	**2,658,968**	**2,335,753**

Country	2009	2010	2011	2012	2013	2014	2015	2016	2016
Denmark[(2)]	7,300	21,960	5,651	6,960	6,070	7,440	7,390	6,517	3,544
Germany	0	0	0	0	0	0	0	0	0
Ireland	391	0	2,917	730	2,945	34	0	0	0.01
Netherlands	37,089	57,636	13,976	22,960	23,195	16,642	6,656	5,826	2,746
Norway	5,152	1,584	1,710	5,018	3,399	9,040	15,868	11,087	16,042
Spain	0	0	0	0	0	0	NI	NI	NI
United Kingdom	1,046,561	930,855	738,516	648,520	896,187	646,476	818,122	819,485	693,579
Total	**1,096,493**	**1,005,095**	**762,769**	**684,188**	**931,796**	**679,632**	**848,035**	**842,914**	**715,911**

Grand total SUB Chemicals Discharged	**1,742,188**	**1,452,077**	**1,153,868**	**998,921**	**1,512,655**	**1,034,165**	**1,201,963**	**1,429,316**	**1,339,921**

Part B: Cumulative Report relating to 2017 data

* The criteria are as follows:
  i. (biodegradation in 28 days less than 70% (OECD 301A, 301E) or less than 60% (OECD 301B, 301C, 301F, 306);
  ii. bioaccumulation log Pow > 3 or BCF > 100 and considering molecular weight;
  iii. toxicity LC50 < 10mg/l or EC50 < 10mg/l.

(1) Part of the Danish report contains the report on the use of offshore chemicals from Faroe Islands: For 2010: 15 400 kg.

(2) Part of the Danish reports contains the reports on the discharge of offshore chemicals from Faroe Islands: For 2010: 14 717 kg.

Part B: Cumulative Report relating to 2017 data

Table 7h: Quantity of chemicals spilled[a] in kg per year, 2009 - 2017

Prescreening category	2009	2010	2011	2012	2013	2014	2015	2016
PLONOR	7,251,474	1,001,352	621,219	1,351,550	1,201,755	705,579	844,650	623,859
List of Chemicals for Priority Action	1,600	0	0	0	0	0	8	0
Inorganic LC_{50} or EC_{50} < 1 mg/l	0	863	0	72	0	360	0	186
Biodegradation < 20%	353,271	2,123	1,590	16,785	9,027	3,361	9,913	12,790
Substance meets two of three criteria	244	31,129	1,251	17,223	3,016	3,573	5,913	1,844
Inorganic, LC_{50} or EC_{50} > 1 mg/l	3,217	108	328	1,014	472	171	242	1,960
Ranking	6,330,759	250,475	133,103	1,270,125	1,180,123	220,305	363,842	165,736
Total	**13,940,565**	**1,286,050**	**757,491**	**2,656,769**	**2,394,393**	**933,349**	**1,224,568**	**806,375**

a. All chemical spilled, including those related to accidental spillage of drilling fluids.

(1) UK has included 67kg of substances in 'Inorganic, LC50 or EC50 >1mg/l' that were on The Candidate List of Substances of Very High Concern for Authorisation to REACH (I

Calculate the amount of substances on the basis of §1.6 of Appendix 1 of OSPAR Recommendation 2000/5 on a Harmonised Offshore Chemical Notification Format (HOCNF), including its updates.

Important! To avoid double reporting, the first appropriate category for the substance shall be chosen. This means that the PLONOR substances are chosen first, and the ra

Part B: Cumulative Report relating to 2017 data

2017 [1]
990,073
0
247
4,444
5,814
242
138,246
1,139,067

EC1907/2006) c

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Part B: Cumulative Report relating to 2017 data

Table 8: Discharges of radioactive substances in produced water in terabecquerel (TBq), 2009-2

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total alpha	7.4	7.6	7.6	8	6.5	6.1	6.7	7.1	7.2
Total beta	5.02	4.94	5.03	5.2	4.34	4.1	4.4	4.7	4.8

The calculations for alpha and beta are estimates of activities discharged, rather than a measured value.
More information on this data is available in the OSPAR Report on discharges of radionuclides from the non-nuclear sectors.

Part B: Cumulative Report relating to 2017 data

Table 9: Total production in oil equivalents, (toeq)

Year: 2009-2017

	2009	2010	2011	2012	2013	2014	2015	2016	2017
Denmark	21,136,996	19,428,193	17,757,812	16,290,666	13,674,575	13,035,469	12,662,022	11,769,054	11,639,294
Germany	1,323,703	1,142,193	1,245,520	1,129,230	1,158,020	1,099,947	1,043,589	1,038,094	1,040,213
Ireland	392,584	408,678	361,130	367,540	336,618	332,647	288,212	2,210,232	2,517,825
Netherlands	17,931,997	16,562,387	17,160,297	17,147,270	18,176,106	14,725,986	13,415,377	13,392,326	9,161,000
Norway	246,686,000	213,000,000	170,723,267	170,552,545	161,574,251	161,363,160	178,379,964	184,471,764	190,916,970
Spain	0	41,176	39,044	58,115	40,269	16,337	NI	NI	NI
United Kingdom	121,700,000	125,612,217	99,391,433	86,480,357	78,304,262	78,229,908	80,859,966	102,538,306	82,375,071
Total	**409,171,280**	**376,194,844**	**306,678,503**	**292,025,723**	**273,264,101**	**268,803,454**	**286,649,130**	**315,419,776**	**297,650,373**

Part B: Cumulative Report relating to 2017 data

Table 10: Installations included in the Risk Based Approach

Year: 2015-2017

Country	No. of Installations included within RBA process	No. of Installations Assessed to date	Assessment method [a]	No. of Installations where risk is adequately controlled [b]	No of Installations still awaiting outcome of assessment [c]	No. of Installations where action is to be taken [d]
Denmark	16	16	S / C	1	15	ND
Germany	1	1	S / WET / C	1	0	0
Ireland [(1)]						
Netherlands	85	80	S / WET / C	76	0	4
Norway	46	46	S	22	0	24
Spain[(1)]						
United Kingdom	88	56	S / WET / WEA / C	18	38	ND

[a] For assessment method, C (Chemical), WET (Whole Effluent Toxicity), WEA (Whole Effluent Assessment), S (Substance level).

[b] Determination of whether 'Risk is adequately controlled' is as described in OSPAR Recommendation 2012/5 and according to national criteria.

[c] Outcome of assessment will determine whether further action is needed or the risk is adequately controlled.

[d] Action needed may be chemical substitution, technology or other measure implemented.

[(1)] Ireland and Spain have not yet commenced any RBA assessments.

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