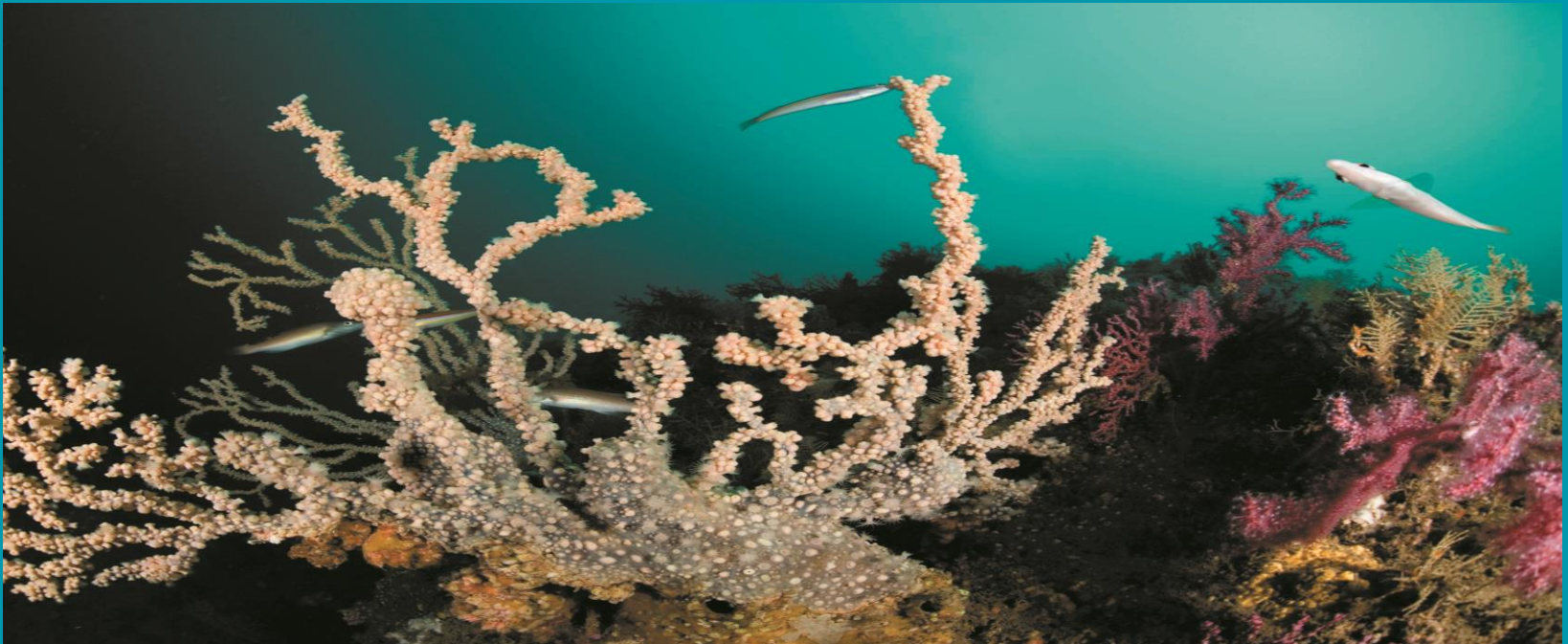




**OSPAR**  
**COMMISSION**

*Protecting and conserving  
the North-East Atlantic  
and its resources*

## OSPAR REPORTING AND MONITORING ACTIVITIES WITHIN OIC



Dr Luisa Rodriguez-Lucas, Deputy Secretary, OSPAR Commission  
3<sup>rd</sup> Offshore Protocol Working Group Meeting, Attard, Malta 17-18 June 2014.

## OSPAR Convention and OSPAR Strategy

### Discharges of chemicals and oil

Recommendation 2006/5 on a Management Regime for Offshore Cutting Piles

Recommendation 2001/1 for the Management of Produced Water

Decision 2000/3 on the use of Organic-Phase Drilling Fluids (OPF) and the discharge of OPF contaminated cuttings

Recommendation 2012/5 for a risk-based approach to the management of produced water

### Use of chemicals offshore

Decision 2000/2 on a Harmonised Mandatory Control System for the Use and Reduction of the Discharge of Offshore Chemicals

Recommendation 2010/3 on a Harmonised Offshore Chemical Notification Format

Recommendation 2010/4 on a Harmonised Pre-screening Scheme for Offshore Chemicals

Decision 2005/2 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or Contain Added Substances Listed in the OSPAR LCPA

Recommendation 2006/3 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are or Contain Substances Identified as Candidates for Substitution

### Decommissioning

Decision 98/3 on the Disposal of Disused Offshore Installations

### Environmental Management

Recommendation 2003/5 on the Promotion of the Use and Implementation of EMS

### Offshore Drilling activities

Recommendation 2010/18 on the Prevention of significant acute pollution from offshore drilling activities

# Reporting: OIC annual reports

(See AP Specific Objective 5)



OSPAR report on discharges, spills and emissions from offshore oil and gas installations in 2011

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**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 Recommendation 2001/1 for the Management of Produced Water from Offshore Installations). Drainage water is considered so far of such little consequence that there is no reporting requirement for OSPAR.*

Year: 2011

**Table 2a: Produced water<sup>3</sup>**

Country	Total number of installations <sup>b</sup>	Annual quantity of water discharged <sup>c</sup> (m <sup>3</sup> )	Annual average dispersed <sup>d</sup> oil concentration (mg/l)	Total amount of dispersed <sup>d</sup> oil discharged (tonnes)	Annual average BTEX <sup>e</sup> concentration (mg/l)	Total amount of BTEX <sup>e</sup> discharged (tonnes)	Number of installations injecting water <sup>f</sup>	Annual quantity of water injected <sup>d</sup> (m <sup>3</sup> )
Denmark	13	24 493 493	6,7	165	6,7	165	8	13 372 434,00
Germany	1	18 182	16,0	0,3	43,0	0,8	1	2 022 171
Ireland	1	1 538	14,8	0,02	240,9	0,4	0	0
Netherlands	77	7 976 520	6,9	55	8,4	67	7	6 225 959
Norway	44	128 550 571	11,5	1 478	13,0	1 675	20	31 095 328
Spain <sup>(1)</sup>	0	0	0,0	0	0,0	0	0	0
United Kingdom	102	174 280 183	14,3	2 493	14,2	2 477	27	34 934 888
<b>Total</b>	<b>238</b>	<b>335 320 487</b>	<b>12,5</b>	<b>4 191,18</b>	<b>13,1</b>	<b>4 384,80</b>	<b>63</b>	<b>87 650 780</b>

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 water used for desalting oil (citation from OSPAR Recommendation 2001/1 (as amended), definition of produced water).

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<sup>e</sup> determined according to 1.1 of OSPAR Recommendation 2001/1, as amended by OSPAR Recommendation 2011/6, are considered as dissolved oil.

f. Produced water only (excluding sea water for pressure maintenance).

<sup>(1)</sup> Spain - There is only one offshore gas storage installation (platform Gaviota) connected to a cluster of three wells (Albatros, Gaviota I, Gaviota II) and one sub-sea gas production. None of them discharge any produced water into the sea, since water is re-injected or treated onshore installation (North Poseidon and South Poseidon). There is no displacement water.

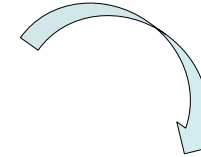
# Reporting: OIC Inventory

(See AP Specific Objective 5)

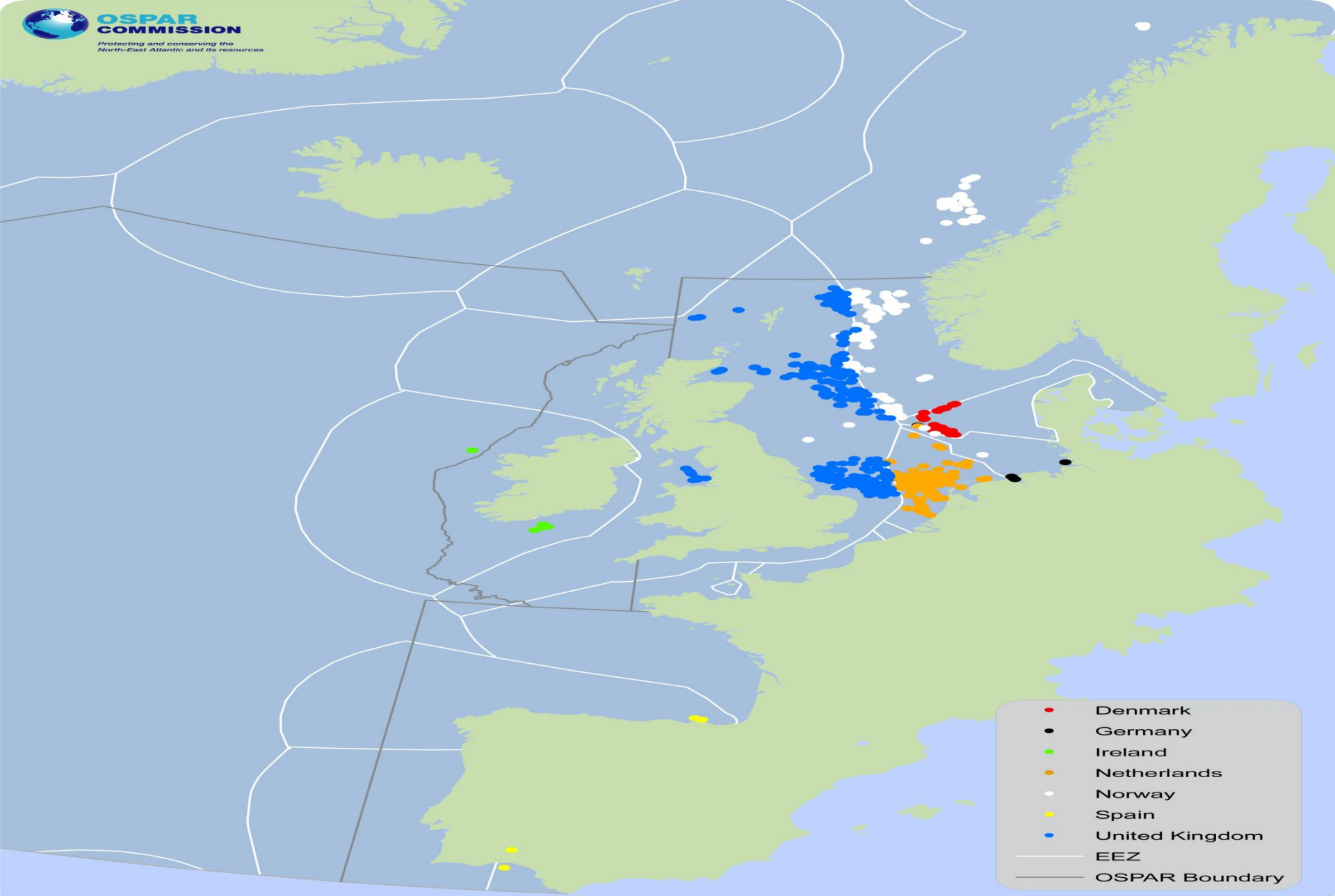


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2013 Update of the inventory of Oil and Gas  
Offshore Installations in the OSPAR Maritime Area



M53		Above water production														
A	B	D	E	F	G	H		I	J	K	L	M	N	O		
ID	Country	Location(blocks)	Latitude	Longitude	Water depth (m)	Operator		Production start	Current Status	Primary production	Category	Function	Weight sub-structure (tonnes)	Weight topside (tonnes)		
2	DK01	Denmark	550415	55,576474	4,618248	40	Mærsk		1991	Operational	Oil	Fixed steel	Above water production	500	532	P.C. Wellhead
3	DK02	Denmark	550517	55,468738	5,132611	42	Mærsk		1972	Operational	Oil	Fixed steel	Above water production	870	100	Wellhead
4	DK03	Denmark	550517	55,469040	5,133104	42	Mærsk		1972	Operational	Oil	Fixed steel	Above water production	1045	1700	Separation, accomodation
5	DK04	Denmark	550517	55,469642	5,134314	42	Mærsk		1972	Operational	Oil	Fixed steel	Above water production	385	100	Flare
6	DK05	Denmark	550517	55,468737	5,133623	42	Mærsk		1972	Operational	Oil	Fixed steel	Above water production	1050	100	Wellhead
7	DK06	Denmark	550517	55,480678	5,116252	42	Mærsk		1977	Operational	Oil	Fixed steel	Above water production	1100	600	Water Injection
8	DK07	Denmark	550517	55,479769	5,108403	43	Mærsk		1987	Operational	Oil	Fixed steel	Above water production	1690	1970	Wellhead
9	DK08	Denmark	550517	55,478896	5,107311	43	Mærsk		1987	Operational	Oil	Fixed steel	Above water production	1705	2100	Wellhead
10	DK09	Denmark	550517	55,478210	5,105770	43	Mærsk		1987	Operational	Oil	Fixed steel	Above water production	1700	8700	Process/accommodation
11	DK10	Denmark	550517	55,479284	5,106076	43	Mærsk		1987	Operational	Oil	Fixed steel	Above water production	491	250	Flare
12	DK11	Denmark	550517	55,480332	5,109197	43	Mærsk		1992	Operational	Oil	Fixed steel	Above water production	550	1270	Wellhead, bridge module



- Denmark
- Germany
- Ireland
- Netherlands
- Norway
- Spain
- United Kingdom
- EEZ
- OSPAR Boundary

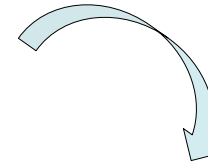
# Implementation reporting

(See AP Specific Objective 10)

## Recommendation 2000/1 on produced water, as amended

### 9. Implementation Reports

9.1 Reports on the implementation of this Recommendation should continue to be submitted by Contracting Parties with offshore installations that discharge produced water into the sea, using as far as possible the format set out in Appendix 1. The reports should be submitted to the appropriate OSPAR subsidiary body by 31 December 2012 and every four years thereafter unless otherwise specified by the Commission.



#### The format for implementation reports concerning OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations

*(Note: In accordance with paragraph 9.1 of the Recommendation, this format should be used as far as possible in implementation reports)*

##### I. Implementation Report on Compliance

Country:

Reservation applies

Is measure applicable in your country?

If not applicable, then state why not (e.g. no relevant installation)

Means Implementation:	of	by legislation	By administrative action	by agreement negotiated
		yes/no*	Yes/no*	yes/no*

.....  
.....  
.....

Please provide information on:

- a. specific measures taken to give effect to this measure;
- b. any special difficulties encountered, such as practical or legal problems, in the implementation of this measure;
- c. the reasons for not having fully implemented this measure should be spelt out clearly and plans for full implementation should be reported;
- d. if appropriate, progress towards being able to lift the reservation.

# Implementation reporting

## Recommendation 2000/1 on produced water, as amended

### Appendix 6

Implementation Report from UNITED KINGDOM concerning OSPAR Recommendation 2001/1, as amended by OSPAR Recommendation 2006/4 and OSPAR Recommendation 2011/8

Country:	United Kingdom
Reservation applies	No
Is measure applicable in your country?	Yes

If not applicable, then state why not (e.g. no relevant installation)

Means of Implementation:	By legislation	By administrative action	By negotiated agreement
	Yes	Yes	Yes

Please provide information on:

a. specific measures taken to give effect to this measure;

The means of implementation varies depending upon the requirement of the amended Recommendation. For example, the requirement to reduce discharges by a minimum of 15% by 2006 was implemented by administrative action and negotiated agreement, whereas the requirements relating to new or substantially modified installations and the application of BAT and BEP, and all of the requirements relating to sampling, analyses and achievement of the 30 mg/l performance standard, are implemented through legislative processes. Where requirements are a condition of relevant discharge permits, enforcement action is taken in relation to any breaches of the conditions, in accordance with the regulator's enforcement policy.

b. any special difficulties encountered, such as practical or legal problems, in the implementation of this measure;

No special difficulties have been encountered, although there is an ongoing problem in relation to a number of offshore installations that do not fully meet the 30 mg/l performance standard. The problem includes installations producing wet gas and condensate, and installations with contingency permits for the discharge of produced water during periods when produced water re-injection is not possible (re-injection down-time). As far as the former are concerned, there are a number of problems relating to the efficacy of the treatment facilities for particular produced water streams, which are being investigated by the operators. As far as the latter are concerned, when contingency discharges are necessary, the levels of dispersed oil are often greater than 30 mg/l for short periods of time when the treatment facilities are brought on-line and, although the levels reduce when the treatment systems have stabilised, the initial failure can result in the monthly average exceeding the performance standard. Relevant details of failures to meet the performance standard are included in the annual emissions and discharge report submitted to OIC, in accordance with the requirements of the amended Recommendation.

c. the reasons for not having fully implemented this measure should be spelt out clearly and plans for full implementation should be reported;

Where installations repeatedly fail to meet the performance standard, and there is not a satisfactory explanation for the failure, the operators are required to prepare improvement plans to achieve full compliance, that are discussed and agreed with the regulator.

Table 3a. Information on installations which did not 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 defined in OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations (as amended)

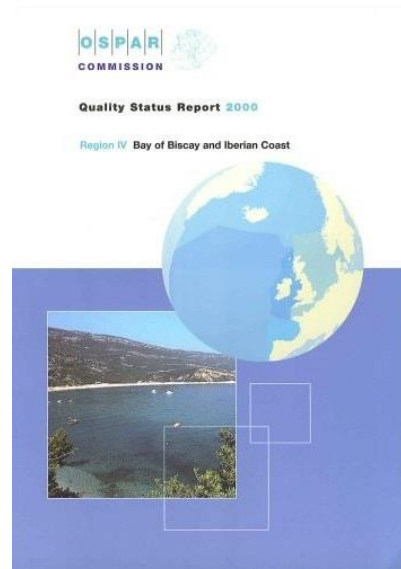
Year: 2011

Country/Installation/Operator <sup>a</sup>	Type of installation	Annual average concentration of dispersed oil (mg/l) <sup>b</sup>	Treatment equipment installed	Reasons for not achieving the standard	Action being taken
NO/Gisa/GDF Suez	Oil	38,40	Hydrocyclones and Epon CFU	The produced water volumes are lower than what the treatment facilities need to run optimally	Being followed closely
UK/Shearwater C PUQ Platform/Shell	Gas	358,11	Permanent hydro-cyclones, degasser vessel and from November 2011 a temporary adsorption media solution.	In 2011 Shell has undertaken various operational improvements on de-sanding separators, optimising hydro-cyclone performance, maximising uptime of the key well for OPW. From mid November a temporary adsorption based technology was installed downstream of existing equipment. Shell has selected a final technical solution which is due to be commissioned in Q3 2013.  The installation of the temporary adsorption media solution allowed levels below 30 mg/l to be achieved, but recovery from process trips to this level required up to two weeks of steady operation.	
UK/Gannet A Platform/Shell	Oil	30,14	Permanent hydro-cyclones and Induced Gas Floation Unit (IGFU).	Following an unsuccessful chemical trial program, Shell focused on optimising the existing PW system.  Performance deteriorated during start ups and production upsets which were more frequent due to several unplanned shutdowns.	Action being taken to improve performance in 2012
UK/Heather A Platform/Enquest	Oil	38,15	Wemco Oily Water Separator Compact Floation Unit Hydrocyclones	Produced water treatment has been affected by various issues including: - chemical treatment and optimisation, efficiency of treatment process  plant instability  poorer than expected performance of treatment equipment	Enquest have commissioned hydrocyclones, developed enhanced maintenance regimes on existing equipment, equipment refurbishment, further chemical trials, working on plant stability and optimisation of well line up.
UK/Ravenstun North CPP Platform/BP	Gas	249,38	Horizontal 3-phase separator and a mares tail coalescer water treatment package	Sand and proppant fill the treatment vessels, also emulsions are formed that prevent adequate separation in the vessels.	A sand treatment package is being installed, also a new vane package has been installed in the 3-phase separator. Better chemical control is being investigated as are 'end of pipe' treatment packages

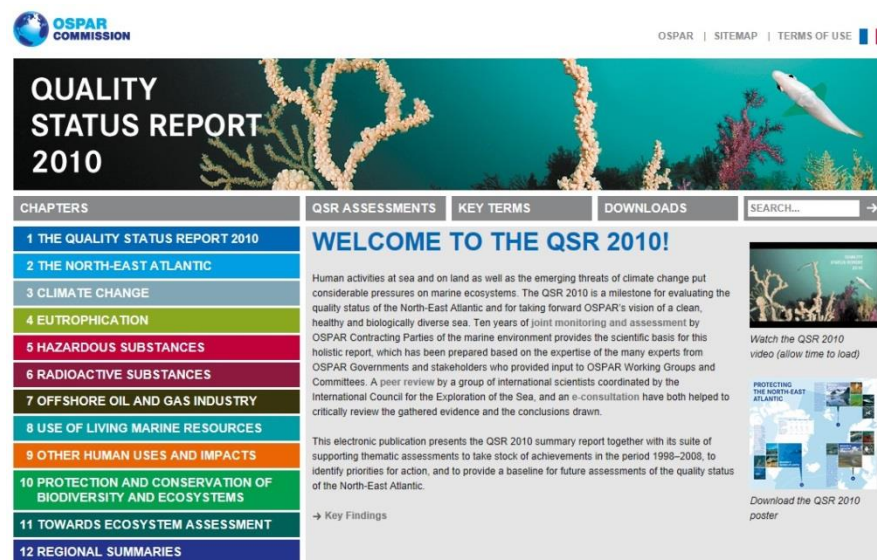
# OSPAR Monitoring Programme: JAMP



1993  
Oslo and Paris  
& ICES  
North Sea Task  
Force in North  
Sea sub-regions



2000  
OSPAR  
Five Regions +  
integral QSR 2000



2010  
OSPAR  
integral QSR 2010  
+ web-based and  
underlying thematic  
reports



**JAMP**

General parts

Theme A - General & Ecosystem approach

Theme E

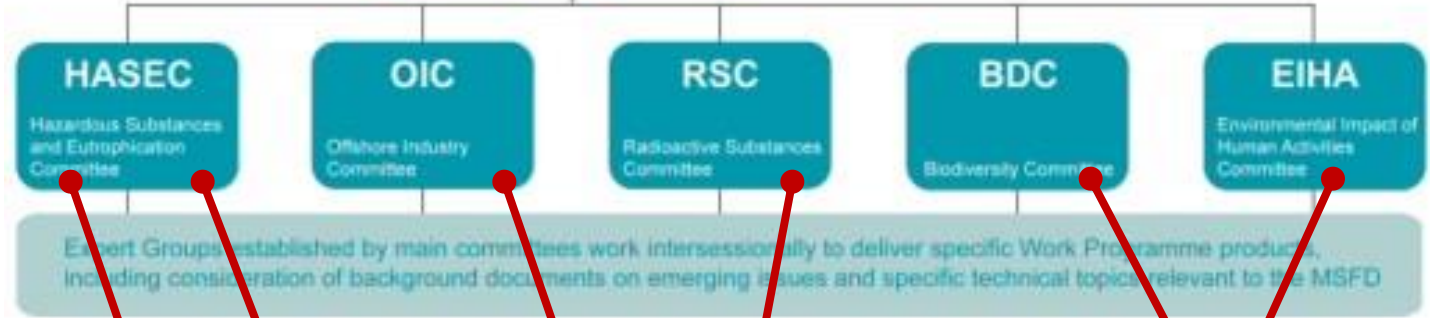
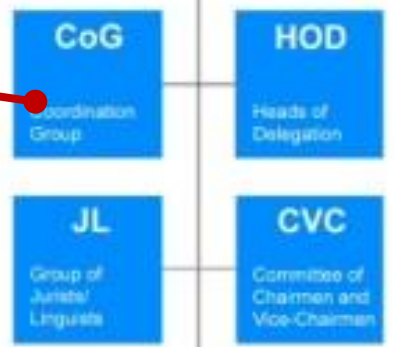
Theme H

Theme O

Theme R

Theme B

**OSPAR Commission**



# JAMP 2010-2014



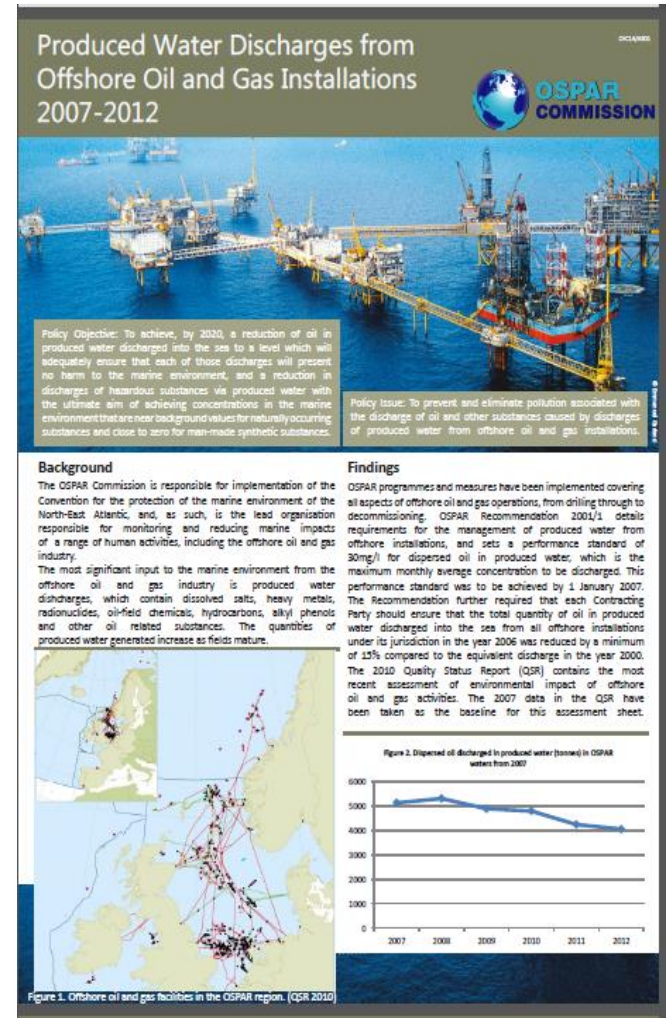
Target year/s	Product reference	Product type	Description
Annual products to be delivered in 2010–2014			
2010–2014	O-1	MP imp	Annual implementation of monitoring and reporting of data <ul style="list-style-type: none"> <li>on offshore platforms (biannual update of offshore database)</li> <li>discharges, emissions and spills of oil and hazardous substances from offshore platforms</li> </ul>
2010–2014	O-2	REP	Annual assessment sheets on discharges, emissions and spills from offshore platforms (A-3)



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OSPAR report on discharges, spills and emissions from offshore oil and gas installations in 2011

(See AP Specific Objective 09)



# JAMP 2010-2014

(See AP Specific Objective 09)

2014

O-15

REP

Assessment of impacts of offshore oil and gas industry on the marine environment, including

- status and trends of discharges of oil and other hazardous and radioactive substances from produced water and their concentrations and effects in the marine environment
- possible releases of oil and chemicals from any disturbance of cutting piles
- adverse effects on the marine environment other than from

□



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Assessment of impacts of offshore oil and gas activities in the North-East Atlantic

## Electronic navigator to complementary QSR assessments

- Environmental effects and releases of oil and chemicals from cuttings piles (update 2009) (OSPAR, 2007a)
- Environmental monitoring of impacts from offshore oil and gas activities (OSPAR, 2007b)
- Discharges, spills and emissions from offshore oil and gas installations in 2007 (OSPAR, 2009e)
- Discharges of radioactive substances from the non-nuclear sectors (OSPAR, 2009a)
- Environmental impact of underwater noise (OSPAR, 2009c)
- Environmental impact of shipping (OSPAR, 2009f)



- Thank you!
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