The Regional Regulation of Decommissioning by the OSPAR Commission

David Johnson, Executive Secretary, OSPAR Commission

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Main Objectives
The Contracting Parties shall, in accordance with the provisions of the Convention, take all possible steps to prevent and eliminate pollution and shall take the necessary measures to protect the maritime area against the adverse effects of human activities so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected" (Article 1.a)
OSPAR Approach:

**OSPAR strategic objective for offshore oil and gas**

To prevent and eliminate pollution and take the necessary measures to protect the maritime area against the adverse effects of offshore activities, so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected.

**Tools for targets and indicators:**
OSPAR Guidelines for monitoring environmental impacts of offshore oil and gas activities (agreement 2004-11, and agreement 2006-7)
JAMP Guidelines on standard methodology for the use of oiled beach birds as indicators of marine oil pollution (agreement 1995-6)

**EcoQO oiled guillemots:**
The average proportion of oiled common guillemots in all winter months (November to April) should be 20% or less by 2020 and 10% or less by 2030 of the total found dead or dying in each of 15 areas of the North Sea over a period of at least 5 years.

**Key OSPAR Assessments**
- Overall impacts of offshore oil and gas activities
- Environmental effects of releases of oil and chemicals from cuttings piles
- Environmental monitoring of impacts from offshore oil and gas activities

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What are the problems?

OSPAR Maritime Area: 1,300 installations, 50,000km pipelines

Drilling and production activities
Chemicals

Associated drilling fluids
Oil
Chemicals

cutting piles

spills

flaring

turbine exhaust
diesel exhaust

waste

sewage water

waste

oil

other substances
• heavy metals
• alkyl phenols
• radionuclides
• chemicals
## What has been done?

### 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

### 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
Did it work?

Annual amounts of produced water discharged and injected (2001-2007)

Oil discharges with produced water have fallen on average by 20%
## Delivering OSPAR Strategy objectives for the offshore oil and gas industry

<table>
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<tr>
<th>OSPAR Region</th>
<th>Prevent/eliminate pollution</th>
<th>Environmental status 1998–2006</th>
<th>Key factors and pressures</th>
<th>Outlook for pressures</th>
<th>Action needed</th>
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<tr>
<td>Region I</td>
<td>Partly achieved ✭✭✭</td>
<td>Improved ✭</td>
<td>Oil discharges and spills, Input of contaminants, Air emissions</td>
<td>↑</td>
<td>OSPAR, OSPAR</td>
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<tr>
<td>Region II</td>
<td>Partly achieved ✭✭✭</td>
<td>Improved ✭</td>
<td>Oil discharges and spills, Input of contaminants, Air emissions</td>
<td>↓</td>
<td>OSPAR, OSPAR</td>
</tr>
<tr>
<td>Region III</td>
<td>Partly achieved ✭✭✭</td>
<td>Improved ✭</td>
<td>Minor activity: Oil discharges and spills, Input of contaminants, Air emissions</td>
<td>↔</td>
<td>OSPAR, OSPAR</td>
</tr>
<tr>
<td>Region IV</td>
<td>Mostly achieved ✭✭✭</td>
<td>?</td>
<td>One non-discharging installation: Air emissions</td>
<td>↔</td>
<td>OSPAR</td>
</tr>
<tr>
<td>Region V</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Exploration activities: Oil spills, Air emissions</td>
<td>?</td>
<td>OSPAR</td>
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Decommissioning
Debate within OSPAR

1994/1995 Brent Spar

• Shell Abandonment Impact Hypothesis (1994)
• Greenpeace direct action protest (1995)

Background issues and facts

• Input from the Oil Industry International Exploration & Production Forum (Rules, Guidelines and Standards, Topside facilities, Concrete gravity based structures, large North Sea steel structures) – ‘finding the right balance’
• UK House of Lords Select Committee on Decommissioning of Oil and Gas Installations (March 1996)
• UK Scientific Group on Decommissioning Offshore Structures (NERC for DTI April 1996)
• OSPAR Ad Hoc Working Group on the Disposal of Offshore Installations (December, 1996)
Establishing the facts

Technical Review (EC, 1996)

- Presumption that all installations are entirely removed with possible exemptions linked to safety, navigation, environment, fishing industry, risks of leaving (Geneva Conference 1958, UNCLOS 1982, IMO Guidelines 1989, Regional Agreements – set minimum guidelines for Contracting Parties, do not apply directly to individuals or private sector, obligations are defined by national legislation, licenses granted on a case by case basis by competent state authority)
- Decommissioning was predicted to peak 2010-2020 (est. 25 annually)
- Most steel structures (technically feasible) v some large steel and concrete substructures (technical difficulties)
- Partial removal and/or toppling in situ (after cleaning), practical only in 80m+, liabilities in perpetuity
- Dumping in another location, practical only for re-floated structures, liabilities in perpetuity
- Main issue is large platforms in the Northern North Sea (e.g. Magnus 65,000t in 186m depth)
- Concrete substructures pose greatest problem, some used for oil storage and difficult to remove completely oily residues: Norway has 14 (6m tonnes) and UK has 9 (2m tonnes)
Legally binding OSPAR Decision

OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations

• Recalled Articles 2 and 5 of the OSPAR Convention; UNCLOS; increasing number of installations approaching end of operational life; precautionary principle; preference for disposal on land; national legal liabilities

• Defined – concrete installation, disused offshore installation, steel installation, topsides, footings

• Prohibited dumping and leaving wholly or partly in place

• Provided for derogation of certain categories (Annex 1); on grounds of significant reasons (Assessment procedure Annex 2); on the basis of national permits subject to consultation with other Parties (Annex 3); and with implementation reporting (Annex 4)

• Inventory maintained by the Secretariat (reports every 2 years)
Review of Annex I to the Decision

§7: in light of experience in decommissioning offshore installations and in light of relevant research and exchange of information, the Commission shall try to achieve unanimous support for amendments to Annex I in order to reduce the scope of possible derogations

OSPAR 2003:

• At the time the only permit issued was to leave in place a gravity-based installation at the Ecofisk field in Norway
• OGP Report No. 338 ‘Disposal of disused concrete gravity platforms’
• Concluded insufficient evidence to enable any revision

OSPAR 2008:

• 4 more permits had been issued – 3 permits to leave gravity-based concrete installations at the Frigg Field and a permit for leaving steel footings NW Hutton-UK
• Concluded again – insufficient evidence

OSPAR 2013:

• ?
OSPAR Maritime Area Decommissioning (June 2012)

69 operations decommissioned: 122 offshore installations brought ashore for disposal

7 derogations

Future derogation options:
- 59 steel installations (substructure > 10,000t)
- 22 gravity-based concrete structures
Footings of the Miller steel installation jacket (1)

Most recent derogation case – proposed to be disposed of in current location in the Miller Field

- Cessation of production (September 2007)
- Assessment to support proposal issued by BP (November 2010)
- Detailed investigation of alternative use, removal and disposal options
- Comparative assessment process (40+ studies) – environmental, social, technical and economic aspects of different solutions; EIA and debris clearance and monitoring
- Concluded full jacket removal or partial removal of the jacket footings was not appropriate due to uncertainties and unacceptably high levels of safety and technical risk required to execute these options
- Independent verification
- Weighs over 10,000 tonnes thus qualifies for consideration under ‘footings’ category of OSPAR Decision 98/3
Footings of the Miller steel installation jacket (2)

OSPAR involvement and response

• Consultation between UK and other OSPAR Contracting Parties (§3 Decision 98/3) took place in March 2011

• No objections to the UK proposal were received

• Written comments from Denmark, Germany, Netherlands and Norway

• Requests for clarification on specific technical procedures, mitigation, longer-term liability (as established in the Abandonment Programme and to be subject to the conditions of the permit), potential risk to fishermen, future monitoring and/or intervention in the context of developing technologies

• UK made formal responses and the consultation is now complete

• DECC as the relevant competent authority for the UK can move to issue a permit as and when BP and their partners indicate they are in a position to submit the programme for approval by the UK Secretary of State

• Full version of programme available at: www.bp.com/miller
Brent Decommissioning – Project Scope

The Brent Field is located in the UK Northern North Sea, some 180km north-east of the Shetland Islands. The oil produced by the Brent Field is exported, via the Cormorant A Platform to Sullom Voe. Produced gas is exported via the Brent system to St Fergus.

Located at northern extremity

- 160 wells
- 4 topsides
- 1 steel jacket
- 3 GBS
- 24 pipelines
- 2 subsea locations

Alpha, Bravo & Charlie have multiple interconnections & interdependencies

Slide courtesy Shell UK
Future challenges

• Many structures are old (early 1970s) and corroded – put together in a hurry without CAD (in the North Sea ageing installations with a projected life of 20 years are now 50 years old)

• The North Sea can be a hostile environment - dangerous sea states result in limited time (within any year) available for work and safety considerations

• Logistics: detailed engineering, sheer scale of structures - limited availability of barges/cranes, 10-15 year projects (up to x4 longer duration than commissioning), considerable costs, energy budgets

• Disturbance, possible release of pollutants from structures during decommissioning and disposal of contaminants on-shore

• Stakeholder process must be comprehensive and transparent (lessons learned from Brent Spar)

• Monitoring programme and liability
Elephant in the room

[For me] the real environmental issue is not the visible or underwater structures but making sure the wells do not flow again:

- Portland cement only has a 100 year track record
- Once concrete plugs have been installed and tested the wellhead is severed 3m below the seabed (usually using explosives) – virtually impossible to establish a reconnection if needed

[For me] the economics do not add up:

- In the UK, the more established operations have paid significant tax revenues to the government: 75% petroleum revenue tax on all profits, 15% royalty, 23% corporation tax. Who pays for decommissioning? In reality the tax payer is now liable as industry costs have been offset against tax for the big fields;
- In the UK decommissioning is also a major disincentive to exploitation by new smaller operators who for approximately the last 10 years have had to find provision for decommissioning costs up front (up to £150m).
- Decommissioning is a commercial decision, no one is abandoning currently when price is $120 barrel (in 2008 it was $30) therefore proper evaluation is postponed. Why not build ‘biodiversity gain’ into the derogation permit?
Better left as ‘artificial reefs’?

• OSPAR has developed clear Guidelines on Artificial Reefs in relation to Living Marine Resources (Ref 1999-13) covering materials (which must be inert), design, placement, administrative action, monitoring, scientific experiments, management and liabilities

• A differentiation is made between ‘dumping’ and ‘placement’ – the Guidelines address those structures specifically built for protecting, regenerating, concentrating and/or increasing the production of living marine resources

• In 2011 OSPAR Jurists and Linguist experts (JL) gave detailed consideration to the interpretation of the OSPAR Guidelines on Artificial Reefs (in the context of the language of the 1972 London Convention and its 1996 Protocol). Currently there is no political will to revise the Guidelines

• However, thought is being given to this by IMSA (a Dutch think tank) and a diverse group of stakeholders interested in the ‘bigger picture’ regarding ecological options and possibilities, considering impacts of decommissioning on the local ecosystem (at and around platforms), with preliminary conclusions that leaving structures (and fisheries no take zones) in place provides some advantages in the North Sea particularly for epifauna and flora
Conclusions

• For the North-East Atlantic progress has been made to counter adverse environmental impacts of the oil and gas industry (QSR 2010)

• The OSPAR Convention provides an appropriate legal framework for regional decommissioning

• To date numbers of derogation cases have been limited

• Expect an escalation of decommissioning (and derogations) as North Sea resources phase out although decommissioning is essentially a commercial decision

• Regulatory decisions may have unforeseen consequences and should be revisited following experience with implementation

• Efforts are underway to promote discussion and re-evaluation of OSPAR Decision 98/3 – one idea is a ‘landfill tax’ for the sea

• Any rethinking should take into account safety concerns, financial burden, indirect benefits of infrastructure to biodiversity, and other maritime uses including a socio-economic analysis. In other words a proper holistic ecosystem approach debate to take all aspects into consideration

• Thank you : david.johnson@ospar.org