OSPAR, the OSPAR Quality Status Report and cetacean assessments

ACOBANS CDG4
09 January 2024
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OSPAR Deputy Secretary - Biodiversity
What is OSPAR?

Regional Sea Convention for the North-East Atlantic

16 Contracting Parties, approx. 65 observer organisations

Mandate to protect and conserve while using resources sustainably

Promote collaboration and coordination
OSPAR’s vision

A clean, healthy and biologically diverse North-East Atlantic Ocean, which is productive, used sustainably and resilient to climate change and ocean acidification.
OSPAR’s Strategy

To achieve biologically diverse and healthy seas we will:

Strategic objective 5:
Protect and conserve marine biodiversity, ecosystems and their services to achieve good status of species and habitats, and thereby maintain and strengthen ecosystem resilience

To achieve productive and sustainably used seas we will:

Strategic objective 7:
Ensure that uses of the marine environment are sustainable, through the integrated management of current and emerging human activities, including addressing their cumulative impacts
OSPAR’s Strategy: Operational Objectives

S5.O5: by 2025 OSPAR will have implemented all agreed measures to enable the recovery of OSPAR Listed threatened and/or declining species and habitats and will take additional measures as needed.

S7.O1: by 2028 OSPAR will further develop methods for the analysis of cumulative effects in the marine ecosystems of the North-East Atlantic, taking into account relevant spatial and temporal information on human activities, pressures, sensitive receptors and habitats, and use the results to inform the establishment of measures and actions to prevent or otherwise manage impacts.

S7.O6: OSPAR will work with relevant competent authorities and other stakeholders to minimise, and where possible eliminate, incidental by-catch of marine mammals, birds, turtle and fish so that it does not represent a threat to the protection and conservation of these species and will work towards strengthening the evidence base concerning incidental by-catch by 2025.
Health check for the marine environment of North-East Atlantic and the human activities that effect it
QSR 2023 Structure & Components

- **Target audience**
  - Policy makers & General public
  - Experts and administrations

**Nearly 130 assessments**

- **1 SYNTHESIS REPORT**
- **15 THEMATIC ASSESSMENTS**
- **37 INDICATOR ASSESSMENTS**
  - 11 PILOT ASSESSMENTS
  - 65 OTHER ASSESSMENTS* 
- **DATA SETS & DATA PRODUCTS (ODIMS)**

*3rd party & OSPAR non-indicator assessments
Marine Mammal Common Indicators

- Abundance and Distribution of Cetaceans (*OSPAR M4, Agreement 2018-09, MSFD D1C2 and D1C4*)
- Seal Abundance and Distribution (*OSPAR M3, Agreement 2016-11, MSFD D1C2 and D1C4*)
- Marine Mammal By-catch (*OSPAR M6, Agreement 2022-03, MSFD D1C1*)
- Grey Seal Pup Production (*OSPAR M5, Agreement 2016-12, MSFD D1C3*)

Marine Mammal Candidate Indicators

- [Pilot Assessment of Marine Mammal By-catch in Arctic Waters](#)
- [Pilot Assessment of Status and Trends of Persistent Chemicals in Marine Mammals](#)

Marine Mammal ‘other assessments’

- Status Assessments for OSPAR Listed marine mammals (e.g. harbour porpoise)
Marine Mammals Thematic Assessment

The status of seals and small toothed cetaceans is not good while the status of other marine mammals remains unknown.

Pressures affecting marine mammals in the North-East Atlantic:
- Extracting of, or mortality/injury to, marine mammals
- Pesticides
- Ingrid of litter
- Physical pollution by sediments
- Disturbance of marine mammals
- Impact of anthropogenic sound
- Impact of other substances
Figure 1: Levels and methods of integration for marine mammals (MM). Examples of species are presented. OOAO=One out all out, HD=Habitats Directive.
Thematic Assessment: Integration

• The integration methods are described in the Common Environmental Monitoring Programme (CEMP) Guidelines.

• Challenges for integration include:
  – Different scales of species-specific assessment units (different rules required for seals and cetaceans)
  – Challenge associated with low number of species with adequate data to be integrated

• It was deemed premature to integrate from functional group to ecosystem component (and isn’t required for the MSFD)
Future assessments

• Next OSPAR Assessment planned for 2028/2029, scope and content TBC

• OSPAR Marine Mammal Expert Group priorities include:
  – Improving current and develop further indicators
  – Promote candidate indicator on persistent chemicals to common indicator
  – Expanding the bycatch indicator (M6) to the Arctic Region (I)
  – Exploring data availability in the Wider Atlantic Region (V)
  – Develop a new indicator for the assessment of D1C4, likely in combination with habitat (D1C5)
  – Considering an alternative integration approach to the one out all out approach
Potential collaboration with other areas of OSPAR’s work

• OSPAR Noise Regional Action Plan – aim to adopt in 2025, some actions of relevance to ASCOBANS, e.g.
  – Integration of noise measures within MSP and MPAs
  – Targets and thresholds
  – Promotion of best practice standards
  – Shipping measures (promoted through IMO as appropriate)
  – Improving knowledge on impacts/harm

• Work on developing spatial approaches to cumulative impacts.
Thank you

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Cumulative Effects Assessment

Marine Mammals

Credit: A. Judd
CEA weightings – activity/pressure/state

Spatial extent $\times$ Frequency $\times$ Degree of Impact $\times$ Persistence $\times$ Resilience

Exposure

Impact Potential

Filter applied to screen out pressures that would not result in a significant impact

Risk

EU Framework 7 Developing Ecosystem Marine Management (ODEMM)

Weightings progressed by Questionnaire, Joint Workshops and Bilateral meetings with Expert Groups

Weightings applied to each Activity Pressure combination for each Ecosystem Component (i.e. Marine Mammals)

Credit: A. Judd
Weightings method

**Frequency** - how often a pressure type and ecological characteristic interaction occurs measured in months per year

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistent</td>
<td>Where a pressure is introduced throughout the year, i.e., 12 months</td>
</tr>
<tr>
<td>Common</td>
<td>Where a pressure is introduced up to 8 months of the year</td>
</tr>
<tr>
<td>Occasional</td>
<td>Where a pressure is introduced up to 4 months of the year</td>
</tr>
<tr>
<td>Rare</td>
<td>Where a pressure is introduced up to 1 month of the year</td>
</tr>
</tbody>
</table>

**Persistence** - the period over which the pressure continues to cause impact following cessation of the activity introducing that pressure

<table>
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<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Continuous</td>
<td>The pressure continues to impact the ecosystem for at least 100 years</td>
</tr>
<tr>
<td>High</td>
<td>The pressure continues to impact the ecosystem for between 10 and 100 years</td>
</tr>
<tr>
<td>Moderate</td>
<td>The pressure continues to impact the ecosystem for between 2 and 10 years</td>
</tr>
<tr>
<td>Low</td>
<td>The pressure continues to impact the ecosystem for between 0 and 2 years</td>
</tr>
</tbody>
</table>

Spatial extent of overlap between a pressures type and ecological component

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Widespread</td>
<td>Where a sector overlaps with an ecological component by 50% or more (max is 100%)</td>
</tr>
<tr>
<td>Local</td>
<td>Where a sector overlaps with an ecological component by &gt;5% but &lt;50%</td>
</tr>
<tr>
<td>Site</td>
<td>Where a sector overlaps with an ecological component by &gt;0% but &lt;5%</td>
</tr>
</tbody>
</table>

Degree of Impact

<table>
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<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute</td>
<td>Severe effects after a single interaction, which kills a large proportion of individuals and causes an immediate change in the characteristic feature</td>
</tr>
<tr>
<td>Chronic</td>
<td>Severe effects occurring at a frequency that could have detrimental consequences, if often enough and/or at high enough levels</td>
</tr>
<tr>
<td>Low</td>
<td>Severe effect not expected - interaction never causes high levels of mortality, loss of habitat, or change in the typical species or functioning irrespective of the frequency and extent of the event(s)</td>
</tr>
</tbody>
</table>

Resilience - time taken for the ecological characteristic to return to pre-impact conditions.

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>The population/stock has no ability to recover and is expected to go “locally” extinct. The recovery in years is predicted to take 100+ years</td>
</tr>
<tr>
<td>Low</td>
<td>The population will take between 10 and 100 years to recover</td>
</tr>
<tr>
<td>Moderate</td>
<td>The population will take between 2 and 10 years to recover</td>
</tr>
<tr>
<td>High</td>
<td>The population will take between 0 and 2 years to recover</td>
</tr>
</tbody>
</table>

CEA Weightings – State/Impact

| High (H) | Changes in the state of the marine environment **severely impact** the provision of the considered ecosystem service |
| Medium (M) | Changes in the state of the marine environment **impact** the provision of the considered ecosystem services **at an intermediate level**. |
| Low (L) | Changes in the state of the marine environment have a **little or no impact** on the provision of the considered ecosystem service |
| Unknown (?) | Level of impact unknown |
| Not applicable | Delete arrow |

Widespread changes in Phytoplankton and Zooplankton. In many cases, the reasons of these changes are uncertain. In some cases, these changes are related to anthropogenic factors and climate change. Nevertheless, in no case a positive outcome is seen/expected.

Cornacchia, F. (2022) Impacts on ecosystem services due to changes in the state of the environment in the North-East Atlantic Ocean - Rijkswaterstaat Publication Platform