High-level, medium-level, and detailed-level evaluation of progress against OSPAR's North-East Atlantic Environment Strategy

2010 | 2020

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Over the last decade the OSPAR Commission has used the North-East Atlantic Environment Strategy (NEAES) 2010-2020 to work towards its vision of a clean, healthy and biologically diverse North-East Atlantic, used sustainably.

A key deliverable during this period was the publication of the 2017 OSPAR Intermediate Assessment (IA2017). The report detailed the human pressures on the North-East Atlantic, their effects and the implications for the marine environment, and demonstrated OSPAR's progress towards realising its vision.

Protected areas, impacts from human activities and biodiversity issues

Since 2010 OSPAR has worked towards establishing an ecologically coherent and effectively managed Marine Protected Area (MPA) Network and a management framework to halt the loss of marine biodiversity.
As of 2020, the MPA network consists of 552 MPAs, including 7 designated collectively by OSPAR in Areas Beyond National Jurisdiction. The network covers 22.1% of coastal and territorial waters and only 6.5% of the OSPAR Maritime Area as a whole, indicating that the 10% CBD Aichi target 11 has not been fully met. Substantial gaps in the MPA network remain and it cannot yet be considered ecologically coherent. OSPAR has adopted Recommendations that aim to protect 54 species and habitats it has identified as threatened and/or declining and in need of protection. A plan to implement the collective actions listed in the Recommendations has also been developed.

OSPAR manages the impacts of a range of human activities such as marine renewable energy developments, ballast water, cable laying, artificial reefs, and dredged material. New agreements have been adopted for a number of these activities. A Regional Action Plan on Marine Litter was agreed in 2014 and measures identified in the plan are being implemented. OSPAR has worked on methodologies for Cumulative Effects and Socio-economic assessments within the IA2017. Collaboration with other sectors has improved, in particular with the fisheries sector through the Collective Arrangement and a Joint HELCOM-OSPAR harmonised procedure for ballast water management exemptions. Despite these successes, challenges remain; overall litter levels remain a problem and OSPAR's objective for marine litter has not yet been met (the latest marine litter indicator assessments show some signs of reductions, but there are sub-regional differences).

THIS DOCUMENT WAS PRODUCED FOR OSPAR'S 2021 MINISTERIAL MEETING. THE TEXT IN THIS VERSION WAS CORRECT AS OF 22/06/2021

> "Progress has been made in developing common indicators for biodiversity and prominent pressures, such as marine litter and a registry for underwater impulsive noise. However, it has not yet been possible to fully evaluate if implementation of OSPAR measures has achieved the objective to halt further loss of biodiversity."

Progress has been made in developing common indicators for biodiversity and prominent pressures, such as marine litter and a registry for underwater impulsive noise. However, it has not yet been possible to fully evaluate if implementation of OSPAR measures has achieved the objective to halt further loss of biodiversity. Assessments of the status of the environment indicate that species, such as marine birds, are not in good status and there is evidence of extensive physical disturbance to the seabed, caused by bottom contacting fishing gears. Areas in the English Channel and the Celtic seas have higher levels of disturbance than other assessed areas.

Eutrophication

The Eutrophication Strategy seeks to minimise human-induced eutrophication such that all parts of the OSPAR maritime area have non-problem status. Progress has been made, indicated both by the reduction in total problem area from 119 000 km2 in 2006 to 100 000 km2 in 2014, and by reductions in nutrient inputs to the Greater North Sea over the same period of around 10% for nitrogen and 30% for phosphorus. Despite this, the ultimate aim – a healthy marine environment where human-induced eutrophication does not occur – has not been achieved. A key problem is uncertainty about the levels of nutrient reduction required to achieve non-problem status. Several national initiatives for setting reduction targets have been completed. However, coordination to reduce nutrient inputs to the marine environment has been hindered by a lack of agreement between Contracting Parties and an absence of regionally consistent threshold values for eutrophication indicators.

Hazardous Substances

The Hazardous Substances Strategy aims to ensure that contaminants do not cause pollution effects, with fish and seafood safe to eat, and that Contracting Parties move towards a cessation of contaminant discharges, emissions, and losses. The IA2017 showed a general improvement in environmental quality with heavy metal inputs to the Greater North Sea continuing to fall. Concentrations of those contaminants that OSPAR monitors have also continued to fall in most areas though the ultimate aim of achieving background levels (i.e. the levels of contaminants that would be found in the absence of human activity) has not been reached and there remain areas of concern. Work with OSPAR substance lists focuses on substances that are considered to be of concern to the marine environment, including substances covered within the EU framework and global conventions. Coordinated monitoring and assessment continues although there are problems with quantifying inputs in many regions.

Offshore Industry

The Offshore Oil and Gas Industry Strategy aims to protect the OSPAR maritime area from the adverse effects of offshore activities. The OSPAR maritime area is a mature oil and gas production province, although total production of oil and gas has been steadily falling since its peak in 1999. The Offshore Oil and Gas Industry Strategy has achieved a reduction of over 20% in the amount of dispersed oil discharged in produced water; the phase out of discharges of offshore chemicals on OSPAR's List of Chemicals for Priority Action; and a nearly 50% reduction in the discharge of chemical substances identified as candidates for substitution (although further reductions in discharges are considered possible). A risk-based approach for the management of produced water discharges has also been introduced to complement the OSPAR harmonised mandatory control system for offshore chemicals and promote the shift towards a reduction in the use of more hazardous substances. Contracting Parties undertook a review of drilling in extreme conditions and confirmed that their existing respective framework remained fit for purpose. Contracting Parties have also fully implemented the ban on the dumping or leaving in place of disused offshore installations. Since OSPAR Decision 98/3 on the disposal of disused offshore installations was adopted, approximately 170 installations have been decommissioned of which 11 were granted derogations. Contracting Parties continue to promote research and monitor the development of Carbon Capture and Storage proposals, although full scale development is still in its infancy.

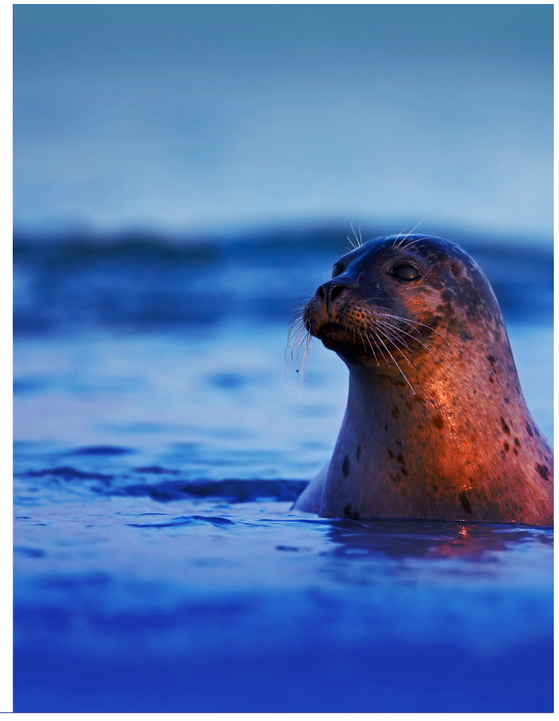
Radioactive substances

OSPAR prevents pollution from ionising radiation. The Contracting Parties have achieved progressive and substantial reductions in discharges from the nuclear sector and continue to make good progress meeting the objectives of the Radioactive Substances Strategy. Recent Periodic Evaluations show continual reduction in discharges from the nuclear sector, up to 95% since the late 1990s. A significant success is a 38-fold decrease in discharges of the long-lived radioactive element, technetium. The radiological impacts on man and biota from the remaining discharges are low. For the non-nuclear sector, OSPAR will complete a detailed assessment of radioactive discharges by 2021 based on data submitted since 2005. Early indications suggest that the impacts from the discharges from the oil and gas sector are low. OSPAR will deliver a robust assessment of progress of reducing discharges and concentrations in the environment in the next Periodic Evaluation and the 2023 Quality Status Report.

Measures and Actions Programme

OSPAR's primary mode of action for the protection and conservation of the North-East Atlantic is the adoption of consistent and harmonised measures in the form of OSPAR Decisions, Recommendations and agreements and implementation of these obligations and commitments by Contracting Parties.

To support Contracting Parties implementation of measures, OSPAR has developed a Measures and Action Programme (MAP) matrix to provide continuous oversight of the implementation and effectiveness of national and collective OSPAR measures. This helps to share best practice and lessons learned across Contracting Parties and to assess progress in implementing OSPAR's measures and actions.



International issues

During 2010-2020 OSPAR has engaged with a wide range of international issues and organisations as part of OSPAR's work to fulfil the commitments of NEAES, with the overall goal of safeguarding and improving the state of both the North-East Atlantic and other marine areas across the globe:

- The 2008 Marine Strategy Framework Directive (MSFD) is the European Union's collective framework for achieving or maintaining good environmental status of European marine waters. OSPAR has invested considerable effort in supporting Contracting Parties that are EU member states to regionally coordinate all elements of their marine strategies, as referred to in MSFD Articles 5 and 6.

- In 2014 the Collective Arrangement between competent international organisations on cooperation regarding selected areas in Areas Beyond National Jurisdiction in the North-East Atlantic (the Collective Arrangement) was adopted by the North East Atlantic Fisheries Commission (NEAFC) and OSPAR to seek cooperation and coordination on implementation of suitable conservation and management measures. Efforts to expand the Collective Arrangement and to engage with other competent authorities continue.

- OSPAR 2015 agreed an engagement remit with the Arctic Council with a view to facilitating increased information exchange and collaboration. In 2017 OSPAR was granted observer status in the Arctic Council.

- OSPAR has cooperated closely with other Regional Seas Conventions (RSCs) over the last decade including the Cartagena Convention, the Abidjan Convention, the Barcelona Convention, and HELCOM. Examples of work include voluntary commitments registered at the United Nations (UN) Conference to Support the Implementation of Sustainable Development Goal 14, held in New York in June 2017, and work within the framework of the UNEP programme of regional seas. There is also ongoing and strengthened collaboration effort with the International Council for the Exploration of the Sea (ICES) and the EU, including joint working groups.

- IMO (International Maritime Organisation) and OSPAR signed a Memorandum of Understanding (MoU) in 2018 to further cooperation at the regional level on issues within the scope of the London Convention and London Protocol (Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter).

- The CBD (Convention on Biodiversity) and OSPAR cooperate inter alia to aid the achievement of the Aichi targets at the regional and national scale. In addition, numerous EBSAs (Ecologically or Biologically Significant Areas) in the North-East Atlantic marine region have successfully been identified through OSPAR and were meanwhile adopted by the CBD.

As part of its engagement with other international organisations, OSPAR has also maintained a watching brief on the measures being taken by other competent authorities in the fields of management of land-based sources of hazardous substances and nutrients, the management of fisheries and other human activities with the potential to impact the marine environment. Where needed OSPAR brought matters of importance to the attention of the relevant authorities.

> "Since 2010 OSPAR has worked towards establishing an ecologically coherent and effectively managed Marine Protected Area (MPA) Network and a management framework to halt the loss of marine biodiversity."

Medium-level and detailed-level review of progress in the North-East Atlantic Environment Strategy 2010 - 2020

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Medium-level review of progress in the North-East Atlantic Environment Strategy

1. Biodiversity and Environmental Impacts of Human Activities thematic strategy

1.1 Thematic objectives

§#	Thematic objective	Progress
1.1	*to halt and prevent by 2020 further loss of biodiversity in the OSPAR maritime area, to protect and conserve ecosystems and to restore, where practicable, marine areas which have been adversely affected.*	In progress Significant progress has been made in putting in place the management framework to halt and prevent biodiversity loss.
1.2a	*improve the status of threatened and/or declining species and habitats, in particular of those on the OSPAR List, and ensure that they are effectively conserved, working, where appropriate, with other competent authorities.*	In progress Work practices have been developed, including links to other organisations. 54 Recommendations have been adopted. Roadmap for implementing collective actions for species and habitat recommendations adopted in 2017. Reporting of national measures in 2013 and 2016. Reporting on all measures due in 2019.
1.2b (i)	*work on OSPAR MPA network so that by 2012 it is ecologically coherent, includes sites representative of all biogeographic regions in the OSPAR maritime area, and is consistent with the CBD target for effectively conserved marine and coastal ecological regions*	In progress Work to develop an ecologically coherent network is behind schedule but good progress has been made recently
1.2b (ii)	*work on OSPAR MPA network so that by 2016 it is well managed, (i.e. coherent management measures have been set up and are being implemented for such MPAs that have been designated up to 2012)*	In progress An assessment approach for management status has been developed and currently is being considered if it is sufficient to assess if the MPA network is “well managed”
1.2c	*aim to ensure that the effects of human activities and pressures on the marine environment, individually or cumulatively, do not adversely affect species, habitats and ecosystems, in particular those on the OSPAR List of Threatened and/or Declining Species and Habitats;*	In progress Listed features have been taken into account in national Environmental Impact Assessments through implementation of Recommendation 2010/5. Listed features are taken into account in MPA management plans. Several guidelines for best practice in managing human activities have been agreed.
1.2d	*substantially reduce marine litter in the OSPAR maritime area to levels where properties and quantities of marine litter do not cause harm to the coastal and marine environment*	In progress Levels of marine litter remain a problem and OSPAR's objective for marine litter has not

§#	Thematic objective	Progress
		yet been met. Latest beach litter indicator assessments (2019) show some signs of reductions; however, there are sub-regional differences. Overall the latest assessment of ingestion of plastic by Fulmars for the whole of the North Sea indicates a statistically significant decreasing trend; sub-regional or national analyses tend to support this, but often lack sufficient bird numbers to be statistically significant. Good progress in the implementation of the Regional Action Plan is being made and new common indicators are being developed.
1.2e	*endeavour to keep the introduction of energy, including underwater noise, at levels that do not adversely affect the marine environment in the OSPAR maritime area*	In progress An indicator for impulsive noise has been developed, but assessments over more years are necessary in order to draw conclusions. Work is ongoing to develop ambient noise monitoring and guidelines for noise monitoring have been agreed.
1.2f	*Endeavour to limit the introduction of non-indigenous species by human activities to levels that do not adversely alter the ecosystems*	In progress Voluntary guidelines for the shipping industry have been developed. An indicator assessing new introductions is available.

1.2 Main strategic directions

§#	Main strategic directions	Progress
3.1a	*Ensuring the protection and conservation of biodiversity and ecosystem functioning throughout the OSPAR maritime area and, when practicable, restoring marine areas, which have been adversely affected. This will be done through the further development and implementation of appropriate programmes and measures within the sphere of competence of the OSPAR Commission and, where necessary, engagement and technical cooperation with other authorities;*	In progress The framework for protection and conservation of species and habitats has been put in place, including the adoption of recommendations and the development of the collective arrangement. Status assessments have not yet been undertaken to assess if the implementation of the framework has been successful.
3.1.b	*further developing the OSPAR network of marine protected areas, including in areas beyond national jurisdiction, ensuring that the network is ecologically coherent in the OSPAR maritime area and that effective management is in place at all sites*	Partially achieved Good progress on expanding the MPA network, including in ABNJ. Management plans and management measures are being developed and implemented. However, there are certain shortcomings that are well reflected in entries above pertaining to well-managed and ecologically coherent networks.

§#	Main strategic directions	Progress
3.1.c	*integrated management of human activities, through, among other measures, the further development and implementation of tools such as marine spatial planning, impact assessment and socio-economic assessment, in order to achieve the reduction in pressures which are adversely affecting the marine environment, and the sustainable use of ecosystem goods and services*	In progress Progress has been made on Cumulative Effects Assessment methodology and socioeconomic assessments. However for marine spatial planning and impact assessment there has been no progress.
3.1.d	*regional, coordinated development of monitoring and assessment of marine biodiversity and ecosystem functioning, including the individual and cumulative pressures and environmental impacts from human activities and climate change and ocean acidification*	Partially achieved Substantial progress has been made towards regional, coordinated monitoring and assessment of marine biodiversity and ecosystem functioning through development of common indicators. Less progress has been made on climate change and ocean acidification

2 Eutrophication thematic strategy

2.1 Thematic objectives

§#	Thematic objective	Progress
1.2a	*achieving that human-induced eutrophication is minimised, especially the adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters*	**Partially achieved** and **in progress**: Progress made in that eutrophication status has improved in Region III and part of II, but it is still present in some coastal waters and in the German Bight and Kattegat. Eutrophication in the OSPAR Maritime Area is still observed in 98 000 km^2 (7%) of the assessed area. The areas still affected are mainly located along the southern and eastern coasts of the Greater North sea, stretching continuously from Northern France to southern Norway, as well as in some inshore coastal waters of the Celtic Sea and Bay of Biscay.
1.2b	*achieving and maintaining, by 2020, that all parts of the OSPAR maritime area have the status of non-problem area*	**In progress**: A small increase in number of non-problem areas, but still a significant issue in coastal waters, where public awareness is highest.

2.2 Main strategic directions

§#	Main strategic directions	Progress
3.2a	*ensure that the regional monitoring and assessment requirements of the MSFD, using its relevant methodological standards and criteria and associated coordination activities, are fulfilled by the Eutrophication Monitoring Programme and the Common Procedure for the identification of the eutrophication status*	**Partially achieved**: Fully achieved for the first and second cycles of the MFSD (EU Commission Decision 2010/477).The assessment period was 2006-2014 did not match MSFD time-scales, but the integrated eutrophication report was published in time for use by Contracting Parties in their MSFD reporting in 2018. Four common indicators (nutrient inputs, nutrient concentrations, chlorophyll and dissolved oxygen concentrations) were applied, which match the MSFD Descriptor 5 primary criteria. Phytoplankton abundance indicators in relation to eutrophication were not applied. Working towards acceptance of regionally-harmonised thresholds for the indicators and MSFD criteria. Working towards defining ecologically-relevant assessment areas.
3.2b	*evaluate and report on the effectiveness of measures addressing eutrophication problems*	**In progress**: Measures have had some effect in that eutrophication status in the OSPAR Maritime Area has improved and the CAMP and RID programmes indicate that nutrient loads to the Greater North Sea have reduced. However, there is a lack of knowledge concerning which measures have been implemented and the effectiveness of specific measures remains unknown. Eutrophication status in the OSPAR Maritime Area has improved slightly. However, the third application of the Common Procedure indicates that the strategic objective has not yet been achieved.

§#	Main strategic directions	Progress
		Eutrophication is still a problem, mainly affecting coastal areas. The Greater North Sea had the largest problem area (approximately 98,000km^2) with respect to eutrophication, extending along the coast from Belgium to Danish and Swedish waters. Small problem areas (5 to 400 km^2) were found along the coast of France, Norway and the United Kingdom. In the Celtic Seas many small inshore and coastal areas were classified as problem areas (approximately 500 km^2). In the Bay of Biscay two problem areas (approximately 800 km^2) were identified. Nutrient inputs to the OSPAR Maritime Area have reduced, particularly phosphorus. However, the rate of nutrient reduction has fallen when measured at the regional-scale. For some river basins, there have been measurable increases in nutrient input at the river basin catchment-level.
3.2c	*cooperate to set appropriate nutrient reduction targets for problem areas*	**Not achieved**: Not achieved despite substantive work in ICG-EMO, due to the lack of agreement between Contracting Parties and of regionally consistent threshold values and due to technical difficulties modelling the large region of North-East Atlantic. *In situ* targets: Not achieved. Input targets: Not achieved. ICG-EMO could not implement modelling for the whole North Sea because there was no agreement as to which model to use, and targets were not agreed.
3.2d	*coordinate the development of measures to reduce and ultimately eliminate anthropogenic eutrophication in marine waters*	**Partially achieved**: Joint OSPAR-HELCOM approach to the IMO on agreeing a NECA[1] for the North Sea and Baltic.

[1]NOx Emission Control Area (NECA). IMO Resolution MEPC. 286(71). Applicability: New ships constructed on or after 1 January 2021 that will operate in European waters

3 Hazardous substances thematic strategy

3.1 Thematic objectives

§#	Thematic objective	Progress
1.2a	*to achieve concentrations of contaminants at levels not giving rise to pollution effects, and contaminants in fish and other seafood for human consumption not exceeding levels established by EU legislation or other relevant standards*	**Partially achieved** and **in progress**: Since the QSR 2010, the concentrations of contaminants assessed have continued to decrease in the majority of areas assessed, especially for PCBs. Although concentrations are generally below levels likely to harm marine species in the areas assessed, they mostly have not yet reduced to background levels (where these are specified). Concerns remain in some localised areas with respect to high levels of mercury, lead, and PCB118 (one of the most toxic PCB congeners) and locally increasing concentrations of PAHs and cadmium in open waters. In progress for substances without agreed target values, e.g. PBDEs and TBT – MIME is investigating potential assessment values such as the Canadian FEQGs (for PBDEs in biota) and Swedish EQS (TBT in sediment)
1.2b	*to move towards the targets of the cessation of discharges, emissions and losses of hazardous substances by the year 2020*	**Partially achieved**: Have moved towards it, particularly through European legislation on marketing and use of chemicals on OSPAR LCPA and LSPC, also the Industrial Emission Directive and Urban Waste Water Treatment Directive and implementation of the Stockholm and MINAMATA Conventions Ongoing implementation of the existing measures e.g. limiting mercury emissions from crematoria and ban on amalgam use by dentists IA2017 showed decreases in heavy metal loads via air and water to the Greater North Sea

3.2 Main strategic directions

§#	Main strategic directions	Progress
3.1a	*Maintain OSPAR LCPA[2] and associated Background documents, and the LSPC[3] and retain the option to work on specific hazardous substances not covered within the EU framework which are assessed as being of concern for the marine environment*	**Fully achieved**: New emerging substances are addressed as necessary
3.1b	*carry out regional data collections to quantify sources, releases and pathways of hazardous substances on the LCPA[4] ("OSPAR priority chemicals")*	**Partially achieved / in progress:** Emissions reporting for mercury under two OSPAR recommendations. Larger industrial sources covered by European register on pollutant releases and transfers (E-PRTR) .

[2] OSPAR List of Chemicals for Priority Action (LCPA), containing substances that might merit action by OSPAR due to their persistency, liability to bioaccumulate and toxicity or other equivalent concern
[3] OSPAR List of Substances of Possible Concern (LSPC), adopted in 2002
[4] HASEC will consider revising this for the NEAES 2030

§#	Main strategic directions	Progress
		Screening exercise through HASEC informed design of monitoring programmes, although this was done before 2010 Atmospheric and waterborne pathways for several substances through EMEP, CAMP and (more limited) RID. WFD requires regular inventories indicating uses of hazardous substances. WFD also includes monitoring of waterborne substances. Reporting on dredged material includes hazardous substances content the emphasis has moved from OSPAR to other international instruments e.g. Stockholm Convention, REACH[5], Minamata[6] and IMO[7]
3.1c	*carry out effective regional, coordinated monitoring and assessment to evaluate the extent of contamination with hazardous substances covered by the Coordinated Environmental Monitoring Programme and their effects in the OSPAR maritime area, taking into account any additional impacts linked to climate change, and to identify actions to be taken, so as to make progress towards good environmental status and good chemical status under the EU MSFD and the WFD respectively*	**Partially achieved**: Through CEMP annual reporting HASEC 2017 addressed climate change and did not recommend further work on it in relation to hazardous substances No evaluation in relation to climate change Some Contracting Parties used the IA 2017 indicator assessments for updating their MFSD Article 8
3.1d	*promote actions to address concerns about chemicals, including endocrine disruptors, through the EU and other relevant international organisations, and act if these concerns are not fully addressed by those organisations*	**Partially achieved**: Achieved for imposex. HASEC is investigating chemical measurements of endocrine disruptors. At different levels from Contracting Parties' national experts engaging in EU working groups. Secretariat participates in the EU Working Groups to communicate and promote OSPAR work

[5]European Union regulation concerning the **R**egistration, **E**valuation, **A**uthorisation & restriction of **CH**emicals (REACH)

[6]The Minamata Convention on Mercury

[7]International Maritime Organisation (IMO)

4 Offshore Oil and Gas Industry thematic strategy

4.1 Thematic objectives

§#	Thematic objective	Progress
1.1 *To prevent and eliminate pollution and take the necessary measures to protect the OSPAR maritime area against the adverse effects of offshore activities[8] by setting environmental goals and improving management mechanisms, so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected*		
1.3a	*to achieve, by 2020, a reduction of oil in produced water discharged into the sea to a level which will adequately ensure that each of those discharges will present no harm to the marine environment*	Reduction of oil in produced water – **FULLY ACHIEVED** There has been a reduction in both the concentration of oil in produced water discharges and the volume of oil discharged. Work is ongoing to ensure that the oil in produced water discharges does not present harm to the marine environment – work to demonstrate 'harm' is **IN PROGRESS**
1.3b	*to have phased out, by 1 January 2017, the discharge of offshore chemicals that are, or which contain substances, identified as candidates for substitution, except for those chemicals where, despite considerable efforts, it can be demonstrated that this is not feasible due to technical or safety reasons (OSPAR Recommendation 2006/3)*	**PARTIALLY ACHIEVED** Progress has been made in reducing the use and discharge of chemicals identified as candidates for substitution since the introduction of OSPAR Recommendation 2006/3. OIC 2018 agreed that more needs to be done to reduce discharges of substitution chemicals
1.4	*The Offshore Oil and Gas Industry Strategy also covers activities to store CO_2 streams in geological formations with the objective to ensure that CO_2 streams are retained permanently in those formations and will not lead to significant adverse consequences for the marine environment, human health and other legitimate uses of the maritime area (OSPAR Decision 2007/2).*	**IN PROGRESS** There are only two full scale projects with CO_2 storage in the OSPAR region Due to the very limited number of full-scale projects so far, an evaluation of the effectiveness of OSPAR Decision 2007/2 has not yet been undertaken.

4.2 Main strategic directions

§#	Main strategic directions	Progress
3.2a	*carry out effective regional, coordinated information collection, environmental monitoring and assessment to evaluate the extent of pollution and other adverse effects of offshore oil and gas activities in all Regions of the OSPAR maritime area*	**IN PROGRESS** Data collected on an annual basis for atmospheric emissions, chemicals and oil discharges and spills Periodical assessment of discharges, spills and emissions from offshore oil and gas installations by Contracting Parties

[8] Defined in the OSPAR Convention as "activities carried out in the maritime area for the purpose of the exploration, appraisal or exploitation of liquid and gaseous hydrocarbons".

§#	Main strategic directions	Progress
		OIC JAMP Products will support the assessment of the impacts of offshore oil and gas industry
3.2b	*assess the extent to which existing programmes and measures meet, or will meet, the objectives of the Offshore Oil and Gas Industry Strategy and the achieving or maintaining of good environmental status under the EU MSFD*	**IN PROGRESS** OIC has continued to periodically evaluate the effectiveness of OIC measures related to produced water, offshore chemicals, drill cuttings, decommissioning etc.
3.2c	*where necessary, revise existing measures and/or develop and adopt new measures, taking climate change impacts into account*	**IN PROGRESS** OIC has continued to adopt measures (new Recommendations), amend existing Recommendations to enhance the measures and develop guidelines as necessary
3.2d	*continue efforts to reduce discharges of harmful substances, including oil, by developing and applying a harmonised method of assessing environmental risk (risk based approach) relating to the management of produced water, and phase out discharges of hazardous substances*	**IN PROGRESS** In relation to the phase out of discharges of offshore chemicals on OSPAR's List of Chemicals For Priority Action – **FULLY ACHIEVED** For other hazardous substances – **IN PROGRESS**
3.2e	*with a view to progressively develop Best Available Techniques (BAT) and Best Environmental Practice (BEP) for environmental issues, promote the sharing of information and experience between Contracting Parties, non-governmental organisations and relevant research and development forums*	**FULLY ACHIEVED** Annual reporting on discharges, emissions and spills has ensured BAT and BEP are continuously reviewed and applied for the discharge of produced water. The application of BAT and BEP has resulted in the average concentration of dispersed oil in produced water in all OSPAR countries to be well below the 30 mg l^{-1} performance standard set out in OSPAR Recommendation 2001/1
3.2f	*assess the relevance for OSPAR work, including cooperation with the Bonn Agreement, of significant acute pollution events*	**FULLY ACHIEVED** Assessment of annual data on discharges, emissions and spills undertaken by OIC Expert Assessment Panel on an annual basis. Contracting Parties report on assessment undertaken on relevant pollution events
3.2g	*continue to promote the use and implementation by the offshore oil and gas industry of environmental management mechanisms, including elements for auditing and reporting, which are designed to achieve both continuous improvement in environmental performance and to fulfil the objective of this strategy*	**FULLY ACHIEVED** Implementation ongoing as it is a continuous process

5 Radioactive Substances thematic strategy

5.1 Thematic objectives

§#	Thematic objective	Progress
1.1	*to prevent pollution of the OSPAR maritime area from ionising radiation through progressive and substantial reductions of discharges, emissions and losses of radioactive substances, with the ultimate aim of concentrations in the environment near background values for naturally occurring radioactive substances and close to zero for artificial radioactive substances*	**Partially achieved**: RSC is working towards the ultimate aim through periodic evaluations
1.2	*The Radioactive Substances Strategy will be implemented progressively by making every endeavour, through appropriate actions and measures to ensure that by the year 2020 discharges, emissions and losses of radioactive substances are reduced to levels where the additional concentrations in the marine environment above historic levels, resulting from such discharges, emissions and losses, are close to zero*	**Fully achieved**: RSC has developed Decisions, Recommendations and Agreements and continues to collect evidence and develop tools to assess the aims of the objective

5.2 Main strategic directions

§#	Main strategic directions	Progress
3.2a	*continue monitoring programmes, to improve the evidence base and further develop assessment tools*	**In progress**: RSC has continued to develop monitoring programmes, improve the evidence base and further develop assessment tools
3.2b	*monitor the international development of environmental quality criteria[9] to evaluate the impacts of discharges on the marine environment and adopt such criteria as they become established*	**Fully achieved**: RSC has monitored the international quality criteria and has adopted the IAEA's approach to quality criteria
3.2c	*assess the contribution of the oil and gas industry to marine radioactive pollution and, where appropriate, develop and implement suitable management measures*	**Fully achieved**: RSC has assessed the contribution of the oil and gas industry to marine radioactive pollution
3.2d	*continue to scrutinise the development in, and encourage Contracting Parties to apply, best available techniques to control (i.e. prevent and/or reduce and/or eliminate) discharges of radioactive substances from the nuclear and non-nuclear sectors*	**Fully achieved**: For the nuclear sector, RSC has ensured, through regular reporting, that Contracting Parties continue to apply Best Available Technology (BAT) to minimise and, as appropriate, eliminate pollution of the marine environment caused by radioactive discharges from nuclear industries. For the non-nuclear sector, RSC has in collaboration with OIC scrutinised the application of BAT by the offshore oil and gas industry.

[9] E.g. the International Commission on Radiological Protection (ICRP), initiatives by the European Commission implementing the Euratom Treaty, and the International Atomic Energy Agency under its Plan of Activities on the Radiation Protection of the Environment

Detailed-level review of progress in the North-East Atlantic Environment Strategy

1 Assessment of BDC and EIHA's progress against the biodiversity thematic strategy

1.1 Thematic objective, main strategic directions and ministerial commitments

Table 1.1: Thematic objectives, main strategic directions and ministerial commitments

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
1.1 The OSPAR Commission's strategic objective with regard to biodiversity and ecosystems is to halt and prevent by 2020 further loss of biodiversity in the OSPAR maritime area, to protect and conserve ecosystems and to restore, where practicable, marine areas which have been adversely affected.	**In progress** This has not been achieved however significant progress has been made in putting in place the management framework to halt and prevent biodiversity loss. Biodiversity assessments provide the evidence base. This information could be relevant for measures to be taken. This information could also be used to assess effectiveness of measures.	Not fully completed Implementation of Roadmap on collective actions to have progressed Better understanding of which management measures need to be taken. Currently this is not included in the remit of COBAM, however if considered relevant some more link-up of common indicators towards measures could be considered.	T/D Status Assessments (JAMP B3) EEA Marine Biodiversity Assessment 2018/19 Birds and Habitats Directive assessments Intermediate Assessment 2017 Common biodiversity indicator key messages: • Marine birds are in trouble • Benthic habitats are affected by bottom fisheries • Fish communities show signs of recovery in some areas • Mixed signals for marine mammals Rolling assessments based on common indicators	**Financing** **Mechanism for implementation – national** **Mechanism for implementation – regional** **Mechanism for implementation – International** **Technical implementation** **Data or information**
§1.2 To this end, the OSPAR Commission will:				

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
1.2.a. improve the status of threatened and/or declining species and habitats, in particular those on the OSPAR List, and ensure that they are effectively conserved, working, where appropriate, with other competent authorities	**In progress** Adopted Recommendations for 54 of the 58 OSPAR listed habitats and species. ICG-POSH was established in 2015 to coordinate this work. Creating awareness about the OSPAR listed features more generally, some progress POSH has supported work on collective arrangement and making that work more concrete Development of working practices and complex working processes, links to other ICGs, synergies,	Adopt any remaining recommendations that are necessary Implementation of collective actions of the roadmap POSH relation to work under EIHA, ICG-EcoC work better linkup of human activities to status of features Test status assessments have been undertaken to finalise the assessment approach (black-legged kittiwake and harbour porpoise**)** and first full assessments are being progressed, to be contributions towards the QSR 2023.	Existence of POSH Indicator assessments where relevant Programme of status assessment work established Action sheets of Roadmap on collective actions	**Technical implementation** Difficult to establish cause-effect between improvement in status of the features linked to the work done **Data or information** Difficult to get real-time information resulting in a measure **Mechanism for implementation – regional** The need for complex processes, slow response from evaluating whether a feature is T&D until a measure is implemented
1.2.b further OSPAR's work on marine protected areas with the view of achieving a network of marine protected areas which:				
1.2.b.i. by 2012 is ecologically coherent, includes sites	**In Progress** Work on the issue of developing an ecologically coherent network across the OSPAR Maritime Area	Foreseen to be partially achieved by 2020, with significant progress in MPA coverage across the biogeographic regions and	The conclusions are based on various data sources including the OSPAR MPA database, annual OSPAR MPA network status sheets	**Technical implementation** Scientific understanding around MPA network principles, availability of

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
representative of all biogeographic regions in the OSPAR maritime area, and is consistent with the CBD target for effectively conserved marine and coastal ecological regions	is behind schedule, but has recently made good progress after the endorsement of a work plan produced by the eco-coherence task group of ICG-MPA in 2016 (endorsed by BDC 2017).	significant coverage of broad-scale habitat types and OSPAR T&D habitats and species where MPAs are appropriate. There are scientific knowledge gaps that need to be addressed to improve our assessment of ecological coherence within OSPAR; most notably around the principle of network connectivity.	and the biennial OSPAR MPA Status Reports.,	habitats and species data and our understanding of the suitability of MPAs for mobile species in particular, maintenance and update of the OSPAR MPA database.
1.2.b.ii. by 2016 is well managed (i.e. coherent management measures have been set up and are being implemented for such MPAs that have been designated up to 2012);	**In progress** Work on the issue is behind schedule In the IA 2017, the "four-question approach" was used to assess the management status of OSPAR MPAs. The guidance for assessments based on the four questions is currently being revised, with the aim to support the use of the four question approach in the QSR 2023. These four questions do address management effectiveness to a limited degree only (Question 4). ICG-MPA is currently discussing whether the 4 question approach is sufficient to assess if the MPAs are "well managed".	Foreseen to be in progress by 2020. A decision about the meaning of "well managed", applicable for both individual MPAs and the OSPAR MPA network should be made by OSPAR 2019 at the latest. Based on that decision, an assessment of MPA management effectiveness should be done by OSPAR 2022 to feed into the QSR 2023.	same as above	**Technical implementation** An agreed definition of what management effectiveness means in practice for the OSPAR MPA network as a whole as well as individual MPAs is missing. **Financing** Financial resources on Contracting Parties hamper the implementation of condition monitoring studies to detect the effectiveness of measures where these have been implemented to manage MPAs.

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
	Regular round table discussions on sharing experiences on implementing measures at ICG-MPA is a means to improve management			
1.2.c ensure that the effects of human activities and pressures on the marine environment, individually or cumulatively, do not adversely affect species, habitats and ecosystems, in particular those on the OSPAR List of Threatened and/or Declining Species and Habitats	**In progress** OSPAR Recommendation 2010/5 on assessments of environmental impact in relation to threatened and/or declining species and habitats has been adopted to ensure OSPAR listed species are taken into consideration in EIAs and SEAs. Listed species taken into account in EIAs Listed features included in management plans for MPAs Nationally adopted measures in place e.g. on licencing. No additional measures have been adopted since 2010 to manage human activities. However a number of guidelines on the management of human activities have: -Agreement 2012-02 (revised in 2017) Guidelines on best	Due to change of QSR date (2020-2023) JAMP Assessments on other activities/pressures are not expected before 2021/2022 Emerging issues identified: geoengineering, aspects of shipping, large scale aquaculture, carbon capture and storage, wet renewables, deep-sea mining and deep-sea disposal of mine tailings and a draft background document on Deep sea mining is being considered at EIHA 2020 Munitions management framework being considered	IA 2017 for dredged material Overview assessment of Implementation of Recommendation 2010-05 shows that the recommendation is not yet fully implemented. JAMP assessments environmental impact of human activities, based on: Adopted systematic reporting streams (common formats and instructions available) for: - Dumping and placement of waste or other matter at sea - Offshore renewable energy developments - Encounters of chemical and conventional munitions Data coming from other bodies: - Sand and gravel extractions Non-regularly collected data:	**All barriers apply**, but particularly acceptance, financing, data or information. Under "**other**" : organisational capacity within OSPAR committees, use of existing instruments **Technical implementation** Challenge to identify link between activities and status of features Availability of pressure layers **Data or information** Comparative analysis of how CPs manage human activities isn't available

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
	environmental practice in cable laying and operation -Agreement 2012-03 Guidelines on Artificial Reefs in relation to living marine resources -Agreement 2014-06 OSPAR Guidelines for the management of dredged material at sea -Agreement 2017-04 CEMP Guidelines for the assessment of dumping and placement of waste or other matter at sea		- tourism, coastal defence, cables and pipelines, carbon capture and storage, mariculture and artificial reefs as well emerging activities such as deep sea mining Other, based on diverse data streams, such as: - Shipping - Fishing And based on common indicators monitoring: - Quantities, types and sources and trends of ML, including impact on the marine environment - Pressure from underwater noise OSPAR List is considered in EIAs by oil- and gas industry at least in some CPs	
1.2.d substantially reduce marine litter in the OSPAR maritime area to levels where properties and quantities of marine litter do not cause harm to the coastal and	**In progress** Litter is abundant on beaches in the OSPAR Maritime Area. Plastic fragments, fishing gear and packaging are the most common types of litter. About 90% of recorded items are plastic. From December 2009 to January 2018 litter abundance declined significantly on 23% of the survey	Adopt any remaining measure that may be identified necessary notably OSPAR Recommendation on the reduction of plastic pellet loss into the marine environment	IA 2017, updated 2019 indicator assessments	**Financing** **Mechanism for implementation – national/regional/eu** **Technical implementation** **Data or information**

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
marine environment	sites and increased on 9% [2019 Assessment] Currently 56% of beached North Sea fulmars have more than 0.1 g of plastics in their stomachs, exceeding the OSPAR long-term goal of 10%. This reflects the abundance of floating litter and provides an indication of harm. The amounts of ingested plastics have decreased significantly over the past ten years. [2019 Assessment] The following actions have been taken to address this issue: OSPAR Agreement 2014-01 Regional Action Plan for prevention and management of marine litter in the North East Atlantic. According to the Secretariat's assessment of progress with implementation; 9 of the CPs reporting on national actions have more than 85% of the actions "Ongoing" or "Fully Implemented"; About 70% of the common actions are "In Progress" or "Fully Implemented". Measures already adopted (deliverable of action 53):			

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
	OSPAR Recommendation 2016/01 on the reduction of marine litter through the implementation of fishing for litter initiatives OSPAR Recommendation 2019/01 on the reduction of marine litter through the Implementation of Sustainability Education Programmes for Fishers (and Agreement 2019-08 on guidelines) Agreement 2017-08 Fishing for litter Guidelines Implementation in progress through ICG-ML as informed periodically in the implementation plan. Contracting Parties will also have implemented national measures in compliance with RAP national actions Common indicators have been agreed (beach litter, plastic particles in Fulmar stomachs, seabed litter, ingestion by turtles) and some assessments completed.			
1.2.e. endeavour to keep the	**In progress**	It will not have been achieved by 2020.	A first regional assessment of impulsive noise pressure was	**Data or information**

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
introduction of energy, including underwater noise, at levels that do not adversely affect the marine environment in the OSPAR maritime area	Currently there is only a pressure indicator for impulsive noise. Work is underway to develop an impact indicator for impulsive noise and to develop ambient noise monitoring. A first project to start ambient monitoring in Region II, JOMOPANS, is underway; another project, JONAS, covers Regions III and IV. The following guidance has also been developed; Adoption of monitoring guidance (Agreement 2014-08 Monitoring Guidance of Underwater Noise in European Seas)Monitoring and Assessment of impulsive noise, based on an OSPAR common registry (Agreement 2017-07 CEMP Guidelines for monitoring and assessment of loud low and mid-frequency impulsive sound sources in the OSPAR maritime region) Adopted monitoring Strategy for Ambient underwater noise (Agreement 2015-05 OSPAR Monitoring Strategy for Ambient underwater noise)	The indicator on impact of impulsive noise and ambient noise are in development and may be adopted by 2020 Work on an Underwater noise RAP has been postponed until the monitoring is further developed. Ambient work will have produced initial results. JOMOPANS will complete by end 2020 providing the means to assess and an implementation plan for monitoring.	completed for the 2017 Intermediate Assessment and was updated in 2019. To be noted in this assessment the description of the noise registry and recognising the limitation on the available data in the registry, data gaps still exist due to reporting not being complete	**Acceptance** (in getting widespread agreement on thresholds)

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
	Contracting Parties have implemented national mitigation measures – • Noise reduction measures such as use of bubble curtains included through the registry on impulsive noise • Other mitigation measures to reduce exposure are being taken, such as through application of operational measures as identified in the OSPAR inventory of measures to mitigate the environmental impact of underwater noise An updated indicator assessment of pressure from impulsive noise was produced in 2019.			
1.2.f Endeavour to limit the introduction of non-indigenous species by human activities to levels that do not adversely alter the ecosystems	**In progress** OSPAR, HELCOM and Barcelona Conventions put in place voluntary guidelines for the shipping industry that request vessels entering the waters concerned to exchange all their ballast tanks at least 200 nautical miles from the nearest land in water at least 200 metres deep In preparation for the entry into force of the IMO Ballast Water	closer link between the status indicator and OSPAR measures to limit introduction such as ballast water management by ensuring NIS EG is linked both to BDC and EIHA Further ratifications following the coming into force of the Ballast Water Convention in September 2017.	Agreement 2012-04 General Guidance on the Voluntary Interim Application of the D1 Ballast Water Exchange Standard by Vessels Operating between the Mediterranean Sea and the North-East Atlantic and/or the Baltic Sea Agreement 2015-01 Joint harmonised procedure for the contracting parties of HELCOM and OSPAR on the granting of exemptions under International Convention for the Control and	**Acceptance** **Financing** **Mechanism for implementation – national** **Mechanism for implementation – regional** **Mechanism for implementation – International** **Technical implementation**

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
	Management Convention, the Joint Harmonised Procedure for the Contracting Parties of HELCOM and OSPAR on the granting of exemptions under the International Convention for the Control and Management of Ships' Ballast Water and Sediments, Regulation A-4 was adopted The common indicator NIS3 quantifies the level of new introductions and spread. This could inform management action The indicator does not cover the adverse impact on the ecosystem.	Ongoing updating and refinement of the Joint Harmonised Procedure due in 2020. Increased cooperation on hull fouling of recreational craft, as a result of widening the terms of reference of the Joint Task Group on ballast water exemptions.. .	Management of Ships Ballast water and sediments IA2017 assessment; trends in new records of non-indigenous species introduced by human activities NIS EG workplan	There is lack of standardised monitoring in the OSPAR area resulting in low confidence in the data. **Data or information**
§3.1 To achieve its objectives and in accordance with the findings of the QSR2010, the OSPAR Commission will focus on the following main strategic directions in the period up to 2020:				

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
3.1 a. ensuring the protection and conservation of biodiversity and ecosystem functioning throughout the OSPAR maritime area and, when practicable, restoring marine areas which have been adversely affected. This will be done through the further development and implementation of appropriate programmes and measures within the sphere of competence of the OSPAR Commission and, where necessary, engagement and technical cooperation with other authorities	**In progress** The framework for protection and conservation of species and habitats has been put in place, including the adoption of recommendations and the development of the collective arrangement. The status assessments have not yet been undertaken to assess if this framework has been successful	Progress has been made in implementing the national actions in the recommendations as highlighted through the 2013 and 2016 reporting. The roadmap for the collective actions was adopted in 2016 and implementation of actions will be underway.	Implementation reporting and status assessments Status assessments as available	**Mechanism for implementation – regional** **Technical implementation**
3.1.b. further developing the OSPAR network of	**Partially achieved**	See above for MPA management and eco-coherence.	See above for MPA management and eco-coherence.	See above in 1.2 **Data or information**

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
marine protected areas, including in areas beyond national jurisdiction, ensuring that the network is ecologically coherent in the OSPAR maritime area and that effective management is in place at all sites;	Overall, there is good progress in MPA designation. Number of MPAs and their coverage of total area and Dinter regions are increasing. Management plans and management measures are being developed and implemented. However, there are certain shortcomings that are well reflected in entries above pertaining to well-managed and ecologically coherent networks. The most substantial shortcomings and future tasks include: - The OSPAR MPA network needs to be further expanded. - The quality and effectiveness of MPA management have to be ensured by the implementation of effective management measures in all OSPAR MPAs (national and ABNJ). - Eco-coherence of the MPA network has to be achieved, considering methodological and conceptual limitations of the assessment of eco-coherence.	With respect to OSPAR-MPA number and coverage, it is unlikely that by 2020 the whole OSPAR maritime area, all individual Regions and/or all “categories” of waters will have accomplished the 10% of CBD Aichi Target 11. (In 2020 CBD will renegotiate this target)	With respect to MPA coverage, the OSPAR MPA database is used to produce the yearly MPA assessment sheet and the biennial MPA Status Report.	**Financing**

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
3.1.c. integrated management of human activities, through, among other measures, the further development and implementation of tools such as marine spatial planning, impact assessment and socio-economic assessment, in order to achieve the reduction in pressures which are adversely affecting the marine environment and the sustainable use of ecosystem goods and services	**In progress** Some development has been made on Cumulative Effects Assessment methodology and socioeconomic assessments as outlined in IA2017. In relation to the development and implementation of tools like marine spatial planning and impact assessment there has been no progress. In relation to MSP CPs have decided not to work on this.	Further development of integrated assessment approach aimed at the QSR 2023	Chapters included in the 2017 Intermediate assessment. Further progress reported to CoG by the expert groups.	**Acceptance** **Data or information**
3.1d: regional, coordinated development of monitoring and assessment of marine biodiversity and ecosystem	**Partially achieved** Substantial progress towards regional, coordinated development of monitoring and assessment of marine biodiversity and ecosystem functioning through developing	Dependent on resources, including national experts Hopefully further towards a consolidated set of indicators and integration of indicators for an overall status assessment in preparation for QSR2023.	Indicator Testing document EcApHRA-project IA2017 CEMP guidelines	**Mechanism for implementation – regional** **Mechanism for implementation – EU level** **Technical implementation**

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
functioning, including the individual and cumulative pressures and environmental impacts from human activities and climate change and ocean acidification.	indicators of the status of species groups, community composition, pelagic and benthic habitat condition and food web function First assessments prepared for IA2017, there are still development needs on most indicators. Pressure-state relationships needs to be further clarified in many cases. Revised EU MSFD Commission Decision necessitates some revision or adaptation of OSPAR's common approaches. This work is underway. Progress in developing coordinated monitoring through CEMP guidelines (coordination tools). While the model of national monitoring programmes coordinated through OSPAR might be appropriate for some biodiversity components, other approaches (collaboration with fisheries survey, use of existing data) may be needed. Climate change signals are apparent in some indicator assessments but there are still challenges in distinguishing from	Start with rolling assessments for biodiversity indicators BDC need to give guidance to set priorities on further work with the resources available. Identification of opportunities for future coordination between national monitoring programmes and other actors ICG-OA will be developing a detailed work plan for monitoring and assessment of ocean acidification Progressing CP´s monitoring programmes	ICES-OSPAR Study Group on Ocean Acidification (SGOA)2014 recommendations	In some cases methods still need to be developed **Data or information** **Financing**

Reference to strategy (paraphrased)	Progress	Expected position by 2020	Evidence base	Barriers
	other anthropogenic impacts. The indicators on pelagic habitats may provide a basis for this. Individual pressures – mainly EIHA and other committees. All benthic indicators have been designed to assess impacts of pressures through a change in status. See 3.1c for cumulative effects CoG invited HASEC to consider work required to take on the mandate for ocean acidification, with a view to developing it in OSPAR. HASEC 2018 discussed what this mandate might entail and the feasibility of carrying out work that would be needed. Some work has been undertaken on climate adaptation plans however this has not been continued There has been limited progress on assessing other physical impacts from climate change in relation to biodiversity through OSPAR.			

1.2 Timeframe and implementation

Table 1.2: Timeframe and implementation

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
§4.2 For the implementation of this Strategy the OSPAR Commission will					
4.2a: continue to monitor and assess, in accordance with the criteria of Appendix 3 to the 1992 OSPAR Convention and with the Joint Assessment and Monitoring Programme, the effects of human activities and pressures, individually and cumulatively, on the marine environment, biodiversity and ecosystem functioning;	**In progress (BDC)/ongoing (EIHA)** 17 common indicators on biodiversity and 5 on pressures from human activities have been developed since 2010. The first quantitative, holistic, regional biodiversity assessment has been completed. Substantial progress has been made over the last decade on developing indicators on food-web, pelagic, benthic habitats. Substantial progress has been made on establishing data arrangements The link between cause and effect can be very complex for biodiversity indicators. Work to characterise this better will provide the needed evidence for management measures. Limited progress for assessments in Region I and V compared to Regions II, III and IV	ICG-COBAM, and national experts involvement in expert groups Project resources from EU Maritimne and Fisheries Fund for the Ecaprha project enabled development of benthic and pelagic habitats assessments Operationalisation of biodiversity indicators and assessments A link with EIHA is needed to link for pressures ICGs ML, Noise, EIHA Committee for other data and assessments	**Financing** Resource for indicator development, both availability of experts and funding **Data or information** Data flows and the nature of the data **Mechanism for implementation – international** Lack of cooperation and working relationships with competent organisations outside OSPAR **Mechanism for implementation – national** **Mechanism for implementation – regional**	No date of achievement set in the strategy objective There will be different dates between indicators and progress will depend on resources. Many of the human activities which are not regularly monitored such as Shipping and Fisheries will only analysed for the QSR 2023 Indicator assessments on noise and litter due in 2019	IA 2017 CEMP appendices, CEMP guidelines Annual monitoring Annual reports

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
	Data collected on various human activities as listed under table 1.1, section1.2.c Assessments on dredged materials, etc Candidate indicators for marine litter (microplastics in sediments) and impact of impulsive noise under development. Some national monitoring of ambient noise has been undertaken. Joint Monitoring of ambient noise commencing in 2019 in the North Sea Human Activities and Pressure Information needs as identified have to be addressed		[in]Sufficient monitoring **Technical implementation** Knowledge gaps, especially on impact-effect relations from human activities (alone and in cumulation) on biodiversity indicators.		
4.2b: by 2013, agree on an overall assessment process for marine biodiversity and ecosystem functioning, and develop and agree by 2014 a coordinated monitoring programme for the ongoing assessment of the environmental status with regard to biodiversity and ecosystem functioning in the OSPAR maritime area	**In progress** 2013 – agreement was reached on a set of biodiversity common indicators This is not yet a fully developed set and some indicators require consolidation, development of some indicators started from a basic conceptual level and they have have progressed towards regional operationalisation	ICG-COBAM, and national experts involvement in expert groups Operationalisation of biodiversity indicators and assessments A link with EIHA is needed to link for pressures	**Financing**; Resource for indicator development **Data or information;** Data flows, Sufficient monitoring **Financing**; Resources for monitoring	By 2020 a first set of CEMP guidelines will be ready CEMP guidelines to be fully developed for the next MSFD Art 11 monitoring reporting in 2026 once the indicators have been operationalised.	CEMP appendices and CEMP guidelines Ongoing monitoring

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
	2015 CEMP agreement took up biodiversity common indicators – but note they are not all mandatorily monitored and model of CEMP might need to be applied differently for biodiversity issues	Monitoring programmes can be defined through indicator development and identification of data needs for assessment, but indicators can also be defined based on existing monitoring	**Mechanism for implementation national;** Mismatch of ongoing monitoring compared to indicator needs **Mechanism for implementation – regional;** Coordination of monitoring **Technical implementation** Monitoring targets hiding under water, Lack of baseline data; Knowledge gaps	Further work on coordination of monitoring (between countries and between subjects, like biodiversity and fisheries monitoring) will continue, not possible to set a concrete date.	
4.2c: assess, based on monitoring data, the current and future impacts of climate change and ocean acidification on species, habitats and ecosystem functioning; establish the timescale(s) for such impacts to take effect and their possible extent; and consider management options suitable for mitigation of, and adaptation to, such impacts	**Not achieved** Still remains difficult to distinguish climate change effects from anthropogenic effects. Biodiversity indicators implemented on the regional scale might be used in the future to distinguish climate change effects on a regional scale in the ecosystem Physical parameters such as sea surface temperature, salinity, sea level, wave high, sea ice extent	ICG-COBAM in cooperation with EIHA and HASEC. A life-form pair in an existing pelagic habitat indicator could be developed to assess ocean acidification effects on calcareous species Signals from all biodiversity indicators could be	**Technical implementation;** Knowledge gaps (e.g. OSA) Limited time series; currently not possible to distinguish trends **Mechanism for implementation – regional;** Lack of internal OSPAR coordination	ICG-OA established in late 2018 but is not foreseen to deliver evidence by 2020 and will not consider impacts on species/ecosystems Next assessment will be QSR 2023	QSR2010 IA2017

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
	were not specifically mentioned in the last strategy and haven't been addressed.	used to evaluate climate change effects Creation of ICG-OA to progress Contracting Parties' monitoring multiannual programmes (described in ToR). IA17, EIHA briefly considered climate change adaptation; however there is no ongoing work	**Financing**; Resource for indicator development **Technical implementation;** Environmental modelling has not been utilised to understand the biodiversity indicator signals **Other**: no common understanding on OSPAR role – cross reference to indicator development in HELCOM and how it has been taken up as an issue		
d. undertake the following actions in further developing appropriate measures for the protection of threatened and/or declining species and habitats on the OSPAR List of Threatened and/or Declining Species and Habitats ("the OSPAR List"), in order to improve their status and to ensure they are effectively conserved:					
i. identify targeted protective measures for species and habitats included in the OSPAR List on the basis of information	**In progress** Measures have been adopted through recommendations	Background documents	**Acceptance**	Unclear when final Recommendations would be adopted, A proposal for a	See all the recommendations, the roadmap,

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
contained in the OSPAR background documents for species and habitats, the report of the OSPAR Workshop on defining actions and measures for the threatened and/or declining species listed by OSPAR (Paris, 2009) and any other sources considered relevant	covering 54 of the 58 listed habitats and species. Following information exchange with ICCAT it was agreed not to adopt a Recommendation for Bluefin tuna at the current time. OSPAR has agreed that there is no need to develop a Recommendation for Nucella lapillus, as the most relevant measures have already been taken (both by OSPAR and other actors). This may be reconsidered after the completion of a status assessment. Consideration of appropriate measures with regard to he Houting and Great Azorean Barnacle still needs to be completed.	adopted and updated Discussion with other competent authorities to deliminate what measures OSPAR should take (e.g. with NASCO, NEAFC)	**Mechanism for implementation – national** **Mechanicsm for implementation - regional**	recommendation for Houting and Azorean Barnacle are being considered and may be agreed by 2020	and 2013/16 reporting. 2016 reporting against Recommendations Collective arrangement formalises competency-boundary between OSPAR and other authorities
ii. develop and adopt as soon as possible, but no later than 2013, OSPAR programmes and measures (Decisions or Recommendations and guidance) aimed at improving the protection of the species and habitats on the OSPAR List, or groups thereof, outlining those targeted actions that should be taken by Contracting	**Fully achieved**, note later date of completion 16 of the recommendations were adopted before 2013	Measures adopted The Contracting Parties are recommended to consider implementing individual national actions, reporting in 2013 and 2016. The collective actions are taken	**Mechanism for implementation – regional** Due to the need to develop a common understanding of the competence of OSPAR in relation to fisheries there was a delay in adoption of some recommendations	Most recommendations adopted and the remaining should be completed by 2020	OSPAR Recommendations

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
Parties and the OSPAR Commission		forward through the roadmap, adopted 2017	**Financing** Capacity issue of drafting the background documents and recommendations for a large number of features		
iii. bring to attention of relevant competent authorities and international bodies those protective measures that the OSPAR Commission considers necessary and which fall within the competence of those authorities and international bodies	**Ongoing** The Secretariat undertook to write other competent authorities highlighting that recommendations have been adopted The collective arrangement has been adopted by OSPAR and NEAFC. Other competent authorities are actively invited to adopt the agreement. OSPAR has communicated with other competent organisations, such as ICCAT, NASCO, ISA, IMO through MoUs and other mechanisms when there has been a need to bring information to the attention of these organisations.		**Mechanism for implementation - national** Internal coordination within Contracting Parties **Mechanism for implementation – regional** **Mechanism for implementation – international** Getting other competent authorities to participate in collective arrangement	On-going process	Collective arrangement agreement

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
iv. evaluate by 2016 whether actions and measures being taken are adequate to achieve the objective set out in §1.2(a), taking into account those being taken by the OSPAR Commission and other competent authorities and international bodies	**Not achieved** by 2016 Currently in progress Parties reported against implementation of 16 recommendations in 2013 and 32 recommendations in 2016. An assessment of whether or not they are adequate has not been undertaken	Contracting Parties have to report on implementation of measures every 6 years. A status assessment methodology has been developed and is ready for testing. First step is to evaluate which actions and measures have been taken, this through the regular reporting agaist recommendations. Second step to evaluate adequacy (under development)	**Data or information** Having an evidence base across the OSPAR maritime area that enables the Commission to determine if status of the habitats and species has improved. Insufficient monitoring and resulting in insufficient data to support and evaluation **Financing** Capacity to undertake the work and knock on from late adoption of Recommendations **Technical implementation** Long-term effects of some activities and thus it's not feasible to assess adequacy in the short term	A methodology is being developed and a continuous assessment process will be adopted in 2019. A proportion of assessments to be undertaken by QSR 2023	2013 and 2016 implementation reporting. Some aspects from IA 2017 Test assessments for developing the JAMP B3 methodology
v. review the OSPAR List with a view to removing any species or habitats that no longer meet the criteria for listing and adding new species and	**Not achieved** This is now an ongoing task of ICG POSH rather than a systemic review. There is a clear process in	It is on the agenda for each POSH meeting.	**Mechanism for implementation - regional** Political and Governance issues	Ongoing	Will be based on case reports Haploop communities and kelp forests likely

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
habitats that fulfil the criteria. Identify any new programmes or measures required to ensure improved conservations status of species and habitats contained within such a revised list	place for listing and de-listing habitats and species.		have made it difficult and protracted to add new features to the list **Technical implementation** Delisting rightly needs evidence of recovery. The evidence required may be difficult to establish at OSPAR scale.		to brought forward again in 2019.
4.2. e. strengthen the knowledge of ecosystem integrity and resilience of the components of marine biodiversity	**In progress** Knowledge is always increasing as a result of scientific progress. Knowledge on species and habitats has significantly increased since 2010. Food-web indicators have contributed to strengthening knowledge	ICG-COBAM and related expert groups OSPAR Science agenda The process of developing indicators and monitoring, understanding ecosystem function and sensitivity to pressures	**Technical implementation** Knowledge of pressure-state relationship More maturity of indicators and integration Data or information; Lack of analysis and reflection on results from indicator assessments, in particular what the IA2017 is telling us	The objective does not give a date, difficult to state when 'knowledge strengthening' has been fully achieved	Ecaphra action plan Expert group workplans
§4.2f. undertake the following actions in further developing an ecologically coherent OSPAR network of well-managed marine protected areas ("the OSPAR					

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
Network") to complement the actions of Contracting Parties under the revised OSPAR Recommendation on a Network of Marine Protected Areas					
i. identify, on the basis of reports from Contracting Parties and observer organisations, further possible components of the OSPAR Network in areas beyond national jurisdiction in order to achieve the purposes of the network, as described in paragraph 2.1 of OSPAR Recommendation 2003/3 and taking due account of guidance provided in the OSPAR agreements 2003-17 (selection of MPAs) and 2006-3 (coherent network of MPAs);	**In progress** 10 MPAs in ABNJ are established 2 proposals under consideration	OSPAR decision adopted for 10 MPAs in ABNJ	**Technical implementation** Unclear if ecologically coherent and well managed, thus not possible to state that the purpose has been achieved	n.a.	Annual MPA report and Intermediate Assessment (IA) 2017, periodic assessments Status report based on 2018 reporting
ii. in accordance with UNCLOS, and in consultation with the relevant competent international organisations, develop and implement the management framework adopted by the OSPAR Commission for those MPAs in areas beyond national jurisdiction already included in the OSPAR Network and, if appropriate, consider how	**Ongoing**	Collective Arrangement; management taken by another authority (currently NEAFC and OSPAR have adopted the collective arrangement Agreement, work is ongoing to enlarge	**Mechanism for implementation – regional** **Mechanism for implementation - international** Collective Arrangement does not cover all	Unknown, not foreseeable (UN negotiation on ABNJ may have an influence)	Intermediate Assessment (IA) 2017, periodic assessments seeking views on NACES MPA proposal

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
such protection could be achieved for any further areas identified under (i) and how to integrate such areas into the network;		the collective arrangement)	management authorities		
iii. evaluate in 2012 whether the components of the OSPAR Network that have been selected by that date fulfil the OSPAR target at § 1.2(b), the commitment of the World Summit on Sustainable Development (WSSD) of representative networks, and the target of the Convention on Biological Diversity to have at least 10 per cent of each of the world's marine and coastal ecological regions effectively conserved;	**Fully implemented** yes, it was evaluated.	Measures adopted, regular assessments published		n.a.	MPA report 2012/13 The target was met in 2012 for the OSPAR Greater North Region and later for the Celtic Sea Region. Not yet met in the other OSPAR Regions.
iv. identify any gaps which need to be filled, especially in offshore areas and areas beyond national jurisdiction, in order to achieve, by 2012, an ecologically coherent OSPAR Network and maintain it thereafter, and take steps towards filling any such gaps in areas beyond national jurisdiction as soon as possible	**In progress** For example, work to identify critical habitat for certain OSPAR Listed species which could be proposed for inclusion in the MPA network is ongoing under ICG-POSH. This work may help complete this analysis in the future.	Measures adopted (work plan of task group), assessments published	**Data or information** Data paucity, **Financing** capacity/resource limitations, methodological **Technical implementation** conceptual constraints	Unknown not yet foreseeable	MPA Report 2012/2013, Intermediate Assessment (IA) 2017, periodic assessments, Action Sheet 12&13 in the species and habitats Roadmap

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
			(see also objective 1.2)		
v. evaluate by 2016, whether OSPAR MPAs are well-managed, working, where relevant, in cooperation with competent authorities;	**In progress** by 2016 progress has been made, however continued work to develop assessment method is needed	Contracting Parties report on national management efforts through Recommendations 2010/11-2010/17 and 2012/1 Collaborative cooperation on management of ABNJ MPAs through the collective arrangement.	**Technical implementation** There is no agreement on the definition of "well managed" (see also objective 1.2)	It may be possible to complete the evaluation by 2020.	MPA report 2017, Intermediate Assessment (IA) 2017, periodic assessments Guidance document for reporting on management
vi. if so requested by a Contracting Party concerned, consider whether any action by the OSPAR Commission, or concerted action by the Contracting Parties, is needed to support efforts by Contracting Parties to achieve the institution of management measures by an international organisation for any component of the OSPAR Network.	**On going** no need for this action has arisen so it has not been relevant to implement. The collective arrangement is used to complete such tasks.				
g. on the basis of continued monitoring and assessment of human activities, keep under review, and if necessary, draw up,					

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
programmes and measures for the management of human activities with a view to:					
i. controlling the effects of human activities and pressures, individually and cumulatively, on the marine environment	**On going**	See table 1.1., section 1.2.c	**all barriers** potentially relevant Recommendation 2010-05 has not been fully implemented. Some CPs had problems as the OSPAR List of species and habitats is not legally binding	Munitions management framework being considered Background doc on deep sea mining under discussion at EIHA 2020 and further work on deep sea disposal of mine tailings is being considered but probably after 2020 Cumulative effects assessment methodology will be implemented in the QSR 2023	Annual monitoring and reports, IA2017, Rec 2010-05 implementation overview assessment
ii. restoring, where practicable, marine areas which have been adversely affected.	**Ongoing** No structured approach, however some projects have been identifified (e.g. LIFE project BLUEREEF - Rebuilding of Marine Cavernous Boulder Reefs in Kattegat, Denmark), seagrass restoration on west coast of Sweden.	Knowledge gap on how to carry this out Active restoration vs. Allowing the area to recover by managing the human activity requires further	**Financing** measures are going to be expensive Capacity in committee **Technical implementation** Lack of practical knowledge on whether restoration is	Potential for some work on oyster beds and zostera beds through ICG-POSH. Noted that this is still at research level.	Reporting against Recommendations in 2013/2016

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
		method developemnt only consider ecological compensation when it leads to net gain of the feature	effective and practicable for most features **Data or information**		
h. collaborate and exchange information (e.g. on vulnerable marine ecosystems) with fisheries management authorities, advisory organisations, the fishing industry and other relevant stakeholders, so as to promote and support the integration of fisheries management with ecosystem-based management of the North-East Atlantic, the sustainable management of fisheries consistent with OSPAR Ecological Quality Objectives, and an improved assessment of fisheries which supports measures to achieve good environmental status	**Ongoing** Collective arrangement with NEAFC Communication with other RFMOs (incl with ICCAT) Acknowledge that there has been development in EU CFP and that this work is carried out by CPs nationally through other forums than OSPAR	Annual meeting, along with invitation to observe at each other's meetings (NEAFC come to BDC and OSPAR goes to PECMAS) National coordination between env. and fisheries	**Data or information** **Mechanism for implementation – national** **Mechanism for implementation – regional** **Mechanism for implementation – EU** challenges in establishing national coordination between colleagues working on environmental and fisheries issues, due to conflicting goals and responsibilities	ongoing	Collective arrangement agreement Updated EU CFP
i. encourage the ratification, implementation and enforcement of relevant instruments of the IMO and other competent organisations and relevant stakeholders (e.g.	**Ongoing** New MoU between OSPAR and IMO (London Convention)	Assessments published	**Mechanism for implementation – national**	Ongoing	Intermediate Assessment (IA) 2017, periodic assessments

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
Bonn Agreement and North Sea Network of Prosecutors and Investigators) on actions addressing impacts of maritime transport on the marine environment	EIHA issues brought through the MoU to attention of IMO (litter, noise, NIS, anti-fouling)	Overlap between Secretariats of OSPAR and Bonn	Development and implementation in national MPAs by CPs. Challenge to establish contact nationally **Mechanism for implementation – regional** **Mechanism for implementation - international** Support is required to engage organisations in CollArr, e.g. IMO, ISA, ICCAT, etc.		
j. develop appropriate programmes and measures to reduce amounts of litter in the marine environment and to stop litter entering the marine environment, both from sea-based and land-based sources, to complement the actions of Contracting Parties such as under OSPAR Recommendation 2010-XX on the reduction of marine litter through the implementation of 'Fishing for Litter' initiatives, including:					
i. by 2012, based on an evaluation of progress made and available data, establish	**Not achieved**	On action 29 of the Regional Action Plan on Marine	**Mechanism for implementation - EU**	Thresholds may be developed by 2020.	IA 2017, Regional Action Plan

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
regionally[10] coordinated targets for marine litter	The objective of OSPAR Contracting Parties is to have a significantly decreasing trend in the abundance of the most common litter items which contribute to 80% of the total amount of litter recorded on beaches. This objective could be considered a reduction target because it directly relates to measures to reduce specific items within a sub-region or region, and can be used to assess the effects of litter reduction measures. OSPAR 2019 endorsed a target for Fishing for Litter (FFL), to increase the total number of vessels participating in FFL schemes in the OSPAR maritime area by 100% by 2021, compared to the baseline situation in 2017. (A target for total abundance will not be set, because total abundance does not relate to specific measures implemented or planned for given litter items or groups of items.)	litter ("develop and agree regionally coordinated SMART reduction/operational targets linked to relevant actions as contained in this implementation plan, starting from 2015, including those linked to sources") ICG-ML 2016 (2) took the decision that the targets should be proposed specifically for each management action by the task leads	The main challenge stems from obligation of the new Commission Decision (COM Dec 2017/848/EU; May 2017) of setting threshold values at EU level, thus progress depends on progress being made in TG ML.	Targets can be expected for some measures fully implemented in the RAP by 2020. Reduction targets for specific items may be developed by the implementation of RAP actions addressing those items.	

[10] "Sub-regionally" for the purposes of the Marine Strategy Framework Directive

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
ii. by 2014, a coordinated monitoring programme for marine litter	**On going**	Adopted common indicators for beaches, seafloor afulmars and turtles. Adopted candidate indicator for microplastics in sediment	**Technical implementation** **Data and information** Limited Scientific knowledge in relation to microplastics and impact on biota. Several projects (INDICIT, BASEMAN, Clean Atlantic…) are working on standardisation of methodologies	Quality of the monitoring programmes (incl. QA, representatively, standardisation of methods) for common indicators will be improved	OSPAR Coordinated Environmental Programme (CEMP) revised in 2017 Agreement 2007-05 CEMP Guidelines for monitoring marine litter washed ashore and/or deposited on coastlines (beach litter) Agreement 2017-06 CEMP Guidelines on litter on the seafloor Agreement 2015-03e CEMP Guidelines for monitoring and assessment of plastic particles in the stomach of fulmars in the North Sea area

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
iii. promotion of research to improve the evidence base with respect to impact of litter, including micro-particles, on the marine environment	**Ongoing**	OSPAR Assessment of land-based inputs of microplastics in the marine environment OSPAR Science needs agenda Link/engagement with external projects lead by a Contracting Party, e.g. INDICIT, Oceanwise and Clean Atlantic JPI Oceans	**Financing** Sufficient budgets/resources available within Contracting Parties	On-going update of science needs agenda Higher cooperation with other international bodies on coordination of research	OSPAR Assessment of land-based inputs of microplastics in the marine environment OSPAR science needs agenda Other regional and national programmes
k. foster, in cooperation with the North Sea Network of Investigators and Prosecutors, enforcement and prosecution of offences under Annex V on garbage to the International Convention for the Prevention of Pollution from Ships (MARPOL 73/78 Convention);	**Ongoing**	Implementation of Marine Litter RAP actions 32, 33 and 38 results presented to NSN; on-going discussion with EMSA	**Mechanism for implementation – national** Competence issues with other policy sectors, close involvement of transport sector needed.	Will be progressed before 2020	ML RAP

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
l. consider, identify and implement measures on noise	**In progress** Some Contracting Parties have implemented mitigation measures nationally for impulsive noise (see review against thematic objective 1.2.e) Coordination of environmental targets or measures at larger scale not yet obtained	OSPAR inventory of measures to mitigate the emission and environmental impact of underwater noise (pile driving and seismic surveys) work needed on further chapters EIHA 2017 considered it was too early to develop a regional action plan on underwater noise Assessment based on monitoring programmes and research into effects of noise, based on this information, mitigation measures can be designed and coordinated on regional scale Impulsive noise registry	**Acceptance** **Data and information** **Mechanism for implementation – international (shipping)** Joint monitoring not yet in place and more research needed on impacts (e.g. effects on population level), to identify what measures are needed Lack of lead countries for certain activities not yet covered in the inventory of mitigation measures Not every country has the noise registry in place Lack of thresholds and targets which could help agree on measures	Progress not expected before 2020 Progress on monitoring is expected, impulsive noise monitoring started in 2015 and ambient noise monitoring is foreseen in 2019 Monitoring and assessment on ambient noise expected in at least one sub-region Impulsive sounds impact indicator planned for adoption in 2019 with assessment approved in 2020 (JOMOPANS deliverables, update as relevant)	IA 2017 impulsive noise

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
m. further develop appropriate measures, in line with the Ecosystem Approach as set out in section 4 of Part I, to facilitate marine spatial planning in the OSPAR maritime area, including:	**Not achieved** (applies to whole of MSP objectives) However, for most countries progress was achieved through EU Directive		**Acceptance**		
i. cooperation on transboundary issues that are arising from marine spatial planning;	No progress		CPs have chosen not to work on MSP within OSPAR at this time	To be determined	
ii. where necessary, additional mechanisms for transnational consultations on marine spatial plans and issues arising from them;	No progress		CPs have chosen not to work on MSP within OSPAR at this time	To be determined	
iii. region-specific, tailor-made approaches to applying marine spatial planning to support the Ecosystem Approach;	No progress overall, but some progress within OSPAR regions II, SEANSE project		CPs have chosen not to work on MSP within OSPAR at this time	To be determined	
iv. exchange of best practices and experiences with regard to marine spatial planning.	Very limited progress	Exchange of views through ICG-MSP whilst still operational	ICG-MSP disbanded	To be determined	
n. further develop cumulative effect assessment methodologies to support the implementation of the Ecosystem Approach and facilitate the fulfilment of requirements under the EU Marine Strategy Framework Directive, particularly in relation to the	**In progress**	Methodology outlined in IA 2017 and further work under way in ICG-C	**Financing** Resources for the implementation of the methodology are limited	Methodology will be further developed but next assessment will be for QSR 2023	IA 2017

Reference of Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
assessment of biodiversity and ecosystem functioning; assessment methodology					
o. by 2012 prepare an economic and social analysis and cost of degradation	**Fully implemented**	Assessment was undertaken and IA2017 assessment was finalised in 2019. Work ongoing to embed socioeconomic analysis in OSPARs work, including in the development of measures, through ICG-ESA			Strategic Support for the OSPAR Regional Economic and Social Analysis OSPAR Publication 2013-611 Overview of OSPAR Regional Economic and Social Analysis Data OSPAR Publication 2013-612 IA 2017

2 Assessment of HASEC's progress against the eutrophication theme

2.1 Thematic objective, main strategic directions and ministerial commitments

Table 2.1: Eutrophication thematic objectives, main strategic directions and ministerial commitments

	Progress	Barriers	Expected position by 2020	Evidence base
1.2a. achieving that human-induced eutrophication is minimised, especially the adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algae blooms and oxygen deficiency in bottom waters	**Partially achieved** and **in progress**: Progress made in that eutrophication status has improved in Region III and part of II, but it is still present in some coastal waters and in the German Bight and Kattegat. Eutrophication in the OSPAR Maritime Area is still observed in 98 000 km^2 (7%) of the assessed area. The areas still affected are mainly located along the southern and eastern coasts of the Greater North sea, stretching continuously from Northern France to southern Norway, as well as in some inshore coastal waters of the Celtic Sea and Bay of Biscay.	**Technical implementation**: Problems with agreeing regionally consistent eutrophication indicator threshold levels. **Financing**: ICG-EMO (modelling) work is expensive and suffered from a lack of financial support. **Data and information**: Under-sampled areas in regional monitoring programmes. Difficulties coordinating with EU's WFD, which has a focus on fresh and coastal waters. Mechanism for implementation at EU level Gap in environmental ambition between Common Agricultural Policy and the Water Framework Directive	No significant changes in eutrophication status are expected by 2020. [No change, but the JMP EUNOSAT will aid with future work] Programmes of measures take a long time to take effect. By 2020, ICG-Eut intends to have agreed assessment areas and regionally agreed threshold values, based on the results of JMP EUNOSAT and work to develop OSPAR Common Procedure, in order to deliver in time for QSR 2023. Further development of protocols for multi-purpose, regional-scale monitoring programmes. There is a variable change inputs of different nutrients; reduction in P is greater than N that is affecting nutrient ratios (increase in nutrient species), which could affect eutrophication status in coastal waters.	**Still relevant**: COMP 2017 (OSPAR Publication 2017/694) National work on eutrophication monitoring, thresholds, modelling, national applications of the Common Procedure. OSPAR integrated report on eutrophication status in the North-East Atlantic maritime area, based on national and regional work. Results from the JMP EUNOSAT project, including; defining regionally coherent assessment areas; proposing regional thresholds; advancement of the use of satellite observation data; Nutrient input work at the national-level and by INPUT (IA2017).
1.2b. achieving and	**In progress**:	**Technical implementation**: Problems with agreeing	Would expect the programmes of measures (OSPAR, EU Directives,	**Still relevant**:

	Progress	Barriers	Expected position by 2020	Evidence base
maintaining, by 2020, that all parts of the OSPAR maritime area have the status of non-problem area	A small increase in the number of non-problem areas, but still a significant issue in coastal waters, where public awareness is highest.	regionally consistent eutrophication indicator threshold levels, which has hindered development of nutrient-reduction targets. **Financing**: ICG-EMO (modelling) work is expensive and suffered from a lack of financial support. Modelling would enable establishment of nutrient-reduction targets. **Data and information** – under-sampled areas in regional monitoring programmes. Difficulties coordinating with EU's WFD, which has a focus on fresh and coastal waters. Mechanism for implementation at EU level Gap in environmental ambition between Common Agricultural Policy and the Water Framework Directive	National measures etc.) to reduce eutrophication but no planned mechanism to assess this in the next 2 years. Increasing in cooperation between OSPAR and WFD and in particular the River Basin Management Authorities/Commissions.	COMP 2017 (OSPAR Publication 2017/694) Total surface of problem areas has reduced from 119,000 km^2 to 100,000 km^2 Development of long-term monitoring datasets that help experts understand the severity of issues. The datasets enable quantitative relationships between pressure and effect to be established, which inform the efforts required to bring areas into non-problem status.
Main strategic directions				
3.2a. ensure that the regional monitoring and assessment requirements	**Partially achieved**: Fully achieved for the first and second cycles of the MFSD (EU Commission Decision 2010/477).The assessment period was 2006-2014 did not match MSFD time-scales, but the integrated eutrophication report was	**Other**: MSFD and OSPAR assessments were not always applied to the same time-frames.	Further development work needed to meet the requirements of the new EU Commission Decision 2017/848.	**Still relevant**: JAMP, common indicators JMP EUNOSAT

	Progress	Barriers	Expected position by 2020	Evidence base
of the MSFD, using its relevant methodological standards and criteria and associated coordination activities, are fulfilled by the Eutrophication Monitoring Programme and the Common Procedure for the identification of the eutrophication status	published in time for use by Contracting Parties in their MSFD reporting in 2018. Four common indicators (nutrient inputs, nutrient concentrations, chlorophyll and dissolved oxygen concentrations) were applied, which match the MSFD Descriptor 5 primary criteria. Phytoplankton abundance indicators in relation to eutrophication were not applied. Working towards acceptance of regionally-harmonised thresholds for the indicators and MSFD criteria. Working towards defining ecologically-relevant assessment areas.	**Technical implementation**: problems with agreeing regionally consistent eutrophication indicator threshold levels. **Acceptance:** Working towards acceptance of regionally-harmonised thresholds for the indicators and MSFD criteria. **Acceptance:** Working towards defining ecologically-relevant assessment areas. **Data and information** – MSFD secondary criteria from the 2017 Commission Decision have not been fully incorporated into the Common Procedure or Common Indicators, in particular D5C4 'photic limit (transparency) of the water column'. **Technical Implementation**: Communication has been established between eutrophication experts and the pelagic expert group, but the indicators for assessing the phytoplankton community and harmful algal blooms are still under development	Working towards acceptance of regionally-harmonised thresholds for the indicators and MSFD criteria. Working towards defining ecologically-relevant assessment areas.	
3.2b. evaluate and report on	**In progress**:	**Other**:	Unchanged	**Still relevant:**

	Progress	Barriers	Expected position by 2020	Evidence base
the effectiveness of measures addressing eutrophication problems	Measures have had some effect in that eutrophication status in the OSPAR Maritime Area has improved and the CAMP and RID programmes indicate that nutrient loads to the Greater North Sea have reduced. However, there is a lack of knowledge concerning which measures have been implemented and the effectiveness of specific measures remains unknown. Eutrophication status in the OSPAR Maritime Area has improved slightly. However, the third application of the Common Procedure indicates that the strategic objective has not yet been achieved. Eutrophication is still a problem, mainly affecting coastal areas. The Greater North Sea had the largest problem area (approximately 98,000km^2) with respect to eutrophication, extending along the coast from Belgium to Danish and Swedish waters. Small problem areas (5 to 400 km^2) were found along the coast of France, Norway and the United Kingdom. In the Celtic Seas many small inshore and coastal areas were classified as problem areas (approximately 500 km^2). In the Bay of Biscay two problem areas (approximately800 km^2) were identified. Nutrient inputs to the OSPAR Maritime Area have reduced, particularly phosphorus. However, the rate of nutrient reduction has fallen when measured at the regional-scale. For some river basins, there have been	Measures can take a long time to take effect. There is a natural lag time between implementing measures to reduce nutrient inputs and observable improvements in the marine environment. The time-lag between implementing measures and the full affect being achieved (i.e. no undesirable disturbance) can be significant, up to decades. **Data and information**: Lack of knowledge of the effectiveness of measures because of a lack of interaction with River Basin Management Authorities and a lack of regular sectoral nutrient input analyses. **Data and information / technical implementation**: An incomplete modelling framework to integrate different nutrient sources (waterborne and atmospheric), retention processes and removal of nutrients in the coastal zone. **Data and information**: Insufficient knowledge of catchment activities that		COMP 2017 (OSPAR Publication 2017/694), [measures check] Intermediate Assessment 2017 nutrient inputs indicator. Work to update WFD assessment 2019-2021. EMEP report

	Progress	Barriers	Expected position by 2020	Evidence base
	measurable increases in nutrient input at the river basin catchment-level.	influence transitional waters, for improving models. **Data and information:** Lack of an agreed framework for assessing the effectiveness of measures.		
3.2c. cooperate to set appropriate nutrient reduction targets for problem areas	**Not achieved**: Not achieved despite substantive work in ICG-EMO, due to the lack of agreement between Contracting Parties and of regionally consistent threshold values and due to technical difficulties modelling the large region of North-East Atlantic . *In situ* targets: Not achieved. Input targets: Not achieved. ICG-EMO could not implement modelling for the whole North Sea because there was no agreement as to which model to use, and targets were not agreed.	**Technical implementation / Data or information:** Acceptance: Lack of agreement between Contracting Parties and of regionally consistent threshold valuesd for eutrophication indicators. Furthermore, few Contracting Parties were involved in the ICG-EMO modelling work. ICG-EMO modelling was based on nutrient reduction scenarios to the North Sea, but the input data to the model was not complete. The trans-boundary nutrient tool has taken a lot of resource to develop and implement.	Work from JMP EUNOSAT may aid setting regionally consistent targets and ecologically coherent assessment units for Region 2. ECOSTAT report published January 2019 on using nutrient concentrations to support good ecological status may aid target setting but it is focused on rivers. ICG-EUT proposes to revise the Comprehensive Procedure Agreement by OSPAR 2020 which would include revised consistent targets and assessment areas.	**Still relevant**: COMP 2017 (OSPAR Publication 2017/694) ECOSTAT has completed several intercalibration exercises on water quality thresholds in transitional and coastal waters (WFD). Lenhart & Große (2018). Assessing the effects of WFD nutrient reductions within an OSPAR frame using trans-boundary nutrient modelling[11]. Outcome of ICG-EUT 2019 JMP EUNOSAT

[11]Lenhart & Große (2018). Assessing the effects of WFD nutrient reductions within an OSPAR frame using trans-boundary nutrient modelling. Frontiers in Marine Science, 5:447. doi: 10.3389/fmars.2018.00447

	Progress	Barriers	Expected position by 2020	Evidence base
3.2d. coordinate the development of measures to reduce and ultimately eliminate anthropogenic eutrophication in marine waters	**Partially achieved** Joint OSPAR-HELCOM approach to the IMO on agreeing a NECA[12] for the North Sea and Baltic.	**Mechanism for implementation at EU level**: Not enough coordination with WFD. **Other:** Lack of alignment with ICG POSH (protection of species and habitats) experts concerning habitat restoration	Unchanged	**Still relevant**: NECA agreement (IMO MEPC 71)

[12]NOx Emission Control Area (NECA). IMO Resolution MEPC.286(71). Applicability: New ships constructed on or after 1 January 2021 that will operate in European waters

2.2 Timeframe and implementation

Table 2.2: Eutrophication substances timeframe and implementation

§ reference of eutrophication Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
4.2 assess the extent of eutrophication in the OSPAR maritime area under the Common Procedure and the effectiveness of implemented measures on the quality status of the marine ecosystems, and evaluate, from time to time, through model scenarios of nutrient reductions the situation in the OSPAR maritime area that is expected following the implementation of measures	**Ongoing**	COMP 3 applied by most Contracting Parties	**Other**: Two Contracting Parties did not apply the Common Procedure	Review and revision of the COMP Agreement 2013.	**Still relevant** National COMP reports and 3rd Integrated report Reviewing and revising the COMP Agreement in the light of development of the COMPEAT for OSPAR purposes
a. When and where it is established that an area has achieved non-problem area status, measures should be kept at a level that ensures that this status is maintained	**In progress**	Measures adopted	**Mechanism for implementation – national & regional**: There is a risk that there are insufficient measures implemented to ensure prevention of deterioration however the problem has not occurred as yet. **Data and Information**: Knowledge of what quantity represents an 'acceptable' load is lacking so we don't know what nutrient inputs can be permitted (input ceilings) without risking a reversion to problem or potential problem status. Other: Climate change risks increasing water temperatures/stratification/oxygen	2020 – 2030 (new strategy period)	**Still relevant** NOx Emission Control Area (NECA) : IA 2017 RID data show reduction in phosphorus inputs. No significant reduction in nitrogen over the last 6 years

§ reference of eutrophication Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
			consumption/increased runoff and atmospheric deposition which could reverse improvements. We lack an analysis of the need for additional measures to maintain non-problem status		
b. In the case of potential problem areas, preventive measures should be taken in accordance with the precautionary principle. There should be urgent implementation of monitoring and research in order to enable a full assessment of the eutrophication status and their final classification as problem or non-problem area by 2014	**Not achieved**	Measures including under the WFD and UWWT & Nitrates Directives Improved monitoring including surveillance monitoring under the WFD and an intensification of monitoring under CEMP	**Financing**: Lack of funding for intensified monitoring **Mechanism for implementation –national, regional & EU levels**: Lack of alignment with programmes of measures in EU Directives Insufficient measures implemented to ensure prevention of deterioration **Data & information**: Knowledge of what quantity represents an 'acceptable' load is lacking	2020 - 2030	**Still relevant** IA 2017 The COMP 2017 report indicated that potential problem areas remain
c. In the case of problem areas, measures shall be taken to reduce or to eliminate the anthropogenic causes of eutrophication	**In progress**	Measures adopted	**Mechanism for implementation – national & regional**: Insufficient measures implemented, **Technical and Data & information**: Lack of knowledge to quantify the time lag for measures to take effect, e.g. due to nutrient reservoirs in sediments Knowledge of what quantity represents an 'acceptable' load is lacking Lack of a common framework to assess the effectiveness of measures	2020 - 2030	**Still relevant** IA 2017 & COMP3

§ reference of eutrophication Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
			Mechanism for implementation – EU level Gap in environmental ambition between Common Agricultural Policy and the Water Framework Directive		
4.3 In support OSPAR will:					
a. further develop its tools for monitoring and assessing the eutrophication status of the OSPAR maritime area and progress towards the objectives of this strategy, and adopt a revised Common Procedure at the latest by 2013	**Fully implemented**	Agreement 2013-08	n/a		**Still relevant** Application of the COMP in 2016/17 IA 2017 Proposing a revision of Agreement 2013-08 by 2020
b. promote the use of modelling and remote sensing to improve the knowledge on the extension and impact of eutrophication on marine ecosystems within the OSPAR Regions	**Partially achieved**	ICG-EMO work and national and European approaches	**Technical and Data & information**: Science understanding and technical issues affecting confidence in the use of model outputs for decision making. Insufficient investment to realise common framework per region. Lack of a common view to the goals to be realised for modelling **Mechanism for implementation – national, regional& EU level**: Lack of alignment with programmes of measures in EU Directives. Thresholds to drive the models have not been agreed **Financing;**	Recent rapid progress. Expecting a steady development during the coming years	**Still relevant** Lenhart & Große (2018). EMoSEM publications

§ reference of eutrophication Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
			ICG-EMO modelling work is expensive and suffered from a lack of financial support		
b. promote the use of modelling and remote sensing to improve the knowledge on the extension and impact of eutrophication on marine ecosystems within the OSPAR Regions	**Partially achieved**	Research, for instance within JMP EUNOSAT project	**Technical and Data or information**: Validation difficulties in combining different sources of chlorophyll & photic limit indicators and technical issues. More work is needed to develop remote sensing and algorithms in coastal and shallow waters **Technical implementation**: Barriers, such as reliance on satellite technology service that could fail. Satellite technology and the use and interpretation of data are still being developed and validated Large, complex datasets will need work to analyse, interpret and report	2022 by some Contracting Parties as part of the next application of the COMP	**Still relevant** Peer-reviewed papers in scientific publications on the application of remote sensing and associated issues. JMP EUNOSAT paper in progress.
c. adopt an integrated assessment of the eutrophication status of the maritime area in time to support Contracting Parties' reporting obligations under the Water Framework Directive in 2015	**Fully implemented**	HASEC 2012 agreed to synchronise COMP with MSFD Article 8 cycles of reporting, (rather than WFD in 2015) and so postponed COMP from 2014 to 2017	n/a	2017	**Still relevant** e.g. Source apportionment work could contribute to future WFD programmes of measures COMP3

§ reference of eutrophication Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
d. review the situation of nutrient inputs for eutrophication problem areas and coordinate with Contracting Parties, by 2012, the setting of nutrient reduction targets required for the eutrophication problem areas to move to non-problem area status	**Not achieved**	Interpreted as meaning nutrient load ceilings required to convert PA and PPA to NPA status, based on the work of ICG-EMO to update the nutrient load targets of PARCOM 88/2	**Mechanism for implementation – regional**: No co-ordinated reduction targets, coherent threshold values, national approaches exist (WFD river basin management; Danish/Swedish agreement in the Kattegat through HELCOM). Insufficient confidence in model outputs. Insufficient political willingness. Financial/technical: Multiple model runs required are costly i.e. HELCOM ran their model approx. 1500 times for 150 yr period in order to determine their nutrient load ceilings.	See 19/03/03 – proposed date 2025 2023, for QSR – an ambition to set nutrient load reduction targets for river catchments, considering atmospheric loads and related to programmes of measures	**Still relevant** ICG-EMO and HASEC documents
d.i. By 2011 quantify the reduction of nutrients required to the maritime area	**Not achieved**		**Mechanism for implementation – regional& EU level**: No co-ordinated reduction targets, national approaches exist (WFD river basin management). Insufficient confidence in model outputs. Insufficient political willingness. [See above]	See 19/03/03 – proposed date 2025 2023, for QSR – an ambition to set nutrient load reduction targets for river catchments, considering atmospheric loads and related to programmes of measures	**Still relevant** ICG-EMO and HASEC documents

§ reference of eutrophication Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
d.ii. by 2012, identify and quantify the main contributing sources for individual eutrophication problem areas and river basins, including transboundary nutrient loads	**In progress** Main contributing sources / pathways identified, and generally measures are in place to address these where there are eutrophication problems	ICG-EMO trans-boundary transport model TBNT Information available under WFD for EU member states and HELCOM Parties Quantified water borne and air borne pathways	**Data & information**: Lack of information on upstream nutrient inputs Sources are not included in the RID reporting, there are guidelines but it is not mandatory No reporting system or database. Routine reporting could be a heavy burden on contracting parties. Information available under WFD for EU member states and HELCOM parties, but the method of estimation is not harmonised OSPAR hasn't had a source-oriented analysis since the 2008 PARCOM report	See 19/03/03 – proposed date 2022 Could be done by 2020 if its decided	**Still relevant** Denmark, Germany and Sweden have undertaken this for HELCOM. National work for PARCOM 88/2 in 2006-8 Lenhart and Grosse, 2018
d.iii. by 2013, implement a revised reporting system for nutrients which coordinates data collection on sources, pathways and environmental status	**Not achieved**	RID[13] database has been developed and updated for inputs. Source information has not been included. Revision of HARP NUT guidelines Revised RID guidelines 14/04	**Data & information**: Waiting for an improved scientific base from ICG-EMO for replacing PARCOM 88/2 load targets which are needed before reporting restarts. Information is lacking concerning nutrient inputs from sea based activities etc. Some HARP NUT guidelines only give examples and are not yet fully harmonised.	2023, towards the QSR	**Still relevant** RID Database documentation from QuoData describing improvements; INPUT outcomes for revision of HARP NUT, RID and CAMP guidelines;

[13]Riverine Inputs and Direct Discharges Monitoring Programme (RID)

§ reference of eutrophication Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
		Revised CAMP[14] guidelines 15/04			
e. improve knowledge about interactions of eutrophication with climate change and, where possible, consider impacts of climate change in monitoring and assessing eutrophication	**Fully implemented** HASEC 2017 addressed climate change as follows: HASEC considered information from the North Sea Region Climate Change Assessment (NOSCCA) on the impact of climate change on harmful algal blooms and hypoxia and concluded the complex and mixed results from NOSCCA's experts meant there was no need for ICG-Eut to further consider the impact of climate change on harmful algal blooms in its	Investigations reported in the Integrated COMP report 2017 based on contributions from ICG-EMO and NOSCCA Work to produce the climate change chapter of IA2017 Nascent ICG-OA work, beginning 2019;	**Data & information**: Limited awareness of the cumulative impacts of climate change and eutrophication; Limited knowledge of future hydrology and nutrient inputs under different climate change scenarios (due to e.g. uncertainty about societal and agricultural responses).	Further development during 2020-2030 and contributions from ICG-Eut and ICG-OA to QSR 2023	**Still relevant** Chapter in IA on climate change Chapter in the third integrated eutrophication report

[14] OSPAR's Comprehensive Atmospheric Monitoring Programme

§ reference of eutrophication Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
	programme of work; In relation to Blue Carbon, HASEC noted information from Sweden on its national studies and assessments on blue carbon in the North East Atlantic. Sweden liaised with BDC to ensure eutrophication aspects were taken into account				
f. (i) setting emission targets for nitrogen under the EU NEC[15] Directive and the Gothenburg Protocol to the UNECE LRTAP, (ii) the revision of standards for ship emissions of IMO	**Fully implemented**	OSPAR presentations to the EMEP steering group 2016 and 2017; Routine contact between EMEP and OSPAR	n/a Financial: OSPAR has limited resources to commission analyses from EMEP	n/a (ongoing)	**Still relevant to keep under review** EMEP[16] report to HASEC as a contribution to the 3rd integrated eutrophication assessment 2017

[15]National Emissions Ceilings (NEC) Directive (2016/2284/EU)

[16]The European Monitoring and Evaluation Programme (EMEP) is a scientifically based and policy driven programme under the Convention on Long-range Transboundary Air Pollution (CLRTAP) for international co-operation to solve transboundary air pollution problems

§ reference of eutrophication Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
g. carry out an assessment of the impact of shipping on the eutrophication status of the North Sea and, if decided by the OSPAR Commission, elaborate a document, in line with Appendix III to Annex VI to the MARPOL 73/78 Convention, providing the basis for a joint submission to IMO justifying the case for designating the North Sea as a NOx Emission Control Area [17] designation	**Fully implemented**	Joint approach to IMO MEPC 71 by HELCOM and OSPAR resulting in the designation of the North and Baltic Seas as NOx (tier III) Emission Control Areas from 2021		2021	**Still relevant to investigate other emissions from shipping** IMO decision (MEPC 71)
4.4 The Eutrophication Strategy will support the implementation of the EU Water Framework Directive by feeding the programmes of measures identified under § 4.3(c) into the first review of the river basin management plans under the Directive	**In progress**	Coordination between marine and freshwater teams at national level in some Contracting Parties to reflect results of OSPAR COMP in WFD POMS	Mechanism for implementation-National: Lack of alignment between WFD, MSFD and OSPAR, with different national agencies working on the Directives in some Contracting Parties.	2027 date for good ecological status (WFD)	**Still relevant** River Basin Management Plans
4.5 For Contracting Parties likely to contribute nutrient inputs:					
a. where national obligations exist under EU legislation, fully implement the Marine Strategy Framework Directive and the Water Framework Directive and associated legislation (e.g. the Nitrates Directive, the Urban Waste Water Treatment Directive and the IPPC	**Fully implemented**	Adoption of EU Directives in national legislation			**Still relevant to keep under review** National legislation

[17]NOx Emission Control Area (NECA)IMO Resolution MEPC.286(71). Applicability: New ships constructed on or after 1 January 2021 that will operate in European waters

§ reference of eutrophication Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
Directive) in order to reduce nutrient discharges to water and emissions to air, supported e.g. by the Rural Development Regulation (EC) No 1698/2005. In implementing those measures, Contracting Parties will take into account marine eutrophication					
b. continue to implement PARCOM Recommendation 88/2 on the reduction in inputs of nutrients to the Paris Convention area and to reduce nutrient inputs to eutrophication problem areas by 50% relative to input levels in 1985, until new nutrient reduction targets are set under § 4.3(c) for problem areas to move to non-problem area status	**Not achieved** Reporting suspended		Mechanism for implementation – regional: Reporting suspended Lack of clarity on how to apply the 50% reduction target Science-based reduction targets quantified by ICG-EMO yet to be established and agreed	See 19/03/03 – proposed date 2025	**Still relevant** Reporting suspended
c. where no national obligations exist to implement more specific EU legislation, continue to implement PARCOM Recommendation 92/7 on the reduction of nutrient inputs from agriculture into areas where these inputs are likely, directly or indirectly, to cause pollution, and PARCOM Recommendation 89/4 on a coordinated programme for the reduction of nutrients	**Fully implemented** Through EU legislation (Recommendations 92/7 & 89/4 set aside in 2010)	National obligations and EU obligations are in place that supersede PARCOM 92/7 and 89/4		n/a	**No longer relevant** (set aside) Fully implemented, through EU legislation (Recommendations 92/7 & 89/4 set aside in 2010)
d. take additional measures, if necessary, to address relevant sources contributing to problem areas. Such further measures should take into	**In progress**	Not implemented as all possible measures required under EU legislation			

§ reference of eutrophication Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
account their feasibility, cost-effectiveness, and region-specific and seasonal factors		have not yet been implemented.			

3 Assessment of HASEC's progress against Hazardous substances theme

3.1 Thematic objective, main strategic directions and ministerial commitments

Table 3.1: Hazardous substances thematic objectives, main strategic directions and ministerial commitments

Reference to strategy (paraphrased)	**Progress**	**Barriers**	**Expected position by 2020**	**Evidence base**
1.2a. to achieve concentrations of contaminants at levels not giving rise to pollution effects, and contaminants in fish and other seafood for human consumption not exceeding levels established by EU legislation or other relevant standards	**Partially achieved**: Since the QSR 2010, the concentrations of contaminants assessed have continued to decrease in the majority of areas assessed, especially for PCBs. Although concentrations are generally below levels likely to harm marine species in the areas assessed, they mostly have not yet reduced to background levels (where these are specified). Concerns remain in some localised areas with respect to high levels of mercury, lead, and PCB118 (one of the most toxic PCB congeners) and locally increasing concentrations of PAHs and cadmium in open waters.	**Other barriers**: Environmental factors: the inherent properties of some substances means they will not degrade in the marine environment. Long-distance transport of some substances. There may still be emissions of some highly regulated substances, e.g. from the waste stage. For several substances OSPAR does not have robust assessment values. **Technical implementation:** Lack of agreement about how to use integrated biological effects approach for assessment purposes. **Cost-effectiveness** for specific contaminants (TBT) or biological effects	Expected progress on agreeing threshold values for some substances, e.g. for TBT Expect clarity from EU or internal OSPAR agreement on implementation of EQS_{biota}	**Still relevant** Intermediate Assessment 2017 Revised EC-EQS_{biota} guidance document no. 27, due for publication in 2019

Reference to strategy (paraphrased)	**Progress**	**Barriers**	**Expected position by 2020**	**Evidence base**
		Mechanism for implementation at EU level: Lack of full description of how to use e.g. mercury EQS_{biota} **Financing** – e.g. ecotoxicological tests for some substances, including emerging substances, that lack EQS **Data and information:** Historical loads (including dumped material) stored in areas of contaminated sediments and remobilised during activities e.g. dredging		
1.2b. to move towards the targets of the cessation of discharges, emissions and losses of hazardous substances by the year 2020	**Partially achieved** Have moved towards it, particularly through European legislation on marketing and use of chemicals on OSPAR LCPA and LSPC, also the Industrial Emission Directive and Urban Waste Water Treatment Directive and implementation of the Stockholm and MINAMATA Conventions Ongoing implementation of the existing measures e.g. limiting mercury emissions from crematoria and ban on amalgam use by dentists	**Mechanism for implementation at national and EU-levels**: **Financing** of extending urban waste-water treatment to cover contaminants UWWTD currently only focuses on nutrients and assists in reducing some contaminants as a secondary effect of precipitation, but not effective for water soluble substances e.g. PFOS and pharmaceuticals. The IA2017 showed that a large proportion of heavy	Probably no change. This will depend on member states' willingness to finance improved waste-water treatment following EU legislation	Implementation of EU legislation OSPAR CEMP time-series for contaminants Mercury from crematoria & chlor/alkali implementation reports IA2017 EMEP reports to OSPAR and HELCOM. EMEP to HELCOM including source apportionment (blame matrices)

Reference to strategy (paraphrased)	**Progress**	**Barriers**	**Expected position by 2020**	**Evidence base**
	IA2017 showed decreases in heavy metal loads via air and water to the Greater North Sea	metal loads come via the atmosphere and originate from beyond the OSPAR convention area (and beyond Europe). This is also the case for many other hazardous substances.		
Main strategic directions				
3.1a. maintain OSPAR LCPA[18]and LSPC[19] and retain the option to work on specific hazardous substances not covered within the EU framework which are assessed as being of concern for the marine environment	**Achieved**		Updates are underway to align with the EU processes for 2020	Ongoing work at HASEC and coordination with the EU
3.1b. carry out regional data collections to quantify sources, releases and pathways of hazardous substances on the on LCPA[20]	**Partially achieved / in progress**: Emissions reporting for mercury under two OSPAR recommendations. Larger industrial sources covered by E-PRTR. Atmospheric and waterborne pathways for several substances through EMEP,	**Other barriers**: Size of installations under E-PRTR (and level of pollution discharge thresholds) Screening exercise needs repeating/updating	Unchanged	Intermediate Assessment 2017 WFD guidance docs IED EMEP reports to HELCOM

[18] OSPAR List of Chemicals for Priority Action (LCPA), containing substances that might merit action by OSPAR due to their persistency, liability to bioaccumulate and toxicity or other equivalent concern

[19]OSPAR List of Substances of Possible Concern (LSPC), adopted in 2002

[20] HASEC will consider revising this for the NEAES 2030

Reference to strategy (paraphrased)	**Progress**	**Barriers**	**Expected position by 2020**	**Evidence base**
	CAMP and (more limited) RID . WFD requires regular inventories indicating uses of hazardous substances. WFD also includes monitoring of waterborne substances. Reporting on dredged material includes hazardous substances content the emphasis has moved from OSPAR to other international instruments e.g. Stockholm Convention, REACH[21], Minamata[22] and IMO[23]	WFD monitoring usually only in dissolved phase RID covers v. Limited range of substances Atmospheric source apportionment information lacking in OSPAR due to financial constraints (available via EMEP)		RID & CAMP Guidance Hg reporting under Recommendations for crematoria & chlor-alkali
3.1c. carry out effective regional, coordinated monitoring and assessment to evaluate the extent of contamination with hazardous substances covered by the JAMP and their effects in the OSPAR maritime area, taking into account any additional impacts linked to climate change, and to	**Partially achieved** Through CEMP annual reporting HASEC 2017 addressed climate change and did not recommend further work on it in relation to hazardous substances Some Contracting Parties used the IA 2017 the indicator assessments for updating MFSD Article 8	**Financing** of new substances, possibly biological effects. **Cost-effectiveness** of the integrated biological effects approach **Data/information** on new substances and pre-CEMP components that are not currently part of the CEMP (e.g. biological effects) **Technical implementation** e.g. of mercury EQS_{biota} Lack of scientific certainty on how to apply some of the EU-	HASEC 2018 has this on its agenda for the next 2 years	IA 2017 CEMP annual assessments Mercury report (OSPAR publication 679/2016[24])

[21]European Union regulation concerning the **R**egistration, **E**valuation, **A**uthorisation & restriction of **CH**emicals (REACH)
[22]The Minamata Convention on Mercury
[23]International Maritime Organisation (IMO)
[24]OSPAR publication 679/2016.Mercury assessment in the marine environment Assessment criteria comparison (EAC/EQS) for mercury

Reference to strategy (paraphrased)	**Progress**	**Barriers**	**Expected position by 2020**	**Evidence base**
identify actions to be taken, so as to make progress towards GES and good chemical status under the EU MSFD and the WFD respectively		established threshold levels (EQS_{biota}) in the marine environment		
3.1d. promote actions to address concerns about chemicals, including endocrine disruptors, through the EU and other relevant international organisations, and act if these concerns are not fully addressed by those organisations	**Partially achieved**: At different levels from Contracting Parties' national experts engaging in EU working groups. Secretariat participates in the EU Working Groups to communicate and promote OSPAR work		Unchanged	JRC expert network engaging with EC working groups OSPAR experts participating in JRC expert working group on chemicals and WG Chem in 2019

3.2 Timeframe and implementation

Table 3.2: Hazardous substances timeframe and implementation

§ reference of Hazardous Substances Strategy	**Progress**	**Method of implementation**	**Barriers**	**If not 2020, predicted date of achievement**	**Evidence base**
4.2 Support the implementation of EU WFD by feeding the programmes of measures identified under §3.1(c) into the first	**In progress** Working on assessment values for TBT in sediment (using SE's	Some input to WFD working group on Chemicals by marine experts to clarify limit values and	**Acceptance** –of proposed assessment values by Contracting Parties	Intention for 2019, for use in QSR 2023	MIME 2018 work and trial assessments in the annual CEMP assessment in 2019

§ reference of Hazardous Substances Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
review of the river basin management plans under the Directive	approach) and PBDE in biota (using Canadian FEQGs) MIME presented OSPAR work on mercury to the EU CIS Working Group on Chemicals	background concentrations			
4.3 OSPAR will;					
a. maintain LCPA and LSPC through consideration of new information on substances already on those OSPAR Lists or information on other substances of concern for the marine environment. Based on suitable evidence	**Ongoing**	Work by lead Contracting Parties to review and update the lists as appropriate	Technical implementation Difficulties in finding chemicals on lists and product information. Chemicals were selected from an old database that needs to be updated with new data that has become available.	Ongoing work	European chemicals agency lists.
(i) to select a substance for priority action and to take measures, as appropriate, where that substance is not prioritised for action or not listed as of possible concern by the OSPAR Commission and is not fully addressed under relevant EU initiatives	**Ongoing** Work in progress	Ongoing work by lead Contracting Parties to review and update the lists as appropriate	**Technical implementation** There is a lag time between identifying possible substances for the list that then require further investigation before being proposed for additions **Financing** Need to have a lead Contracting Party to take responsibility, which requires resources	Ongoing work	Additions to the LCPA and LSPC

§ reference of Hazardous Substances Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
(ii) to deselect a substance from the OSPAR Lists where that substance does not fulfil the criteria for being on those lists	**Ongoing** Review and revision of the LCPA and LSPC by HASEC. Also consideration of applications from industry for deselection being made to HASEC, and documentation of background levels having been reached	Ongoing work by lead Contracting Parties to review and update the lists as appropriate Re-categorisation of substance on Sections A, B and C of the LSPC	**Other** Procedure for deselection requires documented evidence that it is no longer a problem and it is close to background.	Ongoing work	Review by HASEC of requests for deselection as applications are made. Information provided from industry for de-selecting substances from the lists
4.3b. maintain Background docs for OSPAR priority chemicals	**Ongoing** HASEC considering how to revise the background documents to provide only essential information.	[see previous]		n/a	HASEC summary records, OSPAR summary records, lack of use of Background documents.
4.3c. actively generate input to the EU and other international organisations on the identification, selection and prioritisation	**In progress**	Ad hoc involvement of OSPAR experts in JRC and other working groups e.g.	n/a	Ongoing	Submitted background docs to other

§ reference of Hazardous Substances Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
of hazardous substances which are of concern for the marine environment		MCWG, to promote OSPAR work Need to promote OSPAR work in implemention of the NEAES. Standing invitation to ECHA to contact MIME experts regarding marine monitoring data (especially for national marine monitoring data)			conventions e.g. LRTAP[25] (air pollution) Participation in JRC & EU expert groups
4.3d. support initiatives for example through the input of relevant information and assessments;					
(i) by the EU under the REACH Regulation and other relevant EU legislation to reduce releases of priority chemicals from products and wastes and to control risks for the marine environment,	**Ongoing**: OSPAR participates in MSFD working groups; informs EU about activities and progress; OSPAR objectives are incorporated into WFD and MSFD. EU MS use OSPAR products in implementation	Information relevant to the MSFD, e.g. IA 2017 used by Contracting Parties for Article 8 update Report on Recommendations and Decisions already in place (chlor-alkali, crematoria …)	**Other** – absence of appropriate routes to influence EU legislation by OSPAR groups or Committees, only achievable through Contracting Parties that are EU member states.	Dependent on EU collaboration with Regional organisations	EU legislation

[25]United Nations Economic Commission for Europe (UNECE) Convention on Long-range Transboundary Air Pollution (CLRTAP) (UNECE, 1979)

§ reference of Hazardous Substances Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
	and reporting under Directives				
(ii) in the UN framework on the phase out of additional persistent organic pollutants and a global legally binding instrument on mercury	**Fully implemented or Ongoing:** Contracting Parties have supported implementation of Stockholm Convention on POPs and the Minamata Convention. Ongoing for UN SDG implementation	Countries mention OSPAR work in relevant UN work. In the past, OSPAR sent its background documents to the UN protocols , POPs protocol[26], IMO			Conventions
4.3e. further develop existing monitoring and assessment tools to evaluate progress towards achieving the objectives of the Hazardous Substances Strategy by;					
(i) improving information collection on the production, uses and pathways to the marine environment of hazardous substances, especially for substances which are not deemed suitable for marine monitoring	**Ongoing**	CAMP agreement 15/04 RID agreement 14/04 Improved contact with EMEP Work by the ICES Marine Chemistry Working Group and WGMS on OSPAR's request for advice on selection/de-	**Geographical coverage**; IA 2017 covered only Region II (North Sea). Regions I, III, IV and V are missing entirely. In addition there are gaps in Region II Lack of harmonisation of methods for dissolved totals Heavy metals in IA2017 limited to only three metals; could be expanded for more metals	Continual improvement and review	CAMP agreement 15/04 RID agreement 14/04 Improved transparency of the reporting of the RID database

[26]The 1998 Aarhus Protocol on Persistent Organic Pollutants (POPs)

§ reference of Hazardous Substances Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
		selection of hazardous substances of concern (HASEC 2018)			
(ii) redesigning marine monitoring of priority chemicals under OSPAR's existing monitoring programme to reach better regional coverage	**Partially implemented**	Geographical coverage; add more monitoring stations in Regions IV and V	**Financing**		IA2017
(iii) improving methods for marine biological effects monitoring, where appropriate integrated with chemical monitoring	**Fully implemented**	Actions by MIME working with ICES	**Financing**		Surveys in MIME Still relevant but not a priority for some Contracting Parties
(iv) improving the understanding of the effects of hazardous substances on marine ecosystems, particularly cumulative effects and endocrine disruption	**Partially implemented**	Actions by MIME working with ICES Agreeing that EU should be the main focus of work on endocrine disruptors	**Mechanism for implementation – EU level**	?	Work in MIME Work in the EU Biological effects surveys will assist with improving understanding
4.4 In support of OSPAR's objectives for hazardous substances, Contracting Parties will:					
a. fully implement existing EU obligations: MSFD, WFD, IPPC, REACH, EU Chemicals Strategy and Directives on cosmetics, pesticides, biocides,	**Fully implemented**	EU member States implementing the various EU legal instruments			EU implementation records

§ reference of Hazardous Substances Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
pharmaceuticals and veterinary medicine					
b. where no national obligations exist under EU legislation, implement adequate measures adopted at international level or within the framework of national legislation and continue to implement existing OSPAR measures with regard to hazardous substances	**Ongoing**	OSPAR countries have implemented measures agreed in other forums such as IMO, LRTAP, Stockholm Convention, Minamata and OSPAR	**Mechanism for implementation – regional and national levels**		National implementation records
c. take additional measures, if necessary, to reduce pollution with OSPAR priority chemicals at source	**Ongoing**	Different approaches among individual Contracting Parties	**Technical implementation** OSPAR requires no record keeping to keep track of this requirement	**Ongoing**	National implementation records
4.5 Taking into account the increased environmental awareness, Contracting Parties should encourage industry to help achieving OSPAR's objectives for hazardous substances through:					
4.5a. the incorporation, as a strategy, of the objective in their development of clean production and environmentally sound products, and in this context the promotion of "green chemistry", including;					
(i) the development and use of less hazardous, or preferably non-hazardous, substances	**Ongoing**	Support for relevant EU initiatives within REACH, Marketing and Use legislation Development of national guidelines	None	**Ongoing**	At national level

§ reference of Hazardous Substances Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
(ii) the development and use of practices during the manufacture, use and ultimate disposal of chemicals (whether as intermediates, products or residues), including waste handling and waste management techniques, that reduce, or preferably avoid, the use of hazardous substances and that avoid their discharges, emissions and losses to the environment	**Ongoing**	Development of national guidelines e.g. permit licensing, Marine Plans	None	**Ongoing**	At national level
(iii) the provision of alternatives to the use of hazardous substances in processes other than their manufacture	**Ongoing**	Development and use of national guidelines National support in the implementation of EU initiatives	None	**Ongoing**	At national level
4.5b. the provision of reliable data on properties, production volumes, use patterns, emission scenarios, and exposure concentrations of hazardous substances	**Ongoing**	E.g. REACH, pesticide regulation	None	**Ongoing**	Relevant EU web sites

4 Assessment of OIC's progress against Offshore Oil and Gas Industry theme

4.1 Thematic objective, main strategic directions and ministerial commitments

Table 4.1: Thematic objectives, main strategic directions and ministerial commitments

	Progress	Barriers	Expected position by 2020	Evidence base
Thematic objective for OIC 1.1 The OSPAR Commission's strategic objective with regard to offshore oil and gas activities is to prevent and eliminate pollution and take the necessary measures to protect the OSPAR maritime area against the adverse effects of offshore activities by setting environmental goals and improving management mechanisms, so as to safeguard human health and to conserve marine ecosystems and, when practicable, restore marine areas which have been adversely affected. 1.2 The objectives of the other OSPAR thematic strategies apply in so far as they relate to offshore activities. 1.3 The Offshore Oil and Gas Industry Strategy will be implemented progressively, through appropriate actions and measures, with the target: a. to achieve, by 2020, a reduction of oil in produced water discharged into the sea to a level which will adequately ensure that each of those discharges will present no harm to the marine environment; b. to have phased out, by 1 January 2017, the discharge of offshore chemicals that are, or which contain substances, identified as candidates for substitution, except for those chemicals where, despite considerable efforts, it can be demonstrated that this is not feasible due to technical or safety reasons (OSPAR Recommendation 2006/3). 1.4 The Offshore Oil and Gas Industry Strategy also covers activities to store CO2 streams in geological formations with the objective to ensure that CO2 streams are retained permanently in those formations and will not lead to significant adverse consequences for the marine environment, human health and other legitimate uses of the maritime area (OSPAR Decision 2007/2).				
Oil in produced water	Reduction of oil in produced water – **FULLY ACHIEVED** There has been a reduction in both the concentration of oil in produced water discharges and the volume of oil discharged Work is ongoing to ensure that the oil in produced water discharges does not present harm to the marine environment – work to demonstrate 'harm' is **IN PROGRESS**	N/A There is a lack of data to demonstrate no harm from the oil in produced water discharge	Ongoing	Still relevant. Whilst the objective has been achieved, continuing work on reducing oil in produced water, still have to demonstrate there has been no harm to the marine environment. Overview assessment of the implementation of OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations (OIC 18/2/3)

	Progress	Barriers	Expected position by 2020	Evidence base
Phase out of chemicals identified as candidates for substitution	**PARTIALLY ACHIEVED** Progress has been made in reducing the use and discharge of chemicals identified as candidates for substitution since the introduction of OSPAR Recommendation 2006/3. OIC 2018 has agreed that more needs to be done to reduce discharges of substitution chemicals	Technical implementation	Ongoing	Still relevant Report on the implementation of OSPAR Recommendation 2006/3 on environmental goals for the discharge of chemicals that are, or which contain, substances identified as candidates for substitution (OIC 18/3/6)
Carbon Capture & Storage	**IN PROGRESS** There are only 2 full scale projects with CO_2 storage in OSPAR region. Due to very limited number of full-scale projects, evaluation of the effectiveness of OSPAR Decision 2007/2 has not been undertaken.	Other – too few projects to allow assessment	No new projects are expected prior to 2020	Still relevant
Main strategic directions 3.1 To achieve its objectives and in accordance with the findings of the Quality Status Report 2010, the OSPAR Commission will focus, in the period up to 2020, on actions to identify, prioritise, monitor and control (*i.e.* to prevent and/or reduce and/or eliminate) the emissions, discharges and losses of substances which reach or could reach the marine environment and which cause, or are likely to cause, pollution. In addition, the OSPAR Commission will keep under review the need for actions to prevent other potential adverse effects from offshore activities on the ecosystems and biological diversity of the maritime area. The OSPAR Commission also recognises the need to pay particular attention to the decommissioning of redundant oil and gas installations as these activities increase. 3.2 To this end, the OSPAR Commission will focus on the following main strategic directions:				
a. carry out effective regional, coordinated information collection, environmental monitoring and assessment to	**IN PROGRESS** Data collected on an annual basis for atmospheric emissions, chemicals and oil discharges and spills Periodical assessment of discharges, spills and emissions from offshore oil	Information Insufficient monitoring data	Ongoing	Still relevant As in Table 4.2, Section 4.2 a, d, g, h, j k, l (below)

	Progress	Barriers	Expected position by 2020	Evidence base
evaluate the extent of pollution and other adverse effects of offshore oil and gas activities in all Regions of the OSPAR maritime area;	and gas installations by Contracting Parties OIC JAMP Products will support the assessment of the impacts of offshore oil and gas industry: (0-2) Assessment of impacts of discharges of oil and chemicals in produced water on the marine environment (2020); (O-3) Assessment of impacts of decommissioned pipelines on the marine environment and other users of the sea (2019) (0-4) Assessment of the impacts of disturbance of cuttings piles related to decommissioning (2019) (0-5) Assessment of impacts of the offshore oil and gas industry on the marine environment (2020 OIC overall assessment) (2020)		Should be completed by 2020	
b. assess the extent to which existing programmes and measures meet, or will meet, the objectives of the Offshore Oil and Gas Industry Strategy and the achieving or maintaining of good	**IN PROGRESS** OIC has continued to periodically evaluate the effectiveness of OIC measures related to produced water, offshore chemicals, drill cuttings, decommissioning etc. OIC JAMP Products will contribute to the assessment: (0-2) Assessment of impacts of discharges of oil and chemicals in	Information	Ongoing	Still relevant **Drilling**OSPAR Recommendation 2006/5 on a Management Regime for Offshore Cuttings Piles; OSPAR Decision 2000/3 on the Use of Organic-phase Drilling Fluids (OPF) and the Discharge of OPF-Contaminated Cuttings **Use and discharge of chemicals** OSPAR Recommendation 2017/1 on a Harmonised Pre-screening Scheme for

	Progress	Barriers	Expected position by 2020	Evidence base
environmental status under the EU Marine Strategy Framework Directive;	produced water on the marine environment (2019); (O-3) Assessment of impacts of decommissioned pipelines on the marine environment and other users of the sea (2019); (0-4) Assessment of the impacts of disturbance of cuttings piles related to decommissioning (2019); (0-5) Assessment of impacts of the offshore oil and gas industry on the marine environment (2020 OIC overall assessment) (2020)			Offshore Chemicals (as amended by Recommendation 19/4); OSPAR Recommendation 2010/3 on a Harmonised Offshore Chemical Notification Format (HOCNF) (as amended by Recommendation 2014/17 and 2019/3); OSPAR Recommendation 2005/2 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or Contain Added Substances, Listed in the OSPAR 2004 List of Chemicals for Priority Action; OSPAR Recommendation 2006/3 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or Which Contain Substances Identified as Candidates for Substitution (as amended by Recommendation 2019/2); OSPAR Decision 2005/1 amending OSPAR Decision 2000/2 on a Harmonised Mandatory Control System for the Use and Discharge of Offshore Chemicals **Produced water** OSPAR Recommendation 2012/5 for a risk based approach to the management of produced water discharges from offshore installations; OSPAR Recommendation 2001/1 for the Management of Produced Water from

	Progress	Barriers	Expected position by 2020	Evidence base
				Offshore Installations (as amended by 2006/4 and 2011/8); **Noise** OSPAR inventory of measures to mitigate the emission and environmental impact of underwater noise (2016 update) (OSPAR Publication, 2016, No: 706); Overview assessment of impacts of noise from the offshore oil and gas industry on the marine environment (OIC 15/10/2) **Decommissioning** OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations
c. where necessary, revise existing measures and/or develop and adopt new measures, taking climate change impacts into account;	**IN PROGRESS** OIC has continued to adopt measures (new Recommendations, amend existing Recommendations to enhance the measures) and develop guidelines as necessary.	Other – potential duplication of binding global measures tackling climate change	Ongoing	OIC review of applicability of Decisions, Recommendations and other Agreements (OIC/18/1 & OIC 17/11/1); OSPAR Guidelines for Monitoring the Environmental Impact of Offshore Oil and Gas Activities (OSPAR Agreement 2017-02); OSPAR Recommendation 2017/1 on a Harmonised Pre-screening Scheme for Offshore Chemicals (as amended by Recommendation 19/4); OSPAR Recommendation 2010/3 on a Harmonised Offshore Chemical Notification Format (HOCNF) (as amended by Recommendation 2014/17 and 2019/3);

	Progress	Barriers	Expected position by 2020	Evidence base
				Review of OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations (OIC 18/6/4) (Report of OIC Inter-sessional Correspondence Group on the Disposal of Disused Offshore Installations (OIC 18/6/3)); Review of OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations (OIC 13/2/3); OSPAR Recommendation 2012/5 for a risk-based approach to the Management of Produced Water Discharges from Offshore Installations; OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations (as amended by 2006/4 and 2011/8); OSPAR Recommendation 2010/18 on the prevention of significant acute oil pollution from offshore drilling activities
d. continue efforts to reduce discharges of harmful substances, including oil, by developing and applying a harmonised method of assessing environmental risk	**IN PROGRESS** In relation to the phase out of discharges of added offshore chemicals on OSPAR's List of Chemicals For Priority Action – **FULLY ACHIEVED** For other hazardous substances – **IN PROGRESS** OSPAR Recommendation 2012/5 for a risk based approach to the management	Technical implementation – need to continue to reduce discharges of other hazardous substances	Ongoing	Annual implementation update from Contracting Parties (OIC 19/02/01 Add.1, OIC 19/02/01 Add.2, OIC 19/02/01 Add.3, OIC 19/02/01 Add.4); Annual implementation update from Contracting Parties (OIC 18/2/2, OIC 18/2/Info.1, OIC 18/2/Info.2L)

	Progress	Barriers	Expected position by 2020	Evidence base
(risk based approach) relating to the management of produced water, and phase out discharges of hazardous substances;	of produced water discharges from offshore installations; • Implementation due by 31 December 2018; • Review and evaluation of effectiveness of the measure due to be reported every five years as from 2020 following full implementation OSPAR Recommendation 2005/2 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or Contain Added Substances, Listed in the OSPAR 2004 List of Chemicals for Priority Action; • Overview assessment of implementation reports on OSPAR Recommendation 2005/2 on environmental goals for the discharge by the offshore industry of chemicals that are, or contain added substances, listed in the OSPAR List of Chemicals for Priority Action OSPAR Recommendation 2006/3 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or Which Contain Substances Identified as Candidates for Substitution			Report on the implementation of OSPAR Recommendation 2006/3 on environmental goals for the discharge of chemicals that are, or which contain, substances identified as candidates for substitution (OIC 18/3/6); Overview assessment of the implementation of OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations (OIC 18/2/3); OSPAR Intermediate Assessment 2017. Trends in discharges, spills and emissions from offshore oil and gas installations; Addendum to OSPAR Publication number 594/2013. Implementation of OSPAR Recommendation 2006/3 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or Which Contain Substances Identified as Candidates for Substitution, 2012, United Kingdom (OSPAR Publication, 2015, No: 657); Implementation of OSPAR Recommendation 2006/3 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that

	Progress	Barriers	Expected position by 2020	Evidence base
	• Report on the implementation of OSPAR Recommendation 2006/3 on environmental goals for the discharge of chemicals that are, or which contain, substances identified as candidates for substitution OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations • Overview assessment of the implementation of OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations			Are, or Which Contain Substances Identified as Candidates for Substitution (OSPAR Publication, 2013, No: 594); Overview assessment of implementation reports on OSPAR Recommendation 2005/2 on environmental goals for the discharge by the offshore industry of chemicals that are, or contain added substances, listed in the OSPAR List of Chemicals for Priority Action (OSPAR Publication, 2011, No: 528)
e. with a view to progressively develop Best Available Techniques (BAT) and Best Environmental Practice (BEP) for environmental issues, promote the sharing of information and experience between Contracting Parties, non-governmental organisations and	**FULLY ACHIEVED** Annual reporting on discharges, emissions and spills has ensured BAT and BEP are continuously reviewed and applied for the discharge of produced water The application of BAT and BEP has resulted in the average concentration of dispersed oil in produced water in all OSPAR countries to be well below the 30 mg l^{-1} performance standard set out in OSPAR Recommendation 2001/1	N/A	Ongoing	Still relevant Background Document concerning Techniques for the Management of Produced Water from Offshore Installations (OSPAR Publication, 2013, No: 602) OSPAR Recommendation 2011/8 amending OSPAR Recommendation 2001/1 for the Management of Produced Water from Offshore Installations;

	Progress	Barriers	Expected position by 2020	Evidence base
relevant research and development forums;				
f. assess the relevance for OSPAR work, including cooperation with the Bonn Agreement, of significant acute pollution events;	**FULLY ACHIEVED**	N/A	Ongoing – assessment of annual data on discharges, emissions and spills undertaken by OIC Expert Assessment Panel on an annual basis Contracting Parties report on assessment undertaken on relevant pollution events	Still relevant Work of OIC Expert Assessment Panel; The Elgin field gas and condensate release – assessment of environmental release (OIC 14/8/Info.2); BONN Agreement BE-AWARE Project I & II – area wide risk assessment of marine pollution; Annual report on Tour d'Horizon aerial surveillance flights
g. continue to promote the use and implementation by the offshore oil and gas industry of environmental management mechanisms, including elements for auditing and reporting, which are designed to achieve both continuous improvement in environmental performance and to fulfil the	**FULLY ACHIEVED** OSPAR Recommendation 2003/5 to Promote the Use and Implementation of Environmental Management Systems by the Offshore Industry	N/A	OSPAR measure – achieved Implementation – ongoing as it is a continuous process	Still relevant Overview assessment of the implementation of OSPAR Recommendation 2003/5 to promote the use and implementation of environmental management systems by the offshore industry. OSPAR Publication, 2012, No: 587

	Progress	Barriers	Expected position by 2020	Evidence base
objective of this strategy.				

Bremen Statement (June 2003)

25. Since the adoption of the offshore industry strategy, we have:

a. achieved a harmonised mandatory control system for chemicals used and discharged offshore;

b. tightened the measures regulating the use of drilling fluids and the discharge of cuttings contaminated by them. These re-affirm the limits on the use of diesel-based drilling fluids and on the discharge of cuttings contaminated with oil-based drilling fluids. The Decision also limits the use of organic-phase drilling fluids (OPF) and the discharge of cuttings contaminated with OPF;

c. established a goal of reducing by 15% the total quantity of oil discharged into the sea in produced water (that is, the water coming up from oil and gas wells) as compared with the figures for 2000. This reduction should be achieved in the year 2006, despite the expected increases (as a result of ageing wells) in the total amount of produced water to be discharged. It forms a first step towards ensuring that by 2020 discharges of produced water will present no harm to the marine environment.

26. In line with the strategy, we now endorse the Recommendation establishing a goal that all operators of offshore installations in the OSPAR area will have in place by the end of 2005 environmental management systems that conform to internationally recognised standards. We have not achieved the complementary aim of specifying by 2003 all the environmental goals to be achieved, but we endorse the timetable that has been adopted to ensure the specification of such goals by 2004.

27. We confirm that this mixture of action is effectively pursuing the objectives of the offshore industry strategy.

Paragraph 26 is relevant and OIC has achieved the commitment. Please refer to 3.2(g) above.

Sintra Statement (July 1998)

WE RE-EMPHASISE our commitment to prevent the sea being used as a dumping ground for waste, whether from the sea or from land based activities. WE ADOPT a Decision on the disposal of disused offshore installations in support of this. Under this Decision, all dumping of steel installations is prohibited. Derogations, subject to assessment and consultation under agreed procedures, may allow the footings of steel installations weighing more than 10,000 tonnes to remain in place. However, WE WILL STRIVE to avoid using such derogations for footings of steel installations, by returning to land for recycling and disposal all steel installations where it is safe and practicable to do so. Derogations will also be available for concrete installations. WE HAVE no plans to create new concrete installations in any new oil-field developments in the maritime area. Concrete installations will only be used when it is strictly necessary for safety or technical reasons.
The Commission will review this Decision from time to time in the light of developments, with the aim of reducing as fast and as far as possible the cases for which derogations from the general ban on sea disposal may be considered. To support this, WE SHALL PROMOTE

- research and development by industry and relevant Contracting Parties on techniques for reusing and dismantling disused offshore installations and returning them to land for recycling or final disposal;
- exchange of information between competent authorities of Contracting Parties, operators and contractors on such techniques;

	Progress	Barriers	Expected position by 2020	Evidence base
• collaboration between operators of offshore installations in joint operations to decommission such installations. WE AGREE that environmental goals should be set for the offshore oil and gas industry and improved management mechanisms established to achieve them. The Commission will adopt a strategy for this purpose at its next meeting. In preparing this strategy, the Commission will consider how to address, *inter alia*: • the use and discharge of hazardous substances, consistent with the Strategy with Regard to Hazardous Substances; • discharges of oil from offshore installations, including that in produced water; • reduction of emissions of substances likely to pollute the air.				
Sintra commitments are reflected in the OIC Thematic Strategy for 2010 – 2020 and the status is recorded against the OIC Thematic Strategy objectives. OIC has continued to adopt measures (new Recommendations, amend existing Recommendations to enhance the measures) and develop guidelines as necessary in order reduce discharges and emissions from offshore installations. Derogation categories of OSPAR Decision 98/3 have been reviewed in 2003, 2008, 2013 and 2018. OIC 2018 agreed to continue to proactively promote areas of research and scientific understanding and also bring forward information on advances on technological and scientific understanding.				

4.2 Timeframe and implementation

instrument

Table 4.2: Timeframe and implementation

§ reference of OIC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
4.2 develop programmes and measures in respect to all phases of offshore activities:					
a. continue the annual collection of data on use and discharges of offshore chemicals, emissions to air, spills, and discharges of oil and radioactive substances;	**ONGOING** Up to date. Data is being collected on an annual basis for atmospherics, chemicals, oil discharges and spills. The scope of data reporting has widened over the years	OSPAR Co-ordinated Environmental Monitoring and Assessment Programme Appendix 01: Discharges, spills and emissions associated with the offshore oil and gas industry;	Other - Quality and timely provision of data from Contracting Parties; Lack of harmonisation of some data between Contracting Parties makes comparisons of data difficult	Ongoing	Still relevant Annual OIC EAP report on discharges, spills and emissions from offshore oil and gas installations; Three yearly country assessment reports on discharges, spills and emissions from offshore oil and gas installations;

§ reference of OIC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
	and data for 2007 - 2014 is available on ODIMS.	Reporting Procedures for Discharges of Radioactive Substances from Non-nuclear Sectors (OSPAR Agreement, 2013, No: Agreement 2013-11)			Three yearly overview assessment of OSPAR data on discharges, spills and emissions from offshore installations
b. by 2011, develop and implement a harmonised method of assessing environmental risk (risk based approach) relating to the management of produced water discharged from offshore installations;	Development of a harmonised method – **FULLY ACHIEVED** Implementation of a harmonised method - **ONGOING** Implementation due by 31 December 2018; Review and evaluation of effectiveness of the measure due to be reported every five years as from 2018 following full implementation	OSPAR Recommendation 2012/5 for a risk based approach to the management of produced water discharges from offshore installations; OSPAR Guidelines in support of Recommendation 2012/5 for a Risk-based Approach to the Management of Produced Water Discharges from Offshore Installations	Other - the different approaches and methodologies adopted by the Contracting Parties in implementing RBA could make a direct comparison of the results of the RBA results challenging. However, it should be possible to evaluate the effectiveness of RBA as a tool for assessing risk	Implementation should be achieved by 2021	Still relevant Annual implementation update from Contracting Parties (OIC 19/02/01 Add.1, OIC 19/02/01 Add.2, OIC 19/02/01 Add.3, OIC 19/02/01 Add.4); Annual implementation update from Contracting Parties (OIC 18/2/2, OIC 18/2/Info.1, OIC 18/2/Info.2L); OSPAR Recommendation 2012/5: Norwegian implementation programme (OIC 14/2/1); OSPAR Recommendation 2012/5: UK Risk-based Approach implementation programme (OIC 14/2/2); OSPAR Recommendation 2012/5: Danish implementation plan (OIC 13/3/8); OIC 2014 Summary Record §2.3 & §2.4
c. by 2011, encourage Contracting Parties to report on	**FULLY IMPLEMENTED**	OSPAR Recommendation 2010/18 on the	N/A	Completed	Assessment of the Investigations of Drilling in Extreme Conditions and

§ reference of OIC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
their reviews of their existing frameworks, investigate whether there are specific environmental issues relating to drilling activities in extreme conditions, taking into account external reviews, and, if required, develop appropriate measures;	Assessment undertaken in 2011 and OIC 2012 agreed that there is no need for a specific OSPAR measure	prevention of significant acute oil pollution from offshore drilling;			their Relevance to Potential Environmental Impacts (OIC 12/4/1); OIC 2012 Summary Record §4.9
d. by 2011, review the phasing out of the discharge in the OSPAR maritime area of offshore chemicals that are, or which contain added substances, listed in the OSPAR List of Chemicals for Priority Action (OSPAR Recommendation 2005/2);	**FULLY IMPLEMENTED** Review the phasing out of discharges of added offshore chemicals on OSPAR LCPA completed in 2012 as detailed in the annual report on discharges, emissions and spills	OSPAR Recommendation 2005/2 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or Contain Added Substances, Listed in the OSPAR 2004 List of Chemicals for Priority Action;	N/A	Completed	OSPAR Intermediate Assessment 2017. Trends in discharges, spills and emissions from offshore oil and gas installations; Overview assessment of implementation reports on OSPAR Recommendation 2005/2 on environmental goals for the discharge by the offshore industry of chemicals that are, or contain added substances, listed in the OSPAR List of Chemicals for Priority Action (OSPAR Publication, 2011, No: 528); Annual OIC EAP report on discharges, spills and emissions from offshore oil and gas installations; Report on the intersessional work done by the Expert Assessment Panel 2017-18 (OIC 18/7/1)

§ reference of OIC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
e. continue efforts to phase out discharges of hazardous substances by implementing OSPAR Decision 2000/2 (as amended) on a Harmonised Mandatory Control System for the Use and Reduction of the Discharge of Offshore Chemicals and its related measures, including their further review, as necessary, to harmonise with the relevant requirements of the REACH Regulation;	**ONGOING** With regards to OSPAR Recommendation 2006/3, from data reported in the 2016 annual data report the OIC Expert Assessment Panel concluded that there has been a 45% reduction in the discharge of such chemicals from ~2600 tonnes in 2006 to ~1429 tonnes in 2016.	OSPAR Recommendation 2017/1 on a Harmonised Pre-screening Scheme for Offshore Chemicals; OSPAR Recommendation 2014/17 amending OSPAR Recommendation 2010/3 on a Harmonised Offshore Chemical Notification Format (HOCNF); OSPAR Recommendation 2006/3 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or Which Contain Substances Identified as Candidates for Substitution OSPAR Decision 2005/1 amending OSPAR Decision 2000/2 on a Harmonised Mandatory Control System for the Use and Discharge of Offshore Chemicals Common Interpretation on which chemicals are covered and not covered by the Harmonised	Other - Technical barriers in identifying suitable alternative chemical products for Candidates for Substitution	Ongoing	Still relevant Report on the implementation of OSPAR Recommendation 2006/3 on environmental goals for the discharge of chemicals that are, or which contain, substances identified as candidates for substitution (OIC 18/3/6); OSPAR Intermediate Assessment 2017. Trends in discharges, spills and emissions from offshore oil and gas installations; Addendum to OSPAR Publication number 594/2013. Implementation of OSPAR Recommendation 2006/3 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or Which Contain Substances Identified as Candidates for Substitution, 2012, United Kingdom (OSPAR Publication, 2015, No: 657); Implementation of OSPAR Recommendation 2006/3 on Environmental Goals for the Discharge by the Offshore Industry of Chemicals that Are, or Which Contain Substances Identified as Candidates for

§ reference of OIC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
		Mandatory Control System under OSPAR Decision 2000/2 (OSPAR Agreement 2002); Further Guidance on the Assessment of the Toxicity of Substances under the Harmonised Pre-screening Scheme of OSPAR Recommendation 2000/4; OSPAR Decision 2000/2 on a Harmonised Mandatory Control System for the Use and Discharge of Offshore Chemicals			Substitution (OSPAR Publication, 2013, No: 594); As in 'g' below
f. by 2012, review the disposal of naturally occurring radioactive material in the form of low specific activity scales and sludges and, where appropriate, develop management measures to reduce the discharges of radioactive substances from offshore oil and gas activities;	**FULLY IMPLEMENTED**	OIC 2014 Summary Record §14.1, §14.2 & §14.6; Reporting Procedures for Discharges of Radioactive Substances from Non-nuclear Sectors (OSPAR Agreement, 2013, No: Agreement 2013-11); OSPAR Recommendation 2001/1 for the Management of	Other - Re-injection not available on all offshore installations No technique currently available to selectively reduce naturally occurring radioactive material	Completed	Note from OIC to RSC on the application of BAT for discharges of NORM to the marine environment (OIC 18/7/4) & (RSC(2) 19/08/01); Progress report of the joint OIC/RSC review of current practices for discharge of sand from offshore oil and gas activities (RSC 18/8/1); Report of joint OIC/RSC review of current practices for discharge of sand from offshore oil and gas activities (OIC 16/7/4);

§ reference of OIC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
		Produced Water from Offshore Installations			Report of joint OIC/RSC meeting, including the review of current disposal practices for low specific activity scales and sludges (OIC 15/9/5)
g. continue efforts to improve tools for environmental monitoring, data collection and assessment of the effects of discharges and emissions from offshore installations, including effects on ecosystems, in particular on threatened and/or declining species and habitats;	**ONGOING** OIC JAMP Products: (0-2) Assessment of impacts of discharges of oil and chemicals in produced water on the marine environment (2019); (O-3) Assessment of impacts of decommissioned pipelines on the marine environment and other users of the sea (2019); (0-4) Assessment of the impacts of disturbance of cuttings piles related to decommissioning (2019); (0-5) Assessment of impacts of the offshore oil and gas industry on the marine environment (2020 OIC overall assessment) (2020)	OSPAR's Joint Assessment and Monitoring Programme 2014-2020; OSPAR Guidelines for the Sampling and Analysis of Cuttings Piles (OSPAR Agreement 2017-03); OSPAR Guidelines for Monitoring the Environmental Impact of Offshore Oil and Gas Activities (OSPAR Agreement 2017-02); Development and / or identification of tools to monitor the effects of chronic low-level exposure in key elements of the ecosystem. (OIC 16/8/2);	Other - Failure to complete the work scope outlined in Column 2	JAMP deliverables should be achieved by 2020	Still relevant Assessment of the disturbance of drill cuttings during decommissioning (OSPAR Publication, 2019, No: 745); Assessment of the impacts of decommissioned pipelines on the marine environment and on other users of the sea (OIC 19/9/2); OSPAR report on discharges, spills and emissions from offshore oil and gas installations in 2017 (OSPAR Publication, 2019, No: 740); Assessment of discharges, spills and emissions from offshore oil and gas operations in Irish Waters from 2013 – 2017 (OSPAR Publication, 2019, No: 743); Assessment of the discharges, spills and emissions from offshore oil & gas operations on the Danish Continental Shelf 2013-2017 (OSPAR Publication, 2019, No: 741); Assessment of the discharges, spills and emissions from offshore installations on the German

§ reference of OIC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
					Continental Shelf in 2013 – 2017 (OSPAR Publication, 2019, No: 742); Assessment of discharges, spills and emissions from offshore oil and gas operations on The Netherlands Continental Shelf, 2013 – 2017 (OSPAR Publication, 2019, No: 744); OSPAR report on discharges, spills and emissions from offshore oil and gas installations in 2016 (OSPAR Publication, 2018, No: 717); Assessment of the discharges, spills and emissions from offshore oil and gas operations on the United Kingdom Continental Shelf 2012 – 2016 (OSPAR Publication, 2018, No: 718); Assessment of the discharges, spills and emissions from offshore oil and gas operations on the Norwegian Continental Shelf 2012 – 2016 (OSPAR Publication, 2018, No: 719); OSPAR report on discharges, spills and emissions from offshore oil and gas installations in 2015 (OSPAR Publication, 2017, No: 700); Assessment of the OSPAR report on discharges, spills and emissions to air from offshore oil and gas

§ reference of OIC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
					2013-2015 (OSPAR Publication, 2017, No: 701); OSPAR Intermediate Assessment 2017. Trends in discharges, spills and emissions from offshore oil and gas installations; Impacts of certain pressures of the offshore oil and gas industry on the marine environment – stocktaking report (OSPAR Publication, 2016, No: 684); Assessment of discharges, spills and emissions from offshore oil and gas operations in Irish Waters from 2010 – 2014 (OSPAR Publication, 2016, No: 688); Assessment of the discharges, spills and emissions from offshore oil & gas operations on the Danish Continental Shelf 2009-2013 (OSPAR Publication, 2016, No: 683; Assessment of the discharges, spills and emissions from offshore installations on the German Continental Shelf in 2009 – 2014 (OSPAR Publication, 2016, No: 670); Assessment of discharges, spills and emissions from offshore oil and gas operations on The Netherlands

§ reference of OIC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
					Continental Shelf, 2010 – 2014 (OSPAR Publication, 2016, No: 689); OSPAR report on discharges, spills and emissions from offshore oil and gas installations in 2014 (OSPAR Publication, 2016, No: 682); Norway assessment of the discharges, spills and emissions from offshore oil and gas operations on their respective Continental Shelf 2009 – 2013 (OSPAR Publication, 2015, No: 662); Assessment of the discharges, spills and emissions from offshore oil and gas operations on the United Kingdom Continental Shelf 2009 – 2013 (OSPAR Publication, 2015, No: 659); OSPAR report on discharges, spills and emissions from offshore oil and gas installations in 2013 (OSPAR Publication, 2015, No: 658); OSPAR report on discharges, spills and emissions from offshore oil and gas installations in 2012 (OSPAR Publication, 2014, No: 634); Assessment of the OSPAR report on discharges, spills and emissions to air from offshore oil and gas

§ reference of OIC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
					2010-2012 (OSPAR Publication, 2014, No: 635); OSPAR report on discharges, spills and emissions from offshore oil and gas installations in 2011 (OSPAR Publication, 2013, No: 602); OSPAR report on discharges, spills and emissions from offshore oil and gas installations in 2010 (OSPAR Publication, 2012, No: 567)
h. further assess the impact of underwater noise from the offshore oil and gas industry in light of EU criteria and methodological standards for good environmental status and, as appropriate, develop guidance on best practice for its mitigation;	**FULLY ACHIEVED**	OSPAR Guidance detailing measures and techniques to mitigate the impact of noise (or sound) from seismic surveys	Data - reporting of data to OSPAR noise register	Completed	An inventory of measures and techniques to mitigate the impact of seismic surveys (OIC 16/8/4) – amended report; OSPAR inventory of measures to mitigate the emission and environmental impact of underwater noise (2016 update) (OSPAR Publication, 2016, No: 706); Overview assessment of impacts of noise from the offshore oil and gas industry on the marine environment (OIC 15/10/2)
i. assess the suitability of existing measures to manage oil and gas activities in Region I and, where necessary, offer to contribute to the work on offshore oil and gas activities taking place under the Arctic Council, specifically under	Assessing suitability of existing measures – **FULLY ACHIEVED** Co-operation with Arctic Council - **ONGOING**	OIC 2014 Summary Record §12.6	Other - Failure to continue to effectively engage / co-operate with Arctic Council	Assess suitability of offshore measures – Completed;	Co-operation with Arctic Council – Still relevant Offshore developments in the Arctic (OIC 14/12/1 Rev.1);

§ reference of OIC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
the Protection of the Arctic Marine Environment Working Group (PAME);				Co-operate with Arctic Council – OSPAR have received observer status and co-operation with Arctic Council and its working group PAME is ongoing	The suitability of existing measures to manage oil and gas activities in OSPAR Region I (OIC 13/7/1)
j. by 2012, investigate whether there are specific environmental issues relating to ageing installations and infrastructure and, if required, develop appropriate measures;	**FULLY ACHIEVED**	Proposal for a way forward on how to assess the critical aspects with regards to specific environmental issues relating to ageing of installations (OIC 13/7/3)	N/A	Completed	Ageing installations (OIC 14/11/1); OIC 2014 Summary Record §11.2
k. by 2013, review and, if appropriate, amend the categories of disused offshore installations where derogations of OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations may be considered;	**FULLY ACHIEVED** - Reviews undertaken in 2013 and 2018	OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations	N/A	Completed	Still relevant – 5-year review cycle Review of OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations (OIC 18/6/4) (Report of OIC Inter-sessional Correspondence Group on the Disposal of Disused Offshore Installations (OIC 18/6/3));

§ reference of OIC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
					Review of OSPAR Decision 98/3 on the Disposal of Disused Offshore Installations (OIC 13/2/3)
l. by 2014, reassess the possibilities of releases of oil and chemicals from any disturbance of cuttings piles and their potential impacts on the marine environment;	**FULLY ACHIEVED** OIC JAMP Product (0-4) Assessment of the impacts of disturbance of cuttings piles related to decommissioning – mostly achieved, report to be finalised [due to be received by OIC in 2019, so if agreed, it will be finalised by OIC 2020]	Guidelines for the Consideration of the Best Environmental Option for the Management of OPF-Contaminated Cuttings Residue. (OSPAR Agreement, 2002-08); OSPAR Recommendation 2006/5 on a Management Regime for Offshore Cuttings Piles; OSPAR's Joint Assessment and Monitoring Programme 2014-2020; OSPAR Guidelines for the Sampling and Analysis of Cuttings Piles. OSPAR Agreement, 2017-03	N/A	Completed	Assessment of the disturbance of drill cuttings during decommissioning (OSPAR Publication, 2019, No: 745); Assessment of the Impacts of Disturbance of Cuttings Piles related to Decommissioning (OIC 18/8/3); Drill cuttings piles management and environmental experiences (OIC 18/8/Info.1); Assessment of possible releases of oil and chemicals from any disturbance of cutting piles (OIC 14/13/2); Assessment of the possible effects of releases of oil and chemicals from any disturbance of cuttings piles *(2009 update)* (OSPAR Publication, 2007, No: 337)
m. continue monitoring the development of Carbon Capture and Storage (CCS) activities, to	Continue to monitor – **ONGOING**	OSPAR Decision 2007/1 to Prohibit the Storage of Carbon Dioxide Streams	Other - Limited number of full-scale commercial projects	OSPAR measures are in place.	Still relevant Decisions and guidelines as detailed in column 3

§ reference of OIC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
ensure that appropriate measures are in place.	Ensure appropriate measures are in place – **FULLY ACHIEVED** OSPAR measures and guidelines have been introduced	in the Water Column or on the Sea-bed; OSPAR Decision 2007/2 on the Storage of Carbon Dioxide Streams in Geological Formations; OSPAR Guidelines for Risk Assessment and Management of Storage of CO2 Streams in Geological Formations (OSPAR Agreement 2007/12).			

5 Assessment of RSC's progress against radioactive substances thematic strategy theme

5.1 Thematic objective, main strategic directions and ministerial commitments

Table 5.1: Thematic objectives, main strategic directions and ministerial commitments

Thematic objective for RSC	Progress	Barriers	Expected position by 2020	Evidence base
1.1 & 1.2 prevent pollution …	For 1.1 – **Partially achieved**: RSC is working towards the ultimate aim through periodic evaluations	For 1.1 – **Acceptance & Technical implementation**: Finally acceptance of methodologies to be agreed and more work on ICG-MOD and ICG-CTZ	For 1.1 – Continued work towards the ultimate aim	**Still relevant** (1.1 & 1.2) The conclusions of the Fourth Periodic Evaluation (2016) stated: For the Nuclear Sector There is clear evidence of progress made by Contracting Parties towards the OSPAR RSS objectives for the nuclear sector: • In 35 out of 53 assessments for individual Contracting Parties across the nuclear sub-sectors, there was evidence that substantial reductions in discharges have taken place compared to the baseline period. • In another 5 assessments for individual Contracting Parties there was some evidence for a substantial reduction. • None of the assessments carried out for individual Contracting Parties showed any evidence for any increase in any discharges. For the Non-Nuclear Sector The submission of discharge data for the non-nuclear sector began in 2005 and sufficient data for the derivation of a baseline period (2005 to 2011) for the oil/gas sub-sector have now been collected. However, additional years of data must first be collated before a meaningful comparison of discharges against the agreed baseline can be carried out. While environmental concentration data was not considered in the 4PE, the radiological impacts on
	For 1.2 – **Fully achieved**: RSC has developed Decisions, Recommendations and Agreements and continues to collect evidence and develop tools to assess the aims of the objective	For 1.2 – N/A	For 1.2 – RSC expect to be in a position to assess/meet the objectives. May not be able to demonstrate for all radionuclides and indicators and in all OSPAR Regions	

Thematic objective for RSC	Progress	Barriers	Expected position by 2020	Evidence base
				man and marine biota of these discharges were expected to be low, as previously concluded in the Third Periodic Evaluation.
Main strategic directions				
3.2a. monitoring programmes	**In progress**: RSC has continued to develop monitoring programmes, improve the evidence base and further develop assessment tools	**Other**: Discontinuation of monitoring by some or individual Contracting Parties **Financing**: Financing is not necessarily ring-fenced for some Contracting Parties	We will have undertaken the monitoring programmes, improved the evidence base and further developed assessment tools	**Still relevant** OSPAR agreement 2013-10 on the reporting of data on liquid discharges from nuclear installations. OSPAR agreement 2013-11 on the reporting of discharges of radioactive substances from non-nuclear sectors. OSPAR agreement 2005-08 on monitoring of radionuclides in the environment and agreed reporting format. OSPAR Joint Assessment and Monitoring Programme (JAMP) 2014 – 2021

Thematic objective for RSC	Progress	Barriers	Expected position by 2020	Evidence base
b. adopt international quality criteria	**Fully achieved**: RSC has monitored the international quality criteria and has adopted the IAEA's approach to quality criteria	N/A	In place	**Still relevant** OSPAR agreement 2016-7 on a methodology for deriving environmental assessment criteria and their application
c. management measures (oil and gas)	**Fully achieved**: RSC has assessed the contribution of the oil and gas industry to marine radioactive pollution	**Acceptance & Technical implementation**: Finally acceptance of methodologies to be agreed and more work on ICG-MOD	RSC is expected to have completed the necessary work to be able to assess the impact of additional concentrations of NORM in produced water in the near and far field.	**Still relevant** Ongoing work of ICG MOD.
d. best available techniques	**Partially achieved**: Partially achieved to date. For the nuclear sector, RSC has ensured, through regular reporting, that CPs continue to apply Best Available Technology (BAT) to minimise and, as appropriate, eliminate pollution of the marine environment caused by radioactive discharges from nuclear industries For the non-nuclear sector, RSC has in collaboration with OICscrutinised the application of	**Mechanism for implementation – national**: For future BAT reports by individual Contracting Parties	For the nuclear sector, the 7th round of PARCOM reporting will be completed in 2020. For non-nuclear sector, work will continue to scrutinise the development of BAT that may reduce discharges of NORM.	**Still relevant** For the nuclear sector, PARCOM Recommendation 91/4 and corresponding guidelines (OSPAR agreement 2004-3) and published CP PARCOM reports. PARCOM Recommendation 91/4 and Agreement 2004-3 have been replaced by OSPAR Recommendation 2018/01 and Agreement 18-01 from 2020 onwards

Thematic objective for RSC	Progress	Barriers	Expected position by 2020	Evidence base
	BAT by the offshore oil and gas industry.			
Bremen Statement	**Fully achieved**: CPs have implemented national plans	N/A	In place	**Still relevant** to 2020 The production by each Contracting Party of a national report setting out how it intends to meet the objectives of the Radioactive Substances Strategy.
Sintra Statement	**Fully achieved**: Sintra Statement 1998 The RSC-relevant commitment in the Sintra Statement is the same as the objectives in the OSPAR Radioactive Substances Strategy. RSC's progress against the RSS objectives is given above under the heading '**Thematic objective for RSC'**	N/A	In place	**Still relevant** to 2020

5.2 Timeframe and implementation

Table 5.2: Timeframe and implementation

§ reference of RSC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
4.2 Action to improve and further develop tools for data collection and assessment of progress towards the objectives		n/a			
a. statistical trend analysis techniques	**Fully implemented**	RSC have already identified and agreed a statistical trend detection technique that is suitable for use with data reported on environmental concentrations and discharges.	None	Available for use in 5PE.	**Still relevant** RSC documents 13/03/04 and 15/07/06. RSC 2015 summary record: *7.19 RSC agreed that the Kendall's Correlation Coefficient test can be accepted as an assessment tool to be used when appropriate.*
b. i. appropriate method of reporting exceptional discharges	**Fully implemented**	RSC has agreed appropriate revised reporting formats for reporting for exceptional discharges in OSPAR Agreement 2013-10 In addition, based on the work of ICG XV (RSC 12/3/1) RSC has agreed that with regard to exceptional discharges (RSC 2012 summary record): '*3a i. there was consensus on the fact that the inclusion of exceptional discharges, as defined in the RSS , would probably not affect the performance and delivery of the RSS'*	None	Already agreed	Still relevant OSPAR Agreement 2013-10 RSC document 12/03/01

§ reference of RSC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
b. ii. method to take account of the variability	**Fully implemented**	OSPAR has agreed an assessment methodology that uses 7-year baseline and assessment periods to take account of year to year variability. In addition, based on the work of ICG XV (RSC 12/3/1) RSC has agreed that with regard to the variability of operational discharges (RSC 2012 summary record): '3a ii. there was consensus on the fact that variability would probably not affect the performance and delivery of the RSS;'	None	Already agreed	Still relevant RSC has agreed to develop an OSPAR agreement to document the details of the assessment methodology and its application for environmental concentrations and discharges. RSC document 12/03/01
c. agreed baseline values for discharges and concentrations, where possible, from the non-nuclear sector	**Ongoing**	RSC has agreed baselines for produced water from the oil and gas sub-sector. RSC has agreed not to assess other non nuclear subsector discharge data (RSC 2018 summary record).	**Data**: RSC (ICG-MOD) is finalising how to handle other discharge data from the oil and gas sub-sector	RSC is aiming to conclude this by 2020	**Still relevant** for 5PE The Fourth Periodic Evaluation
d. programmes and measures to apply such criteria	**Ongoing**	RSC will examine the use of the agreed EAC methodology (OSPAR agreement 2016-7) as a step in the assessment of whether additional concentrations of NORM from produced water discharges are close to historic levels or background	None	RSC (ICG-MOD) is finalising how to use the agreed EAC methodology RSC is aiming to conclude this by 2020	**Still relevant** TOR of ICG MOD

§ reference of RSC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
e. review progress with tritium abatement techniques by 2018	**Ongoing**	Standing item on RSC's agenda to highlight any new developments in tritium abatement techniques and reporting under recommendation PARCOM 91/4.	**Technical implementation**: There has been no further technological developments in tritium abatement techniques.	n/a	**Still relevant** RSC work programme. CPs PARCOM reports.
4.3 Action to continue monitoring programmes and annual data collection to improve the evidence base					
a. to improve annual collection of data on discharges & concentrations from the non-nuclear sector	**Ongoing**	Regular revision of monitoring agreement (OSPAR agreement 2005-08) by all CPs. Revision of reporting requirements on discharges as necessary. Cooperation with OIC	**Data**: Availability of environmental concentration monitoring data.	n/a	**Still relevant** RSC has increased its database on environmental concentrations of indicator naturally occurring radionuclides. For discharges, RSC has established baseline values for total alpha, total beta (excluding tritium) and indicator radionuclides for produced water from the oil and gas sub-sector.
b. to continue to collect data and monitor discharges of the radionuclides from the nuclear sector	**Ongoing**	Regular revision of monitoring agreement (OSPAR agreement 2005-08) by all CPs. Revision of reporting requirements on discharges as necessary.	**Data**: Availability of environmental concentration monitoring data	n/a	**Still relevant** RSC has increased its database on environmental concentrations of indicator radionuclides associated with the nuclear sector. For discharges, RSC has established baseline values for total alpha, total

§ reference of RSC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
					beta (excluding tritium) and indicator radionuclides for the nuclear sector.
c. to cooperate with IAEA on data in MARiS	**Ongoing**	RSC has established a MoU to share data with the IAEA MARiS	**Data**:	Will be achieved by 2020	**Still relevant** MoU between RSC and IAEA
d. to assess contribution from non-nuclear sector to pollution	**Ongoing**	ICG-MOD work on NORM in produced water from the oil and gas sector is ongoing and progressing.	**Acceptance**: Final decision on the work of ICG MOD yet to be taken by RSC.	RSC is aiming to conclude on these issues by 2020.	**Still relevant** Report of ICG MOD (RSC document 18/03/01)
4.4 Assess the impacts to man and biota					
a. from environmental concentrations of radionuclides associated with the nuclear industry	**Fully achieved**	RSC has agreed a methodology for the derivation and application of environmental assessment criteria (OSPAR agreement 2016-07)	None	Available for use in 5PE.	**Still relevant** OSPAR agreement 2016-07
b. from discharges of radionuclides associated with the non-nuclear sectors	**In progress**	ICG-MOD work on NORM in produced water from the oil and gas sub-sector is ongoing and progressing. RSC has agreed not to assess discharge data currently reported for other non-nuclear sub-sectors.	**Acceptance**: Final decision on the work of ICG MOD yet to be taken by RSC.	RSC is aiming to conclude on these issues by 2020.	**Still relevant** TOR of ICG MOD
4.5 periodical evaluations of progress as specified in JAMP and assess progress in implementing the strategy against baselines	**Ongoing**	RSC has produced 4 periodic evaluations of progress. The Fourth Periodic Evaluation was published in 2016.	None	n/a	**Still relevant** for 5th PE 1st, 2nd, 3rd and 4th Periodic Evaluations published by OSPAR.

§ reference of RSC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
4.6 Effective action taken by Contracting Parties	**Ongoing**	CPs implement national plans at a national level rather than an RSC level	None	n/a	Relevant to individual Contracting Parties' plans, but **no longer relevant** for the new Strategy National plans by individual CPs
4.7 Identification and adoption of relevant measures					
a. to apply and further develop BAT to minimise discharges of radioactive substances from the nuclear sector	**Ongoing**	Recommendation PARCOM 91/4 and reporting guidelines (OSPAR agreement 2004-03). RSC has completed the 7th round or reporting under this Recommendation	none	n/a	**Still relevant** Published CP PARCOM reports.
b. to review periodically the development of abatement techniques for tritium	**Ongoing**	Standing item on RSC's agenda to highlight any new developments in tritium abatement techniques and reporting under recommendation PARCOM 91/4.	**Technical implementation**: There has been no further technological developments in tritium abatement techniques	n/a	**Still relevant** RSC work programme. CPs PARCOM reports.
c. to identify appropriate management measures for the non-nuclear sources (other than oil and gas)	**In progress**	RSC has looked at and discussed issues related to reporting and fate of discharges from the medical sector (e.g. RSC documents 16/08/05, 16/08/02 and 16/08/03). RSC has agreed not to assess other non nuclear subsector discharge data (RSC 2018 summary record).	n/a	n/a	**Not relevant** for assessment in the future Strategy (may decide to still collect the data as an operational objective)

§ reference of RSC Strategy	Progress	Method of implementation	Barriers	If not 2020, predicted date of achievement	Evidence base
d. to address measures regarding radioactive substances from offshore oil and gas activities under the offshore industry strategy	**Ongoing**	Closer cooperation developed with OIC (especially through each committee's. EAPs) as a management measure. Standing agenda item on RSC and OIC coordination on NORM	**Information**: Delay in exchange of information due to meeting cycle order.	n/a	**Still relevant** RSC work programme

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