

Finding common ground

Towards regional coherence in implementing the Marine Strategy Framework Directive in the North-East Atlantic region through the work of the OSPAR Commission



GES 2020
GOOD ENVIRONMENTAL STATUS

Executive summary

Regional coordination for the Initial Assessment (MSFD Article 8) – The OSPAR Commission has ensured a high level of information sharing and joint assessment in the North-East Atlantic, following on from repeated integrated environmental assessments. The OSPAR Quality Status Report 2010, together with its underlying assessment reports, provides the primary basis for coordination of national initial assessments across those North-East Atlantic OSPAR Contracting Parties which are also EU Member States. The QSR provides an overarching summary of environmental state across the Region and the five subregions. It provides evidence that OSPAR has provided Contracting Parties a basis to ensure regional and subregional coherence of their initial assessments. An OSPAR socio-economic analysis is also being taken forward and will provide a strong basis for more detailed coordination of the socio-economic element of the MSFD assessments process in the future. No significant differences in National Initial Assessments were identified through subregional coordination in the first half of 2012 and no country has flagged major inconsistencies in the conclusions of neighbouring national initial assessments.

Regional coordination for the determination of good environmental status, and for the establishment of environmental targets and indicators (MSFD Articles 9 and 10) – Work of the OSPAR Commission has facilitated substantial information sharing of existing methodologies for determining GES as well as coordinating action across Contracting Parties on their further development. OSPAR has also provided a framework for the development of coordinated environmental targets and indicators. OSPAR has developed 'Advice documents' on determining GES and setting targets and indicators for each of the GES Descriptors, with the exception of D3 and D9. The countries implementing the MSFD have collectively analysed their emerging GES determinations and associated targets and indicators through the creation of an inventory of emerging national proposals for Descriptors 3, 5, 7, 8, 9, 10 and 11. This resulted in an assessment of the level of regional coherence and agreement on specific actions to improve regional coordination on Articles 9 and 10 for a number of the GES Descriptors, both before and after July 2012. For the biodiversity Descriptors (1, 2, 4 and 6) countries are sharing expertise on common approaches. An intensive programme of work is still continuing to coordinate national approaches to biodiversity targets and indicators, including the ongoing development of a proposed set of common OSPAR biodiversity indicators for MSFD.

Through the leadership of OSPAR, countries in the North-East Atlantic have been able to make a very positive start to their coordinated implementation of the MSFD. They have also played a significant role in the development of several EU-wide guidance document established under the MSFD Common Implementation Strategy. However, the journey has only just begun and countries have identified a number of areas where regional coordination can be improved. Key priorities for OSPAR-level work between 2012 and 2018, include work on common indicators as a basis for an update of the OSPAR monitoring and assessment programme, as well as work on common approaches to measures.

Récapitulatif

Coordination régionale de l'évaluation préliminaire (Article 8 de la DC SMM) – La Commission OSPAR a assuré un échange d'informations et une évaluation conjointe de haut niveau dans l'Atlantique du Nord-Est, faisant suite à des évaluations environnementales intégrées répétées. Le Bilan de santé 2010 d'OSPAR (QSR), ainsi que ses rapports d'évaluation sous-jacents, constituent la base principale de la coordination des évaluations nationales préliminaires entre les Parties contractantes OSPAR de l'Atlantique du Nord-Est qui sont également des Etats membres de l'UE. Le QSR comporte un résumé déterminant de l'état écologique de la Région et des cinq sous régions et des preuves qu'OSPAR a offert aux Parties contractantes une base permettant d'assurer la cohérence régionale et sous-régionale de leurs évaluations préliminaires. Une analyse socioéconomique OSPAR est également en cours de réalisation et constituera une base solide pour la coordination détaillée de l'aspect socioéconomique du processus d'évaluation de la DC SMM à l'avenir. La coordination régionale n'a déterminé aucune différence significative dans les évaluations nationales préliminaires au cours du premier semestre 2012 et aucun pays n'a signalé d'inexactitudes majeures dans les conclusions des évaluations nationales préliminaires voisines.

Coordination régionale de la détermination du bon état écologique, et de la création de cibles et indicateurs environnementaux (Articles 9 et 10 de la DCSMM) – Les travaux de la Commission OSPAR ont facilité un échange substantiel d'informations sur les méthodologies existantes de détermination du bon état écologique ainsi que la coordination des mesures parmi les Parties contractantes quant à leur développement futur. OSPAR a également fourni un cadre de travail pour le développement de cibles et indicateurs environnementaux coordonnés. OSPAR a élaboré des « documents consultatifs » pour la détermination du bon état écologique et de cibles et indicateurs pour chaque descripteur du bon état écologique, à l'exception de D3 et D9. Les pays mettant en œuvre la DCSMM ont analysé collectivement leurs déterminations émergentes du bon état écologique et des cibles et indicateurs correspondants grâce à la création d'un inventaire des propositions nationales émergentes pour les descripteurs 3, 5, 7, 8, 9, 10 et 11. Ceci a permis d'évaluer le niveau de cohérence régionale et l'accord sur des actions spécifiques pour améliorer la coordination régionale quant aux articles 9 et 10 pour un certain nombre de descripteurs du bon état écologique, aussi bien avant juillet 2012 qu'après. Les pays partagent leurs expertises sur les approches communes pour les descripteurs de la biodiversité (1, 2, 4 et 6). Un programme intensif de travail se poursuit afin de coordonner les approches nationales pour les cibles et indicateurs de la biodiversité. Il s'agit notamment du développement en cours d'une série proposée d'indicateurs communs de la biodiversité pour la DCSMM dans le cadre d'OSPAR.

Les pays de l'Atlantique du Nord-Est ont pu, grâce au pilotage d'OSPAR, commencer de manière positive leur mise en œuvre coordonnée de la DC SMM. Ils ont également joué un rôle significatif dans le développement de plusieurs documents d'orientation à l'échelle de l'UE créés dans le cadre de la Stratégie commune de mise en œuvre de la DC SMM. Cette démarche ne fait que commencer et les pays ont déterminé un certain nombre de domaines dans lesquels la coordination régionale peut être améliorée. Les travaux prioritaires essentiels au niveau d'OSPAR entre 2012 et 2018 portent notamment sur les indicateurs communs à titre de base pour une actualisation du programme de surveillance et d'évaluation OSPAR ainsi que sur les approches communes appliquées aux mesures.

1. Sharing commitment and ensuring delivery

Introduction

The countries on the Atlantic side of Europe have worked together since the mid-1970s to address jointly the environmental issues in the North-East Atlantic. This has deepened the common understanding and paved the way for measures to protect its environment.

Work by the OSPAR Commission under the 1992 OSPAR Convention thus provides a solid basis for implementing the EU's Marine Strategy Framework Directive (MSFD) in a regionally coherent manner. The 1992 Convention¹ as amended is based on the earlier Oslo Convention and Paris Convention with their focus on combating marine pollution. The 1998 addition of an Annex V on the protection and conservation of the ecosystems and biological diversity has considerably broadened OSPAR work to provide an integrated approach to marine environmental protection.

The MSFD and OSPAR are both inspired by the same objectives and principles, with the implementation of the Ecosystem Approach at their core. To do right for one is to do right for the other. OSPAR Contracting Parties thus have no difficulty in combining their work under both instruments. It should be noted that the European Union is a party to the OSPAR Convention. The EU's Marine Strategy was developed on the basis of an analysis of the existing range of instruments to protect the marine environment in Europe, which took due account of achievements and expertise developed in OSPAR. Of all the European regional seas conventions, OSPAR includes the largest group of EU Member States and also some of the most 'maritime' EU Member States. This evidence-base and expertise gives OSPAR a fertile basis for advancing marine environmental protection.

OSPAR benefits from participation by the non-EU countries Iceland, Norway and Switzerland as well as from the participation of land-locked countries such as Luxembourg, Finland² and again Switzerland. All parties have jointly committed themselves in 2010 to facilitate the MSFD implementation in the North-East Atlantic region (see text box).

In practice this means that the OSPAR Commission has built up a strong network of experts with well-established procedures for working together effectively to address common marine environmental questions. Continuing and deepening this cooperation is vital for the effective implementation of the MSFD

OSPAR adopted in 2010 an MSFD Road Map³ outlining what OSPAR countries should do to ensure a coordinated regional approach to implementing the MSFD within the OSPAR Convention within the period 2010-2020, taking account of their national obligations under the Directive.

The timeline at **Annex 1** is taken from the Road Map.

¹http://www.ospar.org/html_documents/ospar/html/ospar_convention_e_updated_text_2007.pdf

²*Note that some rivers in the North and North-East of Finland drain into the OSPAR maritime area via Norway and the Russian Federation. All other watercourses are running into the Baltic Sea maritime area.*

³http://www.ospar.org/documents/dbase/publications/p00501_msfd%20roadmap.pdf

We facilitate the coordinated implementation of the EU Marine Strategy Framework Directive

We welcome the EU Marine Strategy Framework Directive, emphasising that the Directive's objective to achieve or maintain good environmental status in the marine environment by 2020 concurs with and supports our aims.

We affirm that the OSPAR Commission will facilitate the coordinated and coherent implementation of this Directive. To this end, we welcome the Road Map as an OSPAR Regional Implementation Framework for the EU Marine Strategy Framework Directive, as a living document to be updated as appropriate. In particular, we consider the QSR 2010 and its underpinning assessments and reports to provide solid building blocks for the development of the national initial assessments due in 2012. We will continue to cooperate on further steps that need to be taken by the relevant Contracting Parties to establish their marine strategies under the Directive, using our shared expertise and the mechanisms and structure of the OSPAR Commission as a strong regional platform. For this purpose, we have revised our working structure and have identified

in our North-East Atlantic Environment Strategy those issues for which coordination is needed.

With a view to achieving our common goals, we also commit ourselves to strengthen our cooperation with other Regional Sea Conventions involved in facilitating the implementation of the Directive, in particular the Helsinki and the Barcelona Conventions, to which some OSPAR Contracting Parties are also parties. Furthermore, considering that concentrations of nutrients and hazardous substances are related to atmospheric depositions and loads from rivers in the catchment area, we will reinforce our cooperation with land-locked States, using established cooperation structures, such as International River Basin Commissions.

(Bergen 2010 OSPAR Commission Ministerial Declaration paragraphs 11-13)

Practical delivery of OSPAR coordination takes place through the ICG MSFD¹, a group with flexible working arrangements that includes MSFD policy and technical representatives from the different Contracting Parties. It reports to the OSPAR Coordination Group which is responsible for cross-cutting issues such as the implementation of the Ecosystem Approach. These groups draw on the expertise of the entire OSPAR working structure in order to support the MSFD coordination process. Many aspects of the MSFD build on existing work of OSPAR which came under review in the thematic Committees and their expert groups over the past years as the specific MSFD requirements crystallised. While existing frameworks are being adapted to meet MSFD needs, new work strands have been set up to address emerging challenges under the MSFD. The ICG COBAM² has been closely involved in leading OSPAR coordination on GES targets and indicators in relation to the biodiversity descriptors (Descriptors 1, 2, 4 and 6). ICG Eutrophication (D5), ICG Marine Litter (D10), ICG Environmental Assessment Criteria (D8), ICG on Cumulative Impacts of Human Activities (D1, 2, 4, 6) and ICG SEA (socio-economic analysis) are additional examples of expert groups in OSPAR through which Contracting Parties actively cooperate on the science basis for determining GES, setting targets, operationalising associated indicators and developing assessment frameworks, in order to inform policy discussions on regional coordination and coherence at OSPAR Committee level.

OSPAR addresses the MSFD subregions in the North-East Atlantic

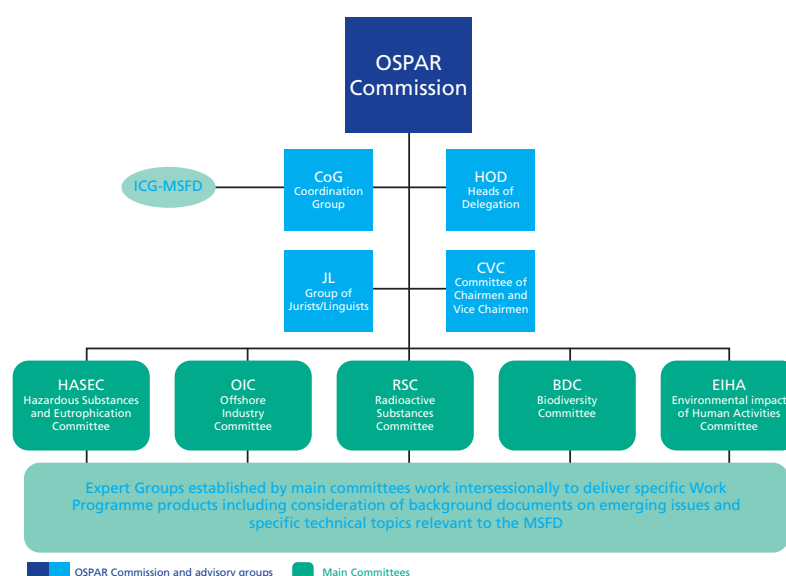
The ecology of the OSPAR maritime area includes a wide range of species and habitats, from the ice-bound and fjord coastlines of the Arctic, to the estuaries, sea lochs, rias and

open bays of the Greater North Sea, the Celtic Seas, the Bay of Biscay and the Iberian Coast, to the deep-ocean ecosystems of the Wider Atlantic. The marine waters in the OSPAR maritime area vary from 'warm-temperate' to 'cool-temperate'. The huge differences in physical, climatic and ecological conditions have to be taken into account in OSPAR's work and in the measures needed to protect the environment. OSPAR has since 1995 addressed monitoring and assessment of the North-East Atlantic in five regions (see graph on next page). These are broadly similar to the MSFD Article 4 subregions⁶.

On the southern side, the OSPAR maritime area only covers a small part of the EU Member States' marine waters in the Macaronesian region. Spain and Portugal are currently considering whether to bring the full extent of their waters in that region under the application of the OSPAR Convention. This may result in future in official adjustments to the geographical coverage of the OSPAR Convention maritime area, pending the necessary negotiations and decision making procedures in those countries and between the OSPAR Contracting Parties.

2. Assessing the state of the marine environment together from the subtropics to the North Pole

The level of pressures and impacts of human activities is very variable across this vast North-East Atlantic Ocean region. The OSPAR countries undertake regular monitoring, with most of the effort going to the shallower shelf sea areas where human activities are most intense.



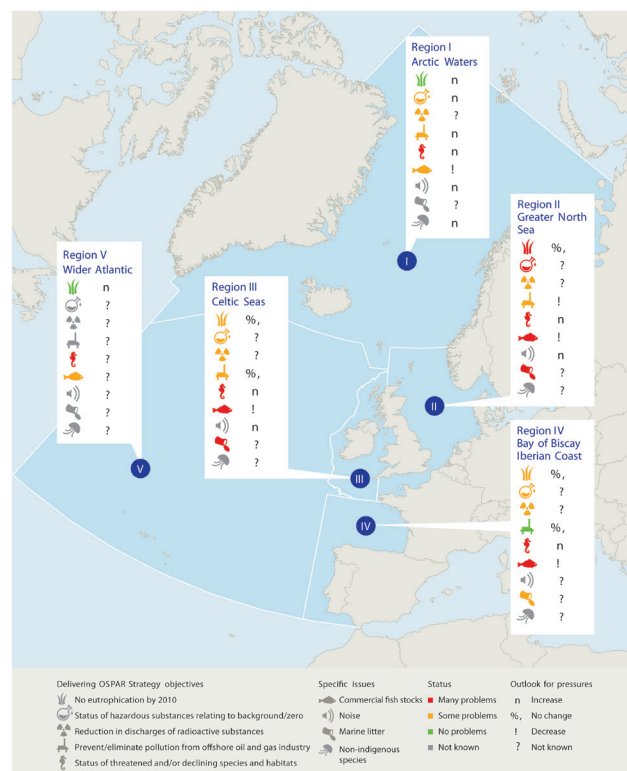
¹Intersessional Correspondence Group on the Marine Strategy Framework Directive.

²Intersessional Correspondence Group on the coordination of biodiversity assessment and monitoring.

⁶Countries have taken account of the boundaries of the OSPAR regions in their subregional boundaries, but there are some differences between the OSPAR regional boundaries and those proposed for MSFD purposes. Contracting Parties will need to consider whether improved alignment between the OSPAR regions and the MSFD subregions is necessary in the future.

The OSPAR Commission has a long track record in organising marine environmental monitoring and of publishing environmental assessments, both thematic reports and overall integrated environmental assessments. Producing Quality Status Reports (QSRs) started in the North Sea Conference process⁷ and they now cover the entire North-East Atlantic Ocean.

OSPAR's most recent QSR 2010 provides both a detailed and a summarised⁸ assessment of the environmental status in the North-East Atlantic, underpinned by a broad range of thematic assessments.



Key findings of the QSR 2010 include:

CLIMATE CHANGE – Climate change effects and ocean acidification are now evident, especially in the northern OSPAR Regions.

EUTROPHICATION – Nutrient inputs have generally decreased, but the OSPAR objective of no eutrophication will not be reached by 2010.

HAZARDOUS SUBSTANCES – Concentrations of some substances have decreased, but problems remain in many coastal areas.

RADIOACTIVE SUBSTANCES – Discharges of radionuclides from nuclear installations have fallen, and radiation doses to humans and marine life from this pollution are low in all OSPAR Regions.

⁷From 1984 to 2006. Several successive QSR-type reports were produced, most prominently the 1993 reports by the North Sea Task Force. OSPAR continued this practice at the scale of the entire North-East Atlantic with the Quality Status Report 2000. The OSPAR Commission was entrusted with following up on the legacy of the North Sea Conferences.

⁸http://qsr2010.ospar.org/en/media/content_pdf/ch00/Keyfindings_EN.pdf

OFFSHORE OIL AND GAS INDUSTRY – Pollution from oil and gas production has fallen, but continued monitoring is essential as the industry changes and develops.

FISHING – Fishing has large impacts on marine ecosystems despite improvements in management.

OTHER HUMAN USES AND IMPACTS – There are multiple pressures on the marine environment, and many are increasing.

BIODIVERSITY AND ECOSYSTEMS – The decline in biodiversity is a long way from being halted.

The EU countries in OSPAR have agreed that they will draw on the QSR 2010 for their 'Initial Assessment' (see text box).

QSR 2010 AND INITIAL ASSESSMENT

1. There has been a high level of sharing of information and joint assessment in the North-East Atlantic through the work of the OSPAR Commission which has repeatedly undertaken holistic environmental assessments.
2. The OSPAR Quality Status Report 2010, together with its underlying assessment reports, provides an important basis for coordination of national initial assessments across the North-East Atlantic OSPAR Contracting Parties / EU Member States. The QSR provides an overarching summary of environmental state across the Region and the five subregions. It provides evidence that OSPAR has provided Contracting Parties / EU Member States with a basis to ensure regional and subregional coherence of their initial assessments. Contracting Parties agreed they should aim to refer in particular and as far as possible to the QSR including its underlying thematic assessments and/or supporting data in their national initial assessments.
3. As regards the conclusions of national initial assessments, the OSPAR Coordination Group agreed that further coordination should be carried out between relevant Contracting Parties at a subregional level. The Coordination Group requested Contracting Parties / EU Member States to share planning information to make this possible.
4. No significant differences identified through subregional coordination were reported in the first half of 2012 and no country has flagged major inconsistencies in the conclusions of neighbouring national initial assessments.
5. An OSPAR socio-economic analysis is also being taken forward under the leadership of the ICG SEA and will provide a strong basis for more detailed coordination of the socio-economic element of the MSFD assessments process in the future.

Building further on this experience, OSPAR is preparing to revise its Joint Monitoring and Assessment Programme over 2013-2014 in order to support countries' MSFD needs, in particular the 2014 MSFD monitoring programmes and the 2018 update of the initial assessment.

EXAMPLE: BILATERAL ENGAGEMENT ON THE INITIAL ASSESSMENT

The UK, the Netherlands, Belgium and Germany held a number of bilateral meetings with each other during 2011 to discuss their different approaches to the Initial Assessment process. Following the discussions which took place during these meetings the countries were able to confirm that although their initial assessments would not follow exactly the same format, they would all follow the requirements of Annex III of the MSFD, and would be based on similar assessment methodologies, linking back to assessments carried out for the OSPAR Quality Status Report, the Water Framework Directive, the Common Fisheries Policy, the Birds and Habitats Directives. These countries have not identified any significant differences in the conclusions of their initial assessments.

Spain, Portugal and France have also held a number of joint meetings to share information on approaches and methodologies. As a result of this work, major inconsistencies in the results of the initial assessment are not expected.

OSPAR Contracting Parties are also using their work in OSPAR as an opportunity to enhance coherence in their national approaches to monitoring and assessment across different instruments, i.e. between OSPAR assessments and EU instruments such as the Water Framework Directive and the Birds and Habitats Directives. OSPAR has long advocated such 'synergies' in assessment and monitoring.⁹ OSPAR Contracting Parties welcome that further efforts are being undertaken from 2012 onwards, together with the European Commission, to address remaining differences between the regional sea conventions and EU-directives in approaches towards indicators and monitoring and assessment methodologies, in time for the updating of national assessments.

⁹OSPAR 2005, *Synergies in Assessment and Monitoring between OSPAR and the European Union* – Publ. No. 230.

OSPAR 2005, *Synergies between the OSPAR Comprehensive Procedure, the integrated set of OSPAR Ecological Quality Objectives (EcoQOs) for eutrophication and the EC Water Framework Directive* – Publication No. 231.

OSPAR 2006, *Synergies in Assessment and Monitoring between OSPAR and the European Union: Biodiversity* – Publ. No. 294.

OSPAR, 2008, *Marine Biodiversity Monitoring and Assessment: Activities to improve synergies between EU directives and international conventions* – Publ. No. 357.

3. Coherent determination of good environmental status and choice of environmental targets and indicators

Existing Strategic objectives and approaches guide OSPAR work

Taking into account scientific information on the state of the North-East Atlantic, the OSPAR Commission has formulated strategic objectives at ministerial level in 1998 and 2003 and has brought them up-to-date in 2010. The 2010 update of the Strategies took account of the MSFD requirements. The OSPAR strategies have provided the reference framework, the objectives and political commitment that guide all OSPAR Committee work programmes. This provides an extensive common basis for the MSFD coordination.

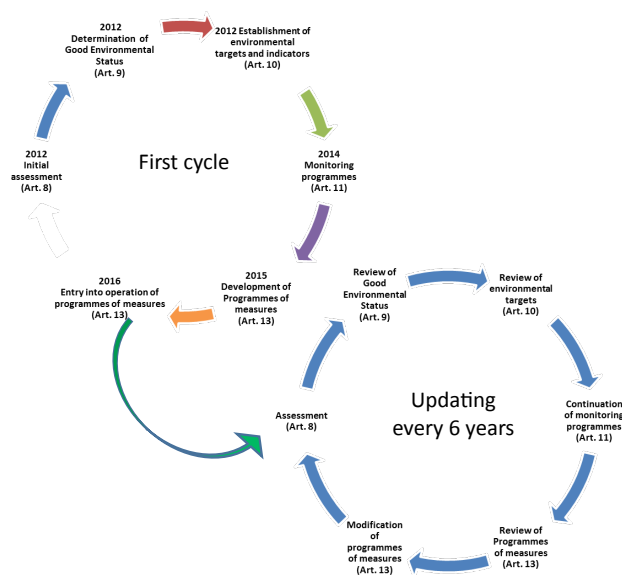
THE OSPAR STRATEGIES ¹⁰	GUIDES THE WORK PROGRAMME OF OSPAR:
Thematic strategies:	
the Biodiversity and Ecosystem Strategy	Biodiversity Committee (BDC) and Environmental Impact of Human Activities Committee (EIHA)
the Eutrophication Strategy	Hazardous Substances and Eutrophication Committee (HASEC)
the Hazardous Substances Strategy	Hazardous Substances and Eutrophication Committee (HASEC)
the Offshore Industry Strategy	Offshore Industry Committee (OIC)
the Radioactive Substances Strategy	Radioactive Substances Committee (RSC)
Common strategy:	
the Strategy for the Joint Assessment and Monitoring Programme (JAMP)	All committees for their theme, the Coordination Group for 'Theme A' (General, i.e. overall Ecosystem Approach)

¹⁰Link: http://www.ospar.org/html_documents/ospar/html/10-03e_nea_environment_strategy.pdf

Strong parallels between OSPAR approaches and the MSFD management cycle

There are strong analogies between the MSFD and OSPAR approaches. For example, the OSPAR commitments to the establishment of 'Ecological Quality Objectives' (EcoQOs) taking account of scientifically sound environmental assessments stem from the Ecosystem Approach in the same way as the linkage in the MSFD between the initial assessment (Art.8) and the determination of Good Environmental Status (Art.9).

Assessing environmental state has progressively been embedded in a firm policy context of ecological objectives, management targets and specific targeted measures to safeguard or improve the quality of the marine environment. Assessment criteria are thus more and more derived from the international commitment to achieve a specific level of environmental quality.



Using OSPAR expertise and experience to support the MSFD coordination process

The work of the OSPAR Committees BDC, EIHA and HASEC contributed to the development of 'OSPAR MSFD Advice documents' for each of the MSFD Descriptors of Good Environmental Status (except Descriptors 3, 9 and 11). The Advice Documents use the benefit of OSPAR expertise to set out common approaches for expressing Good Environmental Status and potential methodologies for developing targets and indicators. They are living documents and reflect the state of discussion at expert level at the time of their drafting. They are non-binding advice intended to guide national work on MSFD implementation and help

ensure a common approach to the basic development of GES, targets and indicators across OSPAR countries. The Advice Documents do not prejudice the ongoing decision making process in Contracting Parties and their final conclusions in 2012.

The Advice Documents have been finalised, for the time being, in the period December 2011 – March 2012 and have been shared with the wider MSFD community through the EU MSFD CIRCA platform¹¹ 'Marine Strategy'. The documents have also been made available to Contracting Parties' delegations and OSPAR Observers.

¹¹<http://www.circa.europa.eu/Public/circa/env/marine/home>

OSPAR ADVICE DOCUMENTS ON DESCRIPTORS OF (GOOD) ENVIRONMENTAL STATUS

1, 2, 4, 6	OSPAR's MSFD Advice Manual on Biodiversity Approaches to determining good environmental status, setting of environmental targets and selecting indicators for Marine Strategy Framework Directive descriptors 1, 2, 4 and 6	
	Status: 20 March 2012 after BDC 2012	http://www.ospar.org/documents/dbase/publications/p00581_advice%20document%20d1_d2_d4_d6_biodiversity.pdf
5	OSPAR's MSFD Advice Document on Eutrophication Approaches to determining good environmental status, setting of environmental targets and selecting indicators for Marine Strategy Framework Directive descriptor 5	
	Status: 5 January 2012 after December 2011 meeting of ICG MSFD	http://www.ospar.org/documents/dbase/publications/p00582_advice_document_d5_eutrophication.pdf
7	OSPAR's MSFD Advice Document on GES 7 - Hydrographical conditions Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems	
	Status: 17 January 2012 under the auspices of the OSPAR Committee on the Environmental Impact of Human Activities Committee (EIHA)	http://www.ospar.org/documents/dbase/publications/p00583_advice_document_d7_hydrographic_conditions.pdf
8	OSPAR MSFD Advice Document on Contaminants Approaches to determining good environmental status, setting of environmental targets and selecting indicators for Marine Strategy Framework Directive descriptor 8	
	Status: 2 March 2012 after the meeting of the Hazardous Substances and Eutrophication Committee (HASEC)	http://www.ospar.org/documents/dbase/publications/p00584_advice%20document_d8_contaminants.pdf

10	OSPAR MSFD Advice dambocument on GES 10 - Marine Litter Properties and quantities of marine litter do not cause harm to the coastal and marine environment	
	Status: 17 January 2012 by the Inter correspondence Group on Marine Litter of the OSPAR Committee on the Environmental Impact of Human Activities (EIHA)	http://www.ospar.org/documents/dbase/publications/p00585_advice_document_descriptor_10_marine%20litter.pdf
11	Advice and background document on GES 11 – Underwater noise	
	Status: 15 April 2011 (EIHA)	http://www.ospar.org/documents/dbase/publications/p00586_advice_and_background_document_description_11.pdf

Biodiversity monitoring and assessment has been identified by OSPAR as an area which could particularly benefit from increased regional coordination, similar to the coordination in areas such as contaminants and eutrophication. In this context, OSPAR has dedicated – and continues to dedicate – special efforts to develop guidance for the “biodiversity descriptors” (1, 2, 4, 6), based on a sound and realistic understanding of the capabilities to monitor and assess these features. This work has been led by the ICG COBAM and further details on the outcomes of the work can be found in the text box below.

The challenge remains to link the broader status aspects relating to biodiversity and ecosystem functioning (D1, 2, 3, 4, 6) with pressures in general and specific status-aspects under so-called pressure-based descriptors (D5, 7, 8, 9, 10, 11) in particular. Work continues to achieve at regional level a common understanding, approach and methodology for implementing an ecosystem-based assessment to evaluate good environmental status as required by the MSFD.

Identification of common biodiversity indicators: the COBAM Process

Coordination of biodiversity assessment and monitoring has been intensified in OSPAR through a dedicated group (ICG COBAM). It is responsible for developing the coordination and coherence of implementation of the biodiversity descriptors, namely Descriptors 1 (Biodiversity), 2 (Non-indigenous species as it relates to impacts on biodiversity), 4 (Foodwebs) and 6 (Sea-floor integrity). As there is still a strong need to develop capabilities in this area, there is a particular interest and opportunity to join forces and expertise with the aim of arriving at a coordinated and coherent approach. The progress of the group has been documented in an OSPAR MSFD Biodiversity Advice Manual and has been made available on the Commission's CIRCA platform.

The ICG COBAM has carried out a significant programme of work over the last two years in order to improve coherence and coordination in MSFD implementation. This has included developing thinking on approaches for determining GES, and how to set baselines and targets, as well as exploring the potential for regional commonalities in indicators that were being developed by countries at a national level. This has

resulted in a list of 43 potentially common (sub)regional indicators for the biodiversity descriptors, including a number of OSPAR's Ecological Quality Objectives, some of which are being adapted for application beyond the North Sea.

- One example of a potential common indicator is “Numbers of individuals within species being bycaught in relation to population” (responding to criterion 1.3, indicator 1.3.1)
- Marine mammals usually reproduce relatively slowly and a high human-induced mortality, on top of natural mortality, can have serious and long-term implications for the population. An important source of human-induced mortality that can be singled out is bycatch in fishing gear. While the number of animals bycaught is clearly pressure related, there is a link with a state of the population.
- A mammal bycatch indicator will require some regional adaptation to reflect variation in species occurrence and the development of baselines for populations, but it is felt that there is strong potential for the development of a common OSPAR indicator.

The ICG COBAM has developed an ambitious programme of ongoing work to continue the progress it has made on the development of common indicators, baselines and targets, focussed on improving regional coordination on assessment and monitoring of the biodiversity descriptors between now and 2014.

Work in ICG EUT, ICG EAC, ICG ML and ICG SEA are examples of the ongoing work on pressure-based descriptors which aims to improve assessment frameworks that allow the analysis of synergetic and cumulative impacts of human activities on the marine ecosystem components. Work covers both existing and new methodologies. An example of the remaining challenges to complete regional coherence is provided by the work of ICG EUT on defining environmental targets in relation to eutrophication (see box overleaf).

Taking coherence in target setting for eutrophication to the next level

The QSR 2010 showed that many eutrophication problems remain, in particular in the North Sea. It concluded that appropriate reduction targets for nutrient inputs to individual problem areas should be set. In adopting the North-East Atlantic Strategy in 2010, OSPAR Ministers committed to cooperate to set appropriate nutrient reduction targets for problem areas to improve them to non-problem area status. At the technical level, this work is taken forward by Contracting Parties, in particular for the North Sea, through ICG EUT and ICG EMO:

- Some Contracting Parties are still continuing bi- and multilateral negotiations to improve coherence of their national assessment levels used for eutrophication assessments. This is an important starting point for determining what effort in nutrient reduction is needed in each problem area to achieve good status under Descriptor 5.
- Contracting Parties have engaged in national analysis to estimate nutrient reductions necessary to achieve good status in current eutrophication problem areas, building on nutrient budgets, OSPAR assessments and reduction approaches under the Water Framework Directive.
- Estimation of required nutrient reductions is supported by modelling. Contracting Parties work together through ICG EMO to determine through multi-model comparison studies “distance to target”, using selected biological parameters, in particular chlorophyll a, as indicators to signal the reductions in nutrient inputs needed to move to GES. Coupled with modelling of nutrient fluxes, this work also aids to address eutrophication problems in a transboundary context.

HASEC 2013 will be invited to conclude on a coherent set of nutrient input reduction targets and work is continuing to set up a data and information collection system to help monitoring effectiveness of measures in achieving those targets.

Providing a platform for countries to share information on the development of national determinations of GES and targets and indicators








With their active participation in the work of the EU MSFD Common Implementation Strategy and in OSPAR, the OSPAR coastal countries have created a solid common basis for the development of national determination of GES and associated targets and indicators (Articles 9 and 10 of the MSFD). OSPAR Countries have also played a significant role in the development of several EU-wide guidance documents on implementation of the MSFD and have ensured that these reflect the results of recent methodological advances mediated by OSPAR.


ICG MSFD has provided a crucial platform to allow all ten coastal countries to continuously share information on implementation at a national level, so that all windows of opportunity for mutual consultation across national boundaries could be seized, whether within the OSPAR context or through additional bilateral or trilateral engagement between countries.

As far as possible, national work on developing GES and targets and indicators has drawn on the OSPAR advice documents and/or other results of the thematic OSPAR Committees and their subgroups.

Following the finalisation of the advice documents, ICG MSFD has also carried out an analysis of the degree of comparability of the countries' draft GES determinations and targets/indicators with the aim of improving coordination in 2012, and identifying opportunities for further coordination in the period 2012-2018. This work has been carried out based on the finalised OSPAR Advice Documents (for Descriptors 1, 2, 4 and 6) and a 'snapshot' of Contracting Parties' emerging national GES and target/indicator proposals (for Descriptors 5, 7, 8, 9, 10 and 11). The results of this analysis are summarised in **Table 1** overleaf. A more detailed description is at **Annex 2**.

Table 1: Summary of OSPAR performance to coordinate Art. 9 and 10 implementation and resulting regional coherence self-assessment

ENVIRONMENTAL STATUS DESCRIPTOR	OSPAR ADVICE?	SELF-ASSESSMENT: REGIONAL COHERENCE OF GES EXPRESSION	SELF ASSESSMENT: SCOPE FOR COMMON INDICATORS	MAIN ELEMENTS FOR THE WAY FORWARD
1 – Biodiversity		Assessment of regional coherence still to be carried out.	Further work ongoing in BDC to develop common indicators	<ul style="list-style-type: none"> •Progress through ICG COBAM (September 2012) •Discuss with EC
2 – Non-indigenous species		Assessment of regional coherence still to be elaborated further.	Further work ongoing in BDC to develop common indicators	<ul style="list-style-type: none"> •Progress through ICG COBAM (September 2012)
3 – Commercial stocks	EU level work	Fair degree of coherence and commonality building on existing EU assessments of commercial fish under the Common Fisheries Policy.	Follow-up to the EU level workshop on D3 in April 2012	<ul style="list-style-type: none"> •Agree common approaches to assessment scales and species list •Exchange information on national assessment methods for shellfish •Continue data acquisition, development of models and reference points
4 – Foodweb		Assessment of regional coherence still to be carried out.	Further work ongoing in BDC to develop common indicators	<ul style="list-style-type: none"> •Progress through ICG COBAM (September 2012) •Engage with ICES working groups developing criteria/indicators
5 – Eutrophication		Good degree of coordination and alignment building on a strong history of OSPAR coordinated action on this issue.	Further work ongoing in OSPAR's Hazardous Substances and Eutrophication Committee (HASEC)	<ul style="list-style-type: none"> •Progress further coordination and alignment of approaches between WFD and OSPAR Common Procedure •Develop cost-effective and integrated programmes of monitoring with shared efforts
6 – Sea-floor integrity		Assessment of regional coherence still to be elaborated further.	Further work ongoing in BDC to develop common indicators	<ul style="list-style-type: none"> •Progress through ICG COBAM (September 2012)
7 – Hydrographical conditions		Relatively low level of coordination and alignment, reflecting the fact that this descriptor has been given low priority at EU level (no EU Task Group) and by Member States.	Further work ongoing in OSPAR's Environmental Impact of Human Activities Committee (EIHA)	<ul style="list-style-type: none"> •Prioritise list of ecosystem components •Agree temporal scales •Assess efficiency of existing regulation in ensuring GES is achieved and maintained for Descriptor 7. •Agree additional actions to improve coordination for D7.
8 – Pollution effects		Good degree of coordination and alignment building on a strong history of OSPAR coordinated action on this issue.	Further work ongoing in OSPAR's Hazardous Substances and Eutrophication Committee (HASEC)	<ul style="list-style-type: none"> •Coordinate and align OSPAR and WFD assessment methodologies •Discuss integrated monitoring
9 – Seafood contaminants		Good degree of coordination and alignment linked to Contracting Parties' compliance with existing food safety legislation.		<ul style="list-style-type: none"> •Better alignment of language

10 – Litter		Good degree of coordination and alignment building on work carried out by the ICG Marine Litter (on beach litter in particular) and more recent work carried out by the EU Technical Sub-Group on litter.	Further work ongoing in OSPAR's Environmental Impact of Human Activities Committee (EIHA)	<ul style="list-style-type: none"> •Review use of fulmar Ecological Quality Objective •Research and monitoring of micro-plastics •Investigations into evidence of biological impacts •Improve International Bottom Trawl Survey protocol for litter monitoring
11 – Energy/noise	EU level work	Fair degree of coordination and alignment building on work carried out by the EU Technical Sub-Group on underwater noise.	Further work ongoing in OSPAR's Environmental Impact of Human Activities Committee (EIHA)	<ul style="list-style-type: none"> •A number of actions agreed, including development of monitoring, improved understanding of current measures and evidence gaps, and the need to agree an approach to the inclusion of other forms of energy.

COORDINATING GES ACROSS THE NORTH-EAST ATLANTIC

In the UK there has been a strong two-way connection between national work to develop targets and indicators for Descriptors 1, 4 and 6 and the work carried out by ICG COBAM to develop a common approach for these Descriptors. In developing proposals for UK targets and indicators for these Descriptors we explicitly checked for consistency with the developing ICG COBAM advice document, and were also able to use the advice of our experts to support the development of that document. The result has been that national proposals are very much in line with final ICG COBAM Advice Manual, and the UK is in a strong position to be able to take forward many of the potential common indicators identified in the Advice Manual.

In December 2011 the Marine Environment Service of the Belgian government organized a workshop for stakeholders and neighbouring Member States to discuss the draft reports of the Initial Assessment (art. 8), the description of the Good Environmental Status (art. 9) and the establishment of Environmental Targets (art. 10). In total 32 participants took part in the workshop, representing the marine and coastal sectors, the responsible policy administrations, scientific experts and representatives of the Netherlands and UK. The main objective of the workshop was to get “an agreement” about the GES definition as described in the background document “Draft of determination of Good Environmental Status & establishment of Environmental targets (Art. 9 & 10 MSFD)”. One example where the input of the experts of the Netherlands and UK was of high relevance was the identification of targets for the descriptor sea-floor integrity. The initial target for Belgium was very detailed and focused on sand-extraction intensity. Based on the comments of the neighbouring countries where more general ‘pressure’

indicators were drafted as they are seen as more practical, participants agreed to define a pressure indicator elaborated for all bottom-disturbing activities (including dumping/dredging, fisheries, sand-extraction). The input of the NL and UK colleagues were also valuable in discussing the targets for biodiversity, hydrographical conditions, and underwater noise.

Since the MSFD was launched, Spain has worked in order to ensure that the objectives of the Directive are coherent and coordinated across the regions and subregions shared with other countries-specifically with France and Portugal. Three meetings have been held in which approaches, methodologies and information have been exchanged among the countries, covering policy issues, preparation of the initial assessment, and approaches to the determination of GES. Many similarities were found between the approaches followed by the countries, especially between France and Spain. There was an agreement to speak bilaterally regarding specific issues identified in bordering areas, and to update each other on progress on the definition of GES and targets. As a result, major inconsistencies in the results of the initial assessment, determination of GES and targets are not expected

The Kattegat and Skagerrak, within the North Sea, join Denmark, Norway and Sweden and call for coordinated action. OSPAR has offered a platform to share views and discuss national approaches towards the implementation of MSFD. The OSPAR Heads of Delegation from Denmark, Norway and Sweden have organised a series of subregional meetings to exchange views on challenges and discuss more in detail specificities about these shared waters. These discussions included sharing of early drafts of GES definitions, targets and indicators. Through these meetings Denmark and Sweden have been able to learn

from Norway's own national process. The three countries have also been engaged in collecting and harmonizing data layers on human activities and certain ecosystem components in the North Sea, Skagerrak and Kattegat via the HARMONY project.

Sweden has benefited from the sharing of expertise on the biodiversity descriptors within ICG COBAM. A Swedish expert who participated in the ICG COBAM workshop hosted by the Netherlands on biological diversity indicators has made the following comments on the value of this work: "I participated in particular in the discussion on 'Environmental Impact of Non-Indigenous Species', which really elucidated the complexity of this issue. Specialists from the different countries reflected on how difficult it was to

formulate measurable indicators in this field. Personally, I had found the same problem within the framework of HELCOM and this OSPAR workshop increased my understanding of the complexity of the problem. It was a relief to me to understand that the difficulty we have had in Sweden in developing an indicator on the impact of NIS was not due to a Swedish constraint in the sense of lack of "brainpower" at the national level. The work with MSFD had progressed at a different speed in the different countries and we could learn from each other's work. The workshop lasted 2 days and was probably too short to deliver concrete results and proposals. It is my expectation that this workshop was the start of a continued cooperation."

4. Outlook – The journey has only just begun

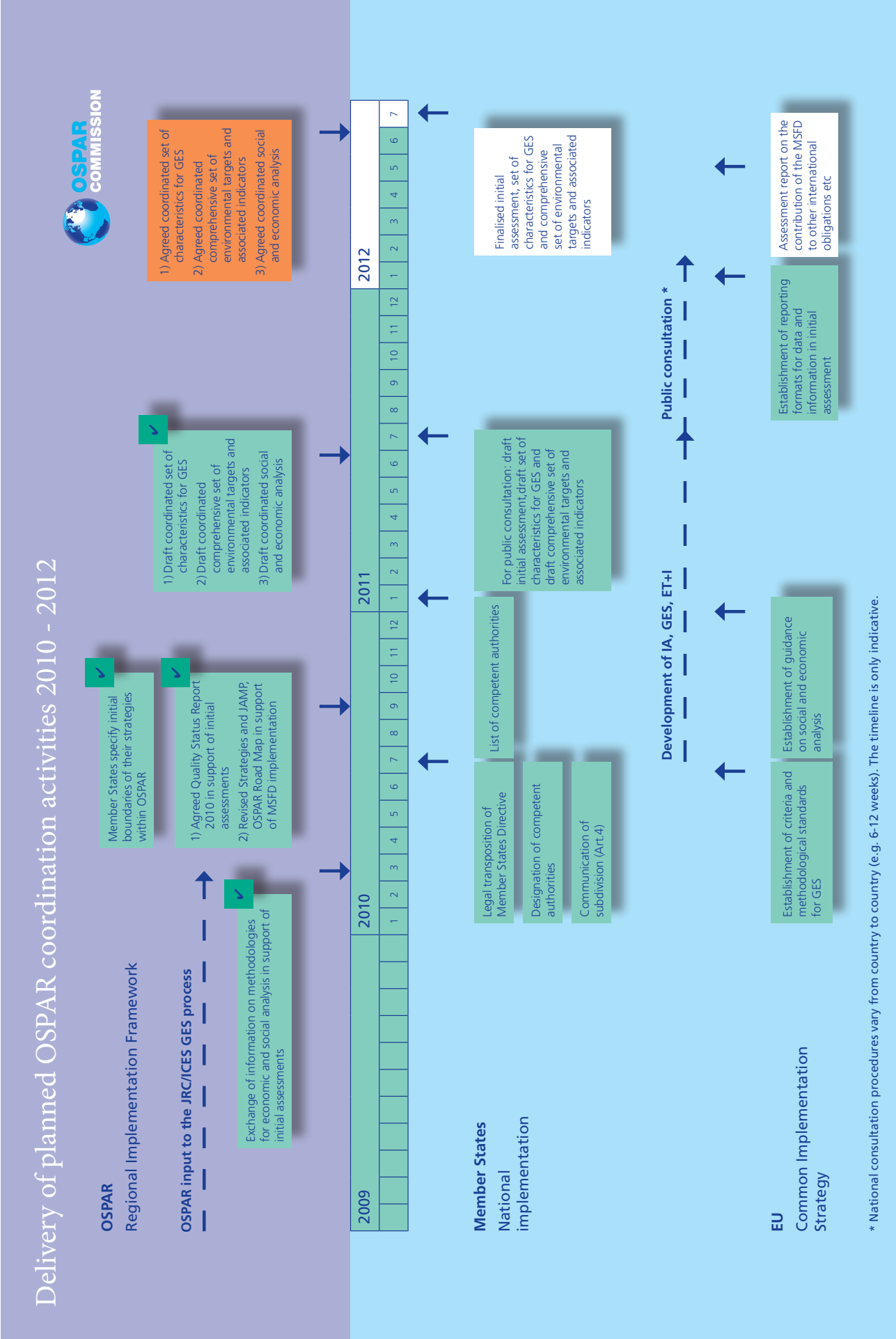
Based on and facilitated by the work within OSPAR, countries in the North-East Atlantic have been able to make a very positive start to their coordinated implementation of the MSFD. OSPAR countries are committed to continuing this work throughout 2012 and beyond, in order to build on the positive steps which have been taken on MSFD implementation in the last two years.

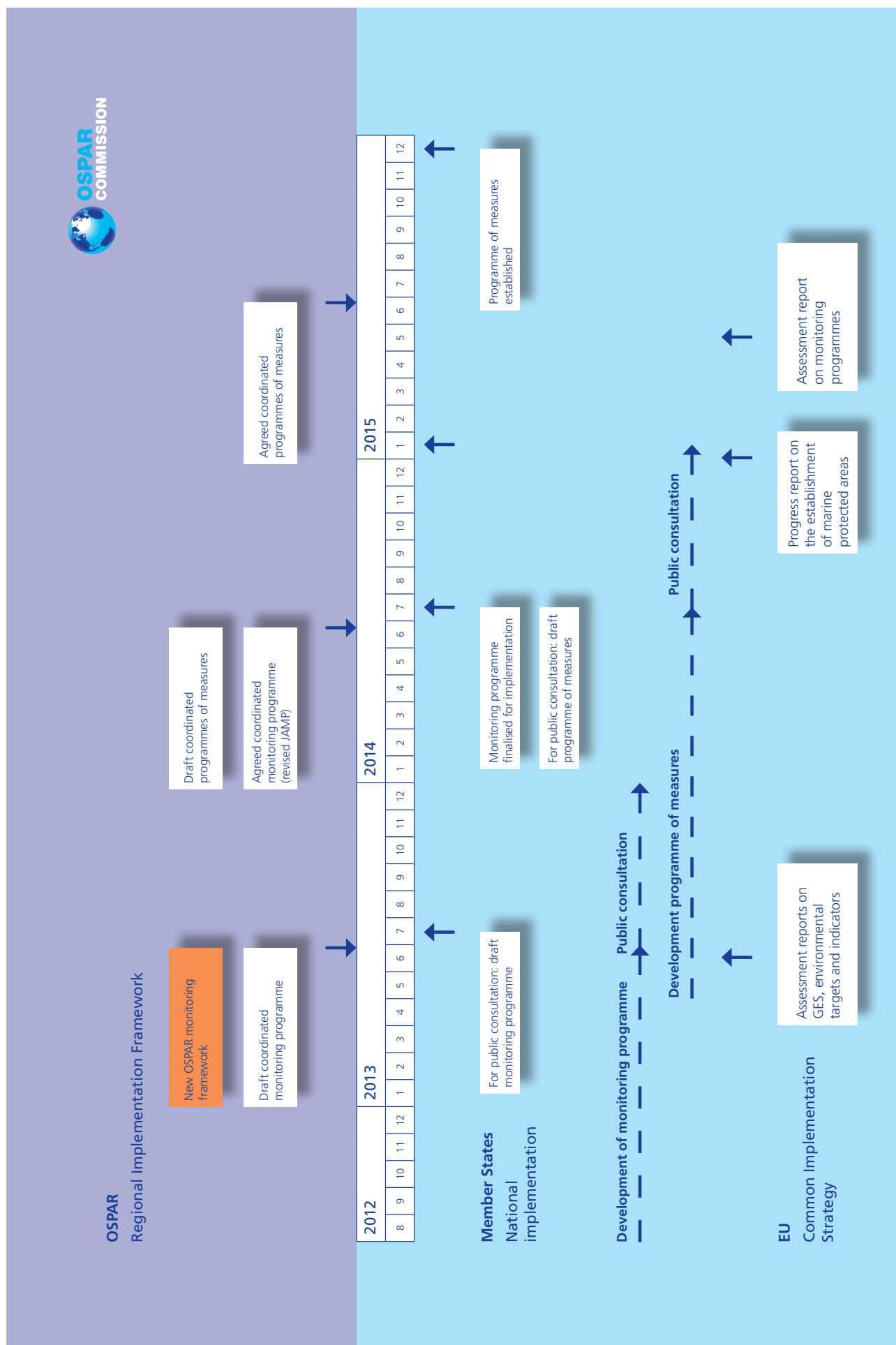
Despite the wealth of experience which OSPAR countries have to build on, the MSFD journey is far from over and countries have identified a number of areas where national efforts and regional coordination have to be improved. Key priorities for OSPAR-level work between 2012 and 2018, as identified in the OSPAR MSFD Roadmap include:

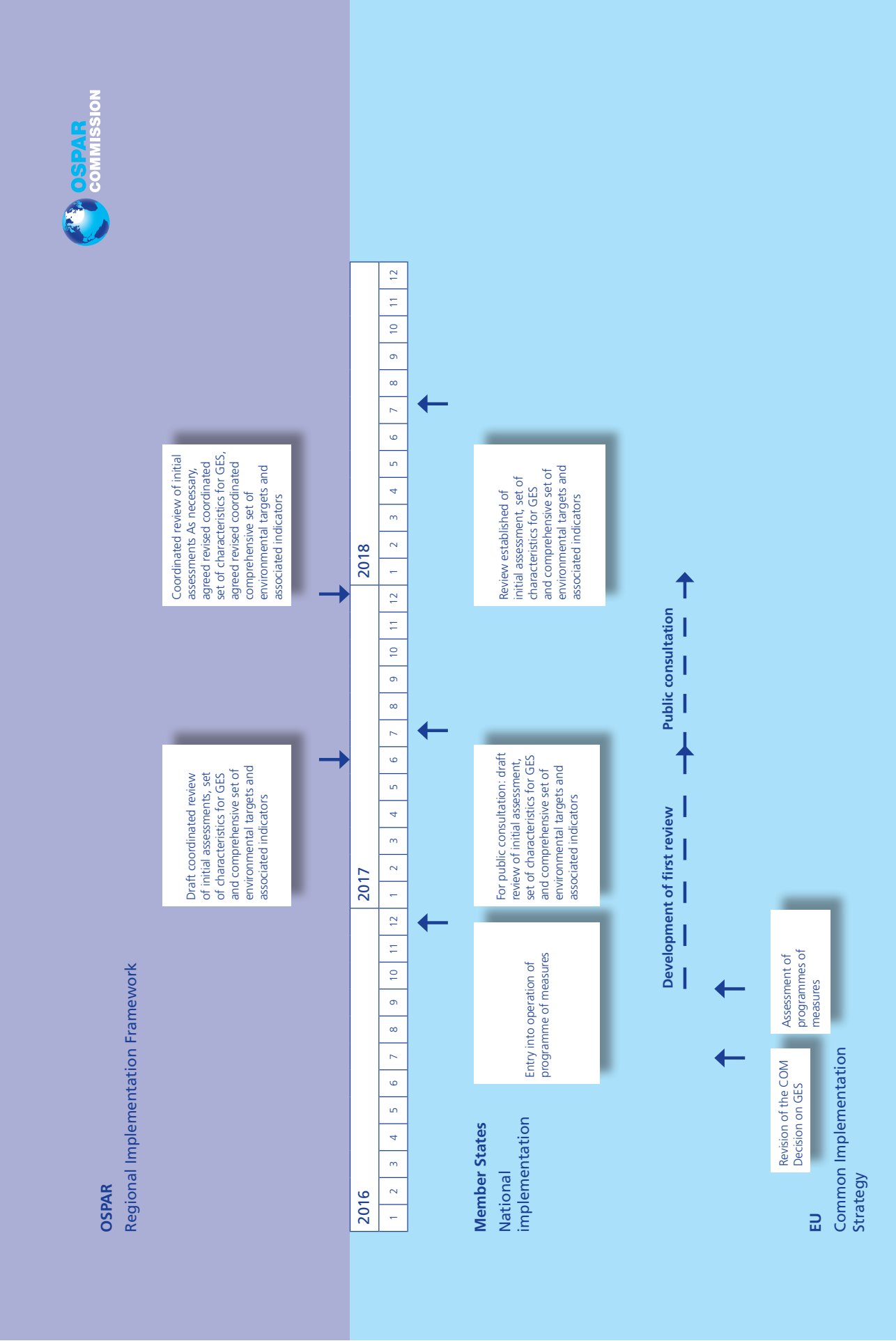
- Building on the work to coordinate national approaches to GES, targets and indicators, and associated assessment criteria, by taking forward a specific programme of work to develop common indicators across the GES Descriptors;
- Using this to inform the development of an OSPAR monitoring framework, which will feed into an updated Joint Assessment and Monitoring Programme by 2014, focussed on supporting countries' MSFD implementation;
- Developing agreement on common policy requirements and opportunities for coordination in the development of measures, identifying the relevant scale for action: national, subregional, OSPAR, EU;
- Developing agreement on the need for collective OSPAR action with regard to the preparation of the 2018 update of national Initial Assessments, including considering how this relates to the next OSPAR QSR;

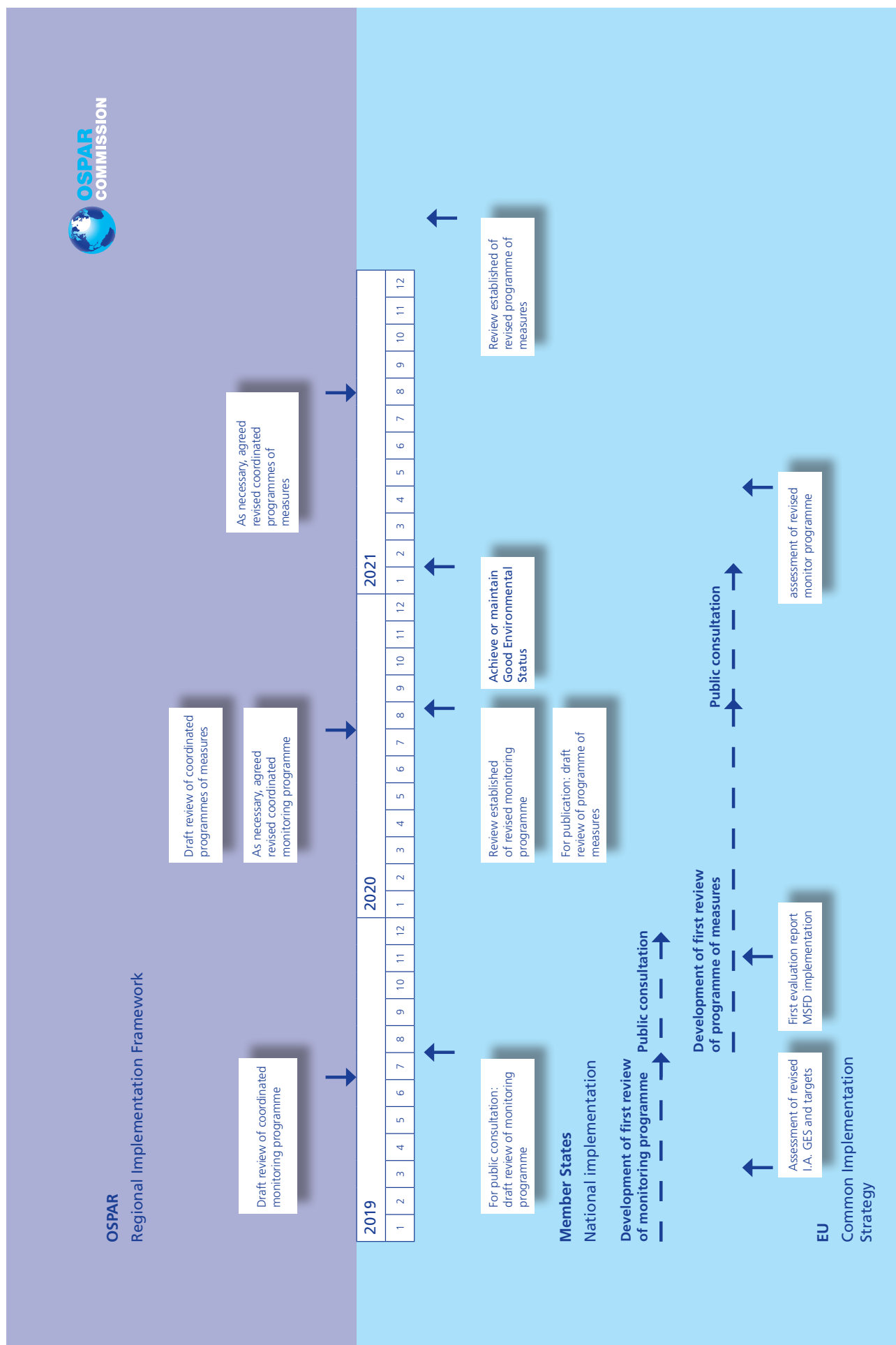
- Considering opportunities for regionally coordinated data and information reporting linked to the work of the EU Working Group on Data Information and Knowledge Exchange.

It is also imperative that work within OSPAR is coordinated with activities on MSFD implementation being taken forward in the context of the EU Common Implementation Strategy. OSPAR countries are keen to support the European Commission during the Article 12 Assessment process and beyond. In order to do this effectively it is essential that joint work planning between the EU and regional sea conventions is carried out on a regular basis to ensure that work being carried out at each level is mutually supportive.









OSPAR Contracting Parties' draft determinations of GES and associated targets: overview and analysis of the level of regional coordination and coherence, including 'shared elements'

1. Across the EU, the degree of sharing of preliminary thinking by Member States on Articles 9 and 10 has varied to date, risking significant divergences and failure to meet the requirements of the Directive for regional coordination. This risk was raised and highlighted by the Commission at the WG-GES in September 2011. The EU Member States that are a Contracting Party to the OSPAR Convention have analysed the level of coordination and coherence pertaining to the eleven Descriptors of GES. This annex contains the analysis (based on information provided by Contracting Parties¹²) and some identified actions that are likely to enhance coherence.

Key Messages

2. The very broad scope of **Descriptor 1** makes its successful implementation a challenge, particularly for those Member States with very large sea areas. Monitoring and assessment of biodiversity may be comparatively extensive and costly and there is much to be gained by (sub)regional coordination and cooperation. This requires commonality with regard to the indicator and species selection. Based on an inventory of Member States' draft indicators¹³ 39 potential common indicators have been identified for functional species groups and some predominant habitats. In addition, lists of species and habitats containing 'listed' species and habitats under the Birds and Habitats Directives and OSPAR, as well as common species and habitats, have been developed in order to promote consistency among Member States. There are still gaps and an evaluation will be required as to whether these gaps are significant to the eventual determination of GES. The indicators developed to date and proposed as potential common indicators have a fair degree to high degree of coherence. Further work is required to develop all proposed indicators¹⁴ and draw up advice on the most appropriate indicators related to predominant pressures and taking account of subregional characteristics.
3. To date, **Descriptor 2** has been treated by ICG COBAM as a pressure having impacts on native biodiversity; the assessment of impacts from non-natives (e.g. the bio-pollution level (BPL) index) needs refinement. It may be appropriate to use indicators for this Descriptor (e.g. on the state of invasive species), but recognise that their reduction/eradication may not be feasible. Because of this, targets may best be associated with reducing the risk of introduction and the spread through pathways and vectors. Two potential common indicators have been defined, both in need of further development. One indicator relates to Commission Decision indicator 2.1.1 and the other is an operational indicator: pathways management measures to prevent the transfer of species. There is agreement that the concepts behind the indicators are sound; however more work is required to develop these further and build consensus. A group of experts comprising expertise from different Contracting Parties is being established within ICG COBAM to take this work forward. Interim results are expected at the next meeting of ICG COBAM in September 2012. EIHA leads on measures for this Descriptor.
4. There is a fair degree of coherence and commonality in the approaches adopted and coverage of the Commission Decision for **Descriptor 3**. However, there are differences in the determinations of GES and associated targets. Coordination and coherence would be greatly improved by agreeing common approaches to assessment scales, the lists of species to be taken into account, and the overall level of ambition. Contracting Parties are making use of recent ICES recommendations, as discussed at an EU-wide workshop in Paris on 24 – 25 April 2012, which will improve the coherence of D3 implementation by Member States. This analysis has not been able to take into account follow-up actions from this workshop.
5. While different approaches have been adopted by Contracting Parties to the implementation of **Descriptor 4** there is agreement on the fact that there are substantial knowledge gaps for this Descriptor. Arguably this is the least well-developed of the biodiversity descriptors. Further work is required to develop suitable options for common indicators and will be undertaken through an expert group established within ICG COBAM, and expected to deliver interim results to the next meeting of ICG COBAM in September 2012.

¹²Not all Contracting Parties have provided comprehensive information on their plans for Articles 9 and 10, which were still under development at the time this report was finalised.

¹³Carried out in preparation of the OSPAR workshop on MSFD biodiversity descriptors: comparison of targets and associated indicators, Amsterdam, 2-4 November 2011.

¹⁴Both those of the Commission Decision of 01 September 2010 on criteria and methodological standards on good environmental status of marine waters (2010/477/EU) as well as those proposed by OSPAR for implementation at regional level.

6. While there is a good degree of commonality across the proposed approaches of Contracting Parties for **Descriptor 5**, some differences in threshold setting remain. Further coordination and improved coherence across borders of national assessment levels and pressure related targets is required. Most Contracting Parties intentions broadly reflect the OSPAR Common Procedure and the COM Decision 2010/477/EU. However, the differing use of language makes it difficult to ascertain the extent of coordination and alignment. Bilateral and trilateral discussions pertaining to transboundary issues should continue up to and beyond 2012 and over the longer term discussions in OSPAR should look to further coordinate approaches and develop cost-effective and integrated programmes of monitoring.
7. **Descriptor 6** has much in common with assessment of habitats under Descriptor 1. For efficiency, it is therefore recommended to treat the two together, with assessment of 'seabed substrate' types under Descriptor 6 aligned with the predominant habitat types of Descriptor 1, and with common assessment of seabed quality and setting of targets, e.g. for reductions in impacts. Three potential common indicators have been identified for Descriptor 6, with a high level of consensus, although these indicators are at varying degrees of maturity and work is still required before they could be operationalised. This work will be undertaken primarily through the benthic habitat expert group within ICG COBAM, with interim work expected by September 2012. One of these indicators requires information on the geographic extent and the nature of pressures arising from human activities and therefore links to the work undertaken by the OSPAR Intersessional Correspondence Group on Cumulative Effects.
8. There is a relatively low level of coordination and alignment on the determination of GES and associated targets and indicators for **Descriptor 7**. Higher level statements of ambition appear broadly in line although differences in detail and the language mean coordination and coherence could be significantly improved. Coordination and coherence could be improved by Contracting Parties making reference to their intentions to consider '*EUNIS level 3*' habitats, '*cumulative impacts*' and '*permanent modifications*' under this Descriptor in their qualitative determinations of GES. Following discussion about the level of coherence for this Descriptor, a number of Contracting Parties are likely to include a similar operational target for Descriptor 7 in their national Marine Strategies, reflecting the use of existing legislative frameworks (e.g. EIA and SEA) in supporting the achievement of GES.
9. There is a good degree of coordination and alignment on the determination of GES and associated targets and indicators for **Descriptor 8**. Ambition levels are well aligned, in particular with respect to the use of OSPAR Environmental Assessment Criteria (EACs) and WFD Ecological Quality Standards (EQSs). Over the shorter term, coordination could be improved with respect to indicator 8.2.2 (significant acute pollution events) and in particular the most appropriate use of the OSPAR Ecological Quality Objective (EcoQO) on oiled sea birds. Over the longer term there is a need to begin discussions in OSPAR on the combined monitoring of chemicals and their biological effects at appropriate assessment scales. There is also a need for Member States to initiate discussions under the Common Implementation Strategies of the MSFD and the WFD with a view to better aligning and combining approaches with regard to chemical pollution in marine waters under both Directives.
10. There is a good degree of coordination and alignment on the determination of GES and associated targets and indicators for **Descriptor 9**. Ambition levels differ slightly in some instances but with further coordination it is thought that these could easily be harmonised. All Contracting Parties refer to meeting relevant existing legislation. Further consideration should be given to the question whether there is a need for an assessment philosophy for the purpose of determining GES under MSFD. Over the longer term there is a need to initiate discussions with the EC (DG SANCO) with a view to improving current food safety monitoring in order that the origin of fish and other seafood can be determined when landed or marketed.
11. There is a good degree of coordination and coherence with respect to the determination of GES and associated targets and indicators for **Descriptor 10**. Ambitions are broadly aligned, in particular with respect to the qualitative elements of the determination of GES and following discussion about the level of coherence for this Descriptor, a number of Contracting Parties are likely to include the same high level qualitative statement of GES for litter in their national Marine Strategies. There is also strong alignment with regard to proposed targets for beach litter and most Contracting Parties are likely to put forward a specific target for reduction in litter on coastlines based on the OSPAR Beach Litter Monitoring Guidelines. Further efforts should be made to clarify and, as appropriate, better align the use of the OSPAR EcoQO on fulmar stomach contents with MSFD requirements: that is in particular to clarify whether it is sufficient as an indicator to cover the relevant impact of litter. Further investigation on impacts from marine litter in the OSPAR area is needed post July 2012. Also it should be noted that with the exception of Germany currently no Contracting Party proposes to develop a target on micro-particles in this cycle.

12. There is a fair degree of coordination and coherence with respect to the determination of GES and associated targets and indicators for **Descriptor 11**. Overall levels of ambition are well aligned with respect to the qualitative elements of the determination of GES and following discussion about the level of coherence for this Descriptor, a number of Contracting Parties are likely to include the same high level qualitative statement of GES for noise in their national Marine Strategies. However, the approaches to GES targets/thresholds differ across Contracting Parties. Some countries (Belgium, Germany, the Netherlands) are proposing quantitative targets under Commission Criterion 11.1, whereas others propose more qualitative approaches. Only Germany has included information regarding sources of energy other than noise (heat, light, electromagnetic energy). More work post July 2012 will be needed to align the approaches for ambient noise where two distinct approaches have formed - either the establishment of a trend based target or no target at all.

Action on Descriptors 1, 2, 4 and 6

13. ICG COBAM is the main delivery group within the OSPAR framework for coordination in relation to the biodiversity aspects of the MSFD (Descriptors 1, 2, 4 and 6). Work to improve coordination on these Descriptors has been undertaken through face to face meetings of ICG COBAM, intersessionally and by means of regional workshops hosted by the Netherlands:
- GES4BIO Workshop, November 2010, Utrecht:* This workshop focused on the methodological approaches to determining GES and methods for setting targets. The outcomes were incorporated into the OSPAR Biodiversity Advice Manual;
 - OSPAR workshop on MSFD biodiversity descriptors: comparison of targets and associated indicators, November 2011, Amsterdam:* This workshop undertook a comparison and analysis of indicators and associated targets for the biodiversity descriptors based on draft proposals made by OSPAR Contracting Parties implementing the MSFD, aiming to highlight where common indicators could be identified. The outcomes of the workshop were analysed by ICG COBAM and resulted in a draft suit of approximately 40 potential common indicators for the OSPAR Region which have been included in an update to the Biodiversity Advice Manual.
14. ICG COBAM is continuing to develop the technical specifications of this draft suit of indicators and establish operational methods looking towards 2014. A summary of the progress made by ICG COBAM can be found in **Appendix 1**.

Action on Descriptors 3, 5, 7, 8, 9, 10 and 11

15. For Descriptors 3, 5, 7, 8, 9, 10 and 11 the ICG MSFD has led a process of information sharing and identification of actions to improve coherence. In November 2011 Contracting Parties were asked to complete and return an inventory of their draft determinations of GES and associated targets and indicators for these Descriptors. This inventory was subsequently analysed by the co-convenors of the ICG MSFD and the initial conclusions discussed at the ICG MSFD meeting in December 2011. The analysis was updated in May 2012, with improved information from Contracting Parties, and the key conclusions (including significant commonalities and differences) of the analysis can be found under **Appendix 1**.
16. Inventories were returned by Belgium, France, Germany, the Netherlands, Portugal, Sweden, Spain, and the UK. Additional contributions on proposed approaches were also made by Ireland. This meant a good comparison could be made of approaches within the Greater North Sea subregion and some conclusions could be drawn between and within other regions.

Detailed analysis by descriptor

Descriptor 1 – Biological diversity is maintained.
The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions.

1. Summary

- As a general guide, it is recommended to focus on a combination of pressures and impacts to enable an assessment of risks to biodiversity (areas and biodiversity components most likely to be affected) and hence a more targeted approach to identification of targets, indicators, monitoring and measures).
- The principles of assessment techniques for species and habitats are reasonably well-established, with recent experience of similar approaches (in terms of criteria and scales) under the Habitats Directive. However, other methods exist (e.g. OSPAR listing, IUCN) and the application of these principles and availability of data are less well-established. There is a need to more firmly incorporate systematic assessments of pressures and impacts at large geographical scales in order to develop robust data-driven assessments. The setting of targets and identification of indicators has traditionally had a state-based focus, often with poor linkages to impacts, pressures and ultimately to measures; this may be less effective for MSFD purposes to achieve GES. Most of the Commission Decision indicators need to be 'operationalised' by making them specific to particular species, habitats and areas (e.g. subregions).
- Assessments at functional group level (for fish, birds, mammals) are less well-established, although the recent development of a seabird EcoQO offers appropriate metrics. Current work within ICG COBAM is focused on identification of suitable species to represent the wider status of the functional groups. Assessment techniques at ecosystem level are poorly developed and will need further efforts.
- It is likely that use of existing biodiversity targets and indicators will provide only a partial picture of overall needs for this descriptor, with a need to develop further targets and indicators to address the predominant habitat types and functional groups. Due to a lack of indicators in some aspects, there is likely to be a need for continued developments for this Descriptor beyond 2012.
- Member States have indicated that, wherever possible, the OSPAR Advice Manual is taken into account in national determination of GES and associated indicators for Descriptors 1, 2, 4 and 6.

2. Approaches to Target setting and indicators

Target and baseline setting methods have been discussed in the GES4BIO workshop:

- For habitats the preferred method is to use reference conditions, either historical, or from areas where human pressures are negligible, or modelled conditions. Target setting methods for potential common indicators range from maintenance of current conditions to (trends towards) conditions close to reference situations.
- For species the advice depends on the functional group under consideration and data availability. For marine mammal species directional/trend-based targets (specifying direction of change) would be preferred, while using a mixture of approaches to set a baseline. The advice for birds includes targets set as a deviation from the baseline, the latter being derived from past monitoring data. For some fish species (i.e. the main commercially exploited species) there are established reference points which can be used for some criteria under Descriptor 1. For other species and criteria, directional or trend-based targets (direction of change) are likely to be the most applicable. This applies to the indicators on population condition as well as on species distribution and population size. It is recognised that for most indicators, regionally specific targets need to be developed. Most fish communities have been overexploited and targets need to reflect community recovery. Baselines should reflect the ecosystem state when exploitation was considered to be at sustainable levels, while further clarification is required with regard to unimpacted state and sustainability terms.
- Based on an inventory of Member States' draft indicators¹⁵ 39 potential common indicators have been identified for functional species groups and some predominant habitats. This suite of indicators includes both existing indicators, i.e. OSPAR's EcoQOs and indicators established under the Water Framework Directive and the Birds and Habitats Directives, and 'new' indicators proposed by Contracting Parties. In addition, lists of species and habitats, containing 'listed' species and habitats under the Birds and Habitats Directives and OSPAR, as well as predominant species and habitats, have been developed in order to promote consistency among Contracting Parties. This advice is included in the OSPAR's MSFD Biodiversity Advice Manual, which has been disseminated and discussed in BDC and the EU Working Group on Good Environmental Status. Ongoing work is planned within ICG COBAM to continue to improve coordination on the approach to these Descriptors.

3. Overall level of coordination

- It is hoped that coordination will be improved by Contracting Parties using the national targets and indicators which were proposed at the ICG COBAM workshops and the potential common indicators incorporated into the OSPAR Biodiversity Advice Manual. Most of these potential common indicators are applicable to all OSPAR Regions, however, the selection of species and the setting of targets requires a (sub)regional approach and a high level of coordination among Contracting Parties that border the same MSFD (sub)regions.

¹⁵Carried out in preparation of the OSPAR workshop on MSFD biodiversity descriptors: comparison of targets and associated indicators, Amsterdam, 2-4 November 2011.

4. Action points to improve coordination and coherence

- Contracting Parties should ensure sufficient participation in expert groups under ICG COBAM. Active involvement of all ICG COBAM members will help coherence among expert groups and optimal use of the Advice Manual. Indicator development under ICG COBAM needs to be informed by national experience and priorities set out in Marine Strategies.
- The ICG COBAM expert groups have been given terms of reference which highlight the necessary steps that need to be taken to evaluate the potential common indicators, evaluate metrics and set regional targets. In addition, the criteria for species selection need to be further developed so that regional species list can be compiled and used to evaluate the proposed indicators.
- Several of the proposed indicators for fish are already part of the indicator suite that EU Member States have to report on under the data collection framework to evaluate the effects of fishing on the ecosystem (Commission Decision 2010/93/EU). There should be close coherence between the two directives with regards to these indicators, their targets and/or limits.
- Several fisheries indicators which are proposed as common indicators for D1 (and D4) are being scientifically evaluated in the ICES working group WGECO. Results of the work need to be incorporated into the indicator evaluation by the ICG COBAM expert group.

Descriptor 2 – Non-indigenous species introduced by human activities are at levels that do not adversely alter the ecosystems.

1. Summary

- ICG COBAM have been working to coordinate approaches for determining GES and establishing targets for this Descriptor. To date it has been treated as a pressure, having impacts on native biodiversity, with the assessment of impacts from non-natives (e.g. the bio-pollution level (BPL) index) needing refinement.
- Some Contracting Parties have proposed operational targets for non-indigenous species (NIS) (2.1.1) with underpinning indicators based on reducing the risk of introduction and spread through pathways and vectors, recognizing that their reduction/eradication may not be feasible. Most indicators proposed by Contracting Parties are very vague, with more work needed to consider the implications for data, baselines, additional monitoring and potential measures needed to meet the targets and indicators proposed. Further work will be necessary to ensure consistency between the proposed indicators.
- There are existing efforts from international agreements and obligations (e.g. IMO) which could be considered relevant to include when defining indicators and targets for this Descriptor, although discussions are ongoing as to whether these should be included at this stage or whether these should be considered during the development of management measures.

- Defining the scope of the NIS descriptor is still subject to discussion. There is currently a mix of targets and indicators either covering both NIS and INIS (invasive non-indigenous species), or only NIS.
- Member States have indicated that, wherever possible, the OSPAR Advice Manual is taken into account in national determination of GES and associated indicators for Descriptors 1, 2, 4 and 6.

2. Approaches to Target setting

- Any targets and/or measures introduced under Descriptor 2 should be considered at the subregional or broader level. National prevention measures may be ineffective if operated in isolation due to the methods of introduction (e.g. via ballast water). Effective pathway and vector management, including an early warning system for highly invasive species, would need to be agreed and implemented at the subregional, if not regional, level.
- It is recommended that targets should be developed for newly-introduced species, and where action can be taken to reduce the impact of an existing invasive NIS. It may not be cost-effective or appropriate to set targets where species are already well-established, and where eradication and/or the reduction of their impact are impossible. This needs to be assessed on a case-by-case basis.
- Pressure targets for this Descriptor will not be considered here, and will be taken forward by EIHA. Representatives from EIHA will join the ICG COBAM NIS technical group to ensure consistency across the groups.

Descriptor 3 – Populations of all commercially exploited fish and shellfish are within safe biological limits, exhibiting a population age and size distribution that is indicative of a healthy stock.

1. Summary

- Inventory returns were provided for this Descriptor from Belgium, France, Germany, the Netherlands, Spain, Sweden and the UK meaning a relatively good comparison of approaches within the OSPAR region could be made. Contracting parties made use of the ICES Descriptor 3+ report¹⁶ although some inventories mention that national work is under review to take recommendations from the report into account. An EU-wide workshop took place in Paris on April 24th and 25th and examined the ICES report with a view to improving the coherence of Descriptor 3 implementation by Member States. The analysis presented here does not take into account the follow-up actions that may have been taken at national level following this recent workshop.
- Although national approaches for determining GES and establishing targets for this Descriptor are different, there is an overall coherence in the approaches and the coverage of all the elements for Descriptor 3.
- There is, however, a need for further coherence regarding assessment scales, lists of species to be taken into account, and overall levels of ambition.

2. Approaches to GES determination

- Determinations of GES for Descriptor 3 have been proposed at a Descriptor level (Germany, the Netherlands, and the UK), at a criterion level (France, Spain) and at the level of the Commission Indicator (Belgium, France, Germany, and Spain). Germany refers to ongoing development work for a number of the indicators of Descriptor 3. Contracting Parties have used different methods, incorporating both qualitative and/or quantitative elements for the determination of GES. Qualitative determination is made at the level of the Descriptor or Criteria, whilst a quantitative determination is made at the level of Criteria or Indicator.
- The level of ambition and coherence differs across the Commission Criteria.
 - A good level of commonality exists with respect to fishing mortality (Criterion 3.1) with all Contracting Parties referring to MSY as the GES level (either in a qualitative or quantitative manner). Several Contracting Parties also refer to other reference levels (i.e. PA or proxies) to be used when F_{MSY} is not available.
 - A good level of commonality exists with respect to biomass (Criterion 3.2) with most Contracting Parties referring to MSY or when not available MSY-trigger (alternative reference point as developed by ICES for SSB in relation to F_{MSY}) as the relevant level of ambition. However, Belgium also mentions different levels i.e. PA (Precautionary Reference point) to be used when MSY is not available. The Netherlands are proposing SSB_{pa} to take into account predator-prey relationships.
 - Less commonality exists with respect to age/size structure (Criterion 3.3) with few Contracting Parties addressing this Criterion under their determination of GES. Qualitative statements are proposed and the use of the OSPAR EcoQO on stock biomass and large fish is proposed by Germany and Sweden along with the use of trends as a first step before being able to set actual GES levels. The absence of reference points is the main reason for Contracting Parties not using this criterion at this stage. Some Contracting Parties deem indicator 3.3.2 not relevant for Descriptor 3, following ICES advice, whilst others propose to use OSPAR EcoQO on large fish for this indicator.
- Most Contracting Parties have highlighted the fact that the development of further reference points (MSY values, etc) is ongoing by ICES and should be taken into account.
- A notable difference can be seen regarding the scales at which the GES is to be assessed. Most Contracting Parties indicate the region, subregion or their national waters in a subregion as being the relevant scale, whereas Germany considers the ICES rectangles and stock assessment areas as being most relevant. This may have arisen due to a confusion between the scale at which we want to assess whether or not GES is reached and the relevant scale for assessing a given stock i.e. there may be further work needed to aggregate information from a single stock assessment in the relevant group of ICES rectangles (using the Commission Decision Indicators) to an assessment of GES for D3 (aggregation amongst stocks and at the scale of subregion or national parts of subregion). On that last issue, ICES proposed several options to determine GES at Criteria level for a subregion or national part of subregion,

based on existing reference points at stock level. The information in the inventory does not indicate which option is preferred at this stage, except for Spain.

3. Approaches to Target setting

- The targets proposed for Descriptor 3 are different in nature. There is a clear distinction between the qualitative, pressure/operational targets set at the Descriptor or Criteria level (proposed by Contracting Parties with a quantitative GES determination) and the quantitative, pressure/state/impact targets (related to the nature of the Commission Indicators) set at the level of the Commission Criteria or Indicators (proposed by Contracting Parties with a qualitative GES determination). Sweden did not propose environmental targets for Descriptor 3.
- Regarding the level of ambition, Contracting Parties with qualitative targets have similar aims, while quantitative targets appear to differ in terms what they hope to achieve, depending on the criteria:
 - For fishing mortality, all Contracting Parties refer to MSY, however, the UK includes F_{pa} as an intermediate target (short term target for 2015).
 - For biomass, three approaches exist - the use of PA (precautionary reference point), MSY or MSY-trigger (alternative reference point as developed by ICES for SSB in relation to F_{MSY}).
 - For age/size structure, most Contracting Parties do not propose any quantitative targets. Although qualitative targets have been put forward and some Contracting Parties are considering OSPAR EcoQO on large fish as a target for indicator 3.3.2.
- The nature of proposed operational targets differ across Contracting Parties. Spain has put forward targets relating to existing regulations and knowledge improvement, whilst Germany are proposing targets relating to other impacts of fisheries or the elimination of illegal unregulated fisheries, and Belgium have specifically referred to shellfish management.
- Most Contracting Parties have indicated that the development of further reference points (MSY values, etc) is ongoing by ICES.

4. Overall level of coordination

- When considering approaches to Articles 9 and 10 together, commonality is more apparent and the overall approaches appear coherent in terms of overall coverage of the Commission Criteria and Indicators.
- Most Contracting Parties have not proposed quantitative thresholds/targets for indicators of criterion 3.3, nor for secondary indicators under criteria 3.1 and 3.2.

¹⁶ICES.2012. *Marine Strategy Framework Directive - Descriptor 3+*, ICES CM 2012/ACOM:62. 173 pp.
Link: <http://www.ices.dk/reports/ACOM/2012/WKMSFD-D3/MSFD%20D3%20Report.pdf>

- The most significant differences that require further coordination are the perceived levels of ambition i.e. the use of intermediate reference points as PA for F and/or SSB, the most appropriate assessment scale i.e. region or subregion vs. stock assessment scales, and the species to be considered.
- To improve coordination and coherence with respect to scale it was proposed at ICG MSFD in December 2011 that Contracting Parties should use:
 - stock scale for assessment of individual indicators for a given stock
 - their national marine waters for assessing GES
 - A common method for aggregating from stock scale to subregional scale. Regarding this method, results from the Commission workshop should be used by Contracting Parties.
- Coordination and coherence could be greatly improved if a common species list for Contracting Parties bordering a same subregion was agreed. To achieve this, consideration needs to be given to:
 - Developing shared criteria for selecting species at an OSPAR level, based on the proposals in the ICES report.
 - Developing at a subregional level the list of species which should be taken into account, based on the agreed criteria.
 - How best to account for highly mobile species e.g. tuna
 - Agreeing not to include anadromous and catadromous species as these are more relevant to Descriptor 1.
 - How to account for coastal stocks (limited to national waters), in particular shellfish. The list of coastal stocks to take into account is each the responsibility of each Contracting Party; however, there is an absence of coordinated methods for shellfish assessment.

5. Action points to improve coordination and coherence

ACTION	DUE	RESPONSIBILITY
a) To exchange information on existing national assessment methods for shellfish.	Ongoing	Contracting Parties.
b) To continue data acquisition and the development of stock models and reference points.	Post July 2012 - Pre 2018	Contracting Parties (within the framework of the CFP/DCF and ICES)

Descriptor 4 – All elements of the marine food webs, to the extent that they are known, occur at normal abundance and diversity and levels capable of ensuring the long-term abundance of the species and the retention of their full reproductive capacity

1. Summary

- Different approaches were adopted by Contracting Parties to implement Descriptor 4. In many cases, food web indicators were proposed as part of the ecosystem components for D1. Consequently, common environmental targets are proposed in both a diversity (structural) and food web (functional) context.
- In order to comply with an ecosystem-based approach to management as the MSFD aims, we need not only focus on structure of systems (abundance/ distribution), but also on the actual functioning/dynamics of the ecosystem. Descriptor 4 is the most suitable descriptor for this.
- Also, Descriptor 4 can be suitable to check compatibility of target values over different descriptors and trade-offs between ecosystem services.
- There is a high degree of consensus between Contracting Parties on the fact that there are knowledge gaps for the descriptor on food webs and a need to develop suitable targets and indicators. Criteria and indicators proposed by the Commission Decision will need further development before GES of food webs can be defined and hence, additional scientific and technical support will be required for this purpose. Existing EcoQOs, for example, will need to be adapted as food web indicators and further tested/validated in each subregion in order to become operational. Also, more holistic measures of food webs should be considered, e.g. ecosystem-based indicators.
- Member States have indicated that, wherever possible, the OSPAR Advice Manual is taken into account in national determination of GES and associated indicators for Descriptors 1, 2, 4 and 6.

2. Approaches to GES determination

- With regards to the proposed indicators in the Commission Decision, variable focus is given to the three important properties of food webs: structure, functioning and dynamic. More emphasis will be required on the functional and dynamic attributes of food webs.
- The type of indicators proposed by Spain, Portugal and France differ significantly from those proposed by the North Sea countries. Spain and France propose an alternative approach including all ecosystem components.

- Current trophic criteria/indicators focus on a single trophic group (i.e. a key component of the food web), and thereby fail to consider complex trophic interactions and whole system energy flow. The assessment of food webs, in particular, should move beyond the use of population and community indicators since they are unlikely to reflect the inherent complex dynamics of the system. Hence, the development of criteria should be directed towards more integrative indicators that consider (1) multiple trophic levels or a whole system approach (i.e. ecosystem-based indicators), (2) trophic transfer efficiencies and material cycling in a more explicit way, and (3) the dynamics of food webs in relation to specific anthropogenic pressures.
- Whereas current advances in the development of food web indicators remain mainly theoretical, further research is underway to apply these indicators for management purposes. As a result, it is likely that GES can currently only be defined in a qualitative manner.

3. Approaches to Target setting

- Considering the complex and dynamic nature of real food webs, identifying and justifying baseline reference points will be a difficult task. However, the availability of historic data can be useful to examine long-term trends and hence, improve our understanding of the systems' temporal dynamics.
- As food webs are dynamic systems, reference points cannot be based on historic data only. Reference sites with minimal anthropogenic pressures must be monitored in order to observe natural evolution of the ecosystem.
- Before targets can be set, scientific knowledge on the structure, functioning and dynamics of food webs will therefore need to be improved. For example, no quantitative relationships have currently been established between prey species abundance and grey seal pup production or harbour seal population, and therefore no quantitative targets can be set. In the absence of any well-defined and well-established reference levels for ecosystem indicators, reference directions are generally preferred¹⁷.
- The existing EcoQOs, especially the Large Fish Indicator, will need to be redefined for their use as MSFD food web indicators. Accordingly, the targets will need to be reassessed since they were set to meet the initial objective for these indicators, i.e. assessing the health of ecosystems, and not in an MSFD context, i.e. in relation to a specific pressure so that management action can be taken to achieve GES.

4. Overall level of coordination

- Considering the usually large geographical scale at which pressures act on food webs, a regional perspective will likely to be required for the assessment of GES. Hence, substantial levels of coordination in terms of the development of food web indicators and appropriate monitoring programmes will be essential, especially for Member States sharing common seas.

5. Action points to improve coordination and coherence

- An expert group has been established within the context of ICG COBAM with terms of reference which highlight the necessary steps that need to be taken to evaluate the potential common indicators, evaluate metrics and set regional targets with anticipated deliverables against these terms of reference by first quarter 2013.
- The Advice Manual (March 2012 version) includes a small set of food web indicators, mainly applicable to OSPAR Region II. Further testing and validation across each subregion is necessary to regionalize these EcoQOs so that they can become fully operational. Discussions with the EC should take place with regards to difficulties in developing suitable targets & indicators, and knowledge gaps for the descriptor of food webs. Knowledge gaps on food webs may be addressed and covered by future frame work calls of the EC. A project could be built on delivering (regionally and subregionally optimised) indicators and targets for D4.
- Advances in criteria/indicator development for D4 are currently taking place in several ICES working groups, e.g. WGECO, WGBIODIV. Outcomes of these workshops should be communicated to other relevant OSPAR working groups so that up-to-date scientific knowledge can be shared by Contracting Parties. Also, in this way, duplicate work between expert groups could be avoided.

Descriptor 5 – Human-induced eutrophication is minimised, especially adverse effects thereof, such as losses in biodiversity, ecosystem degradation, harmful algal blooms and oxygen deficiency in bottom waters

1. Summary

- Initial inventory returns were provided for this Descriptor from Belgium, Germany, the Netherlands, Spain, and the UK, with updated inventories then returned by Belgium, the Netherlands, Spain and the UK, with an additional inventory provided by Sweden. The compilation of information undertaken by ICG EUT provided some additional information on the approaches of Denmark. Ireland and France provided further information at an earlier meeting. This information meant a good comparison of approaches within the OSPAR region could be made.
- Overall, the level of ambition across Contracting Parties appears well aligned, with a relatively good degree of commonality existing across the national approaches. Belgium, the Netherlands and the UK have proposed a qualitative determination of GES whilst Germany, Spain, and France have adopted a quantitative approach and Sweden a mix.

¹⁷Shin, Y.-J., and Shannon, L. J. 2010. Using indicators for evaluating, comparing and communicating the ecological status of exploited marine ecosystems. 1. The IndiSeas project. – *ICES Journal of Marine Science*, 67: 686–691.

- The intentions of most Contracting Parties are rooted in, or derived from, the application of the OSPAR Common Procedure which, in turn, is broadly in accordance with the OSPAR Advice Document for GES Descriptor 5 and the COM Decision 2010/477/EU. Several countries indicated that their approaches would rely on a combination of the OSPAR Common Procedure with assessment criteria from the WFD implementation (including Belgium, France, the Netherlands, Spain, Sweden and the UK).
- The application of the OSPAR Common Procedure by Contracting Parties has allowed for a good degree of shared understanding of the main factors to be taken into account in determining GES and associated targets and indicators for eutrophication. This procedure has, *inter alia*, led to the development of area specific reference values and respective assessment levels (thresholds), allowing Contracting Parties to tailor their assessments to the regional and local conditions of their marine waters but requires further coordination with WFD approaches.
- Greater regional coordination, also with regard to river basins under the WFD, is still necessary and ongoing with respect to the updating and harmonisation of assessment levels for the potential indicator parameters and is a prerequisite for achieving comparability of GES for Descriptor 5.

2. Approaches to GES determination

- Belgium, the Netherlands, and the UK all define GES similarly and in a qualitative manner at the Descriptor level whilst Germany, Spain, Sweden and France describe GES quantitatively and at the level of the Commission Criterion and/or Indicator.
- The level of ambition appears broadly comparable with the overall goal being to ensure eutrophication and the direct and indirect effects of eutrophication are minimised. However, the qualitative nature of the determination means different wording is used making it difficult to directly compare ambition levels based on the information provided.
- Two different approaches to assessing when GES is eventually achieved appear to be proposed. Either by way of an integrative assessment as in the OSPAR Common Procedure e.g. UK, Netherlands, or on the basis of several indicators, either separately (Germany, Spain, Sweden) or in a sequential order, e.g. Belgium.
- Contracting Parties agree that the objective of Descriptor 5 is well aligned with, and forms part of, the OSPAR Eutrophication objective in the North-East Atlantic Environment Strategy (NEAES).
- Ireland elaborated that their OSPAR 'eutrophication problem areas' are all in waters that, for WFD/MSFD purposes, are in 'transitional and coastal' waters, i.e. the WFD is considered a more relevant driver than the MSFD.

3. Approaches to Target setting

- The proposed targets are mainly pressure and state-related, with a mixture of absolute quantitative values and trends. Most of the targets appear to relate to existing WFD/OSPAR targets/assessment levels.
- There do appear to be different interpretations of what constitutes a pressure and state-related target, e.g. is the concentration of nutrients considered a state indicator (the Netherlands and Spain) or a pressure indicator (Belgium, Sweden and the UK).
- Germany has set only pressure-related targets, whereas Spain, Sweden and UK use a mixture of pressure and state-related targets. Spain is the only Contracting Party that identified operational targets to comply with regulation in relation to wastewater treatment and to improve availability of information on sources.
- A significant difference can be seen between the UK, who differentiate between problem and non-problem areas and apply appropriate trends (downwards or stable), Belgium and Sweden who have a fixed quantitative target, and the Netherlands who use a maximum exceedence of the background level. These apparently different approaches make it difficult to compare overall ambition levels.
- Sweden identified three additional potential indicators related to inputs via run-off and point sources, input via atmospheric deposition and inputs from other sea areas. In 2012 no targets will be set for the first, the latter two will not be reported to the EC due to lack of ongoing funding or projects.
- There is less commonality with respect to the range of Commission Criteria and Indicators which have been used with some Contracting Parties using more of the indicators than others. No Contracting Party has proposed a target for nutrient ratios (5.1.2) although Germany does mention the indicator under the determination of GES but a target is not included.
- It was recognised that where targets are set for separate criteria or indicators of eutrophication, care should be taken that in the overall GES assessment all significant eutrophication impacts are duly taken account of.

4. Overall level of coordination

- Any remaining differences in assessment levels for different assessment parameters have been well documented through successive applications of the OSPAR Common Procedure (2003 and 2008) and the WFD intercalibration exercises. ICG EUT (November 2011) asked Contracting Parties to discuss the remaining boundary issues with regard to these assessment levels bilaterally or trilaterally in order to minimise these differences further. This was further endorsed by ICG MSFD. The OSPAR Common Procedure 'screening procedure' is being amended to reflect the screening requirement mentioned in relation to the initial assessment in Commission Decision 2010/477/EU in preparation for 2018.

- National processes are following the WFD and OSPAR Common Procedure hence there is a high level of coordination with regard to state targets. Further regional coordination of pressure-related targets with the WFD is considered essential, especially with regard to those marine areas where the problem area status is transboundary in nature.
- The use of different wording to express GES and targets means the extent of regional coordination is not immediately apparent. Further efforts to align language would improve this.

5. Action points to improve coordination and coherence

ACTION	DUE	RESPONSIBILITY
a) To continue bilateral or multilateral discussions on outstanding boundary issues and to conclude any discussions on outstanding boundary issues with regard to assessment levels for harmonised assessment parameters bi/trilaterally as soon as possible in order that conclusions can be accounted for in national determinations of GES and target & indicator setting	Pre July 2012	Contracting Parties to consider, and progress to be reported back to ICG MSFD and HASEC as appropriate.
b) Continue to progress further coordination of approaches, taking into account developments and approaches under the WFD and the application of the OSPAR Common Procedure	Post July 2012 - Pre 2018	To be progressed through HASEC
c) Cooperate to set appropriate nutrient reduction targets for problem areas taking into account the work carried out in the context of the WFD implementation	Post July 2012 - pre 2018	Contracting Parties – to be progressed through HASEC
d) Continue to address common approach for tackling transboundary nutrient transport	Post July 2012 - pre 2018	Contracting Parties – to be progressed through HASEC
e) Develop cost-effective and integrated programmes of monitoring which avoid redundancy and duplication and make best use of available systems	Post July 2012 - pre 2018	To be progressed through HASEC

Additional background information

For the purpose of the OSPAR North-East Atlantic Strategy, the OSPAR objective in relation to Eutrophication is as follows:

- “1.1 The OSPAR Commission’s strategic objective with regard to eutrophication is to combat eutrophication in the OSPAR maritime area, with the ultimate aim to achieve and maintain a healthy marine environment where anthropogenic eutrophication does not occur.
- 1.2 The Eutrophication Strategy will be implemented progressively by making every endeavour, through appropriate actions and measures, to move towards the targets of:
 - a. 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, and finally;
 - b. achieving and maintaining, by 2020, that all parts of the OSPAR maritime area have the status of non-problem area.”

For the purpose of the OSPAR North-East Atlantic Strategy, eutrophication means “the enrichment of water by nutrients causing an accelerated growth of algae and higher forms of plant life to produce an undesirable disturbance to the balance of organisms present in the water and to the quality of the water concerned, and therefore refers to the undesirable effects resulting from anthropogenic enrichment by nutrients as described in the Common Procedure” (Annex 1 to the OSPAR Strategy, reference number: 2010-3)

It should also be noted that in the context of the EU, the definition of eutrophication (cf. Art. 2(11) of the UWWT Directive 91/271/EEC) is as follows:

Eutrophication is “the enrichment of water by nutrients, especially compounds of nitrogen and/or phosphorus, causing an accelerated growth of algae and higher forms of plant life to produce an undesirable disturbance to the balance of organisms present in the water and to the quality of the water concerned”.

Descriptor 6 – Sea-floor integrity is at a level that ensures that the structure and functions of the ecosystems are safeguarded and benthic ecosystems, in particular, are not adversely affected

1. Summary

- As **Descriptor 6** has much in common with assessment of habitats under Descriptor 1 it is envisaged that the two descriptors will be treated together. The assessment of ‘seabed substrate’ types under Descriptor 6 will be aligned with the predominant habitat types of Descriptor 1, with a common assessment of seabed quality and targets being set, e.g. for reductions in impacts.
- Three potential common indicators have been identified for Descriptor 6, with a high level of consensus, although these indicators are at varying degrees of maturity and work is still required before they could be operationalised. This work will be undertaken primarily through the benthic habitat expert group within ICG COBAM. One of these indicators requires information on the geographic extent and nature of pressures arising from human activities and

therefore links to the work undertaken by the OSPAR Intersessional Correspondence Group on Cumulative Effects.

- Whilst the Commission Decision indicators for Descriptor 6 are more oriented towards functioning of seabed communities, they are compatible with and complementary to those used for Descriptor 1. As for Descriptor 1, and overall assessment of the substrate types needs to assess the extent of impact from all pressures affecting the seabed, at the scale of the assessment area.
- Member States have indicated that, wherever possible, the OSPAR Advice Manual is taken into account in national determination of GES and associated indicators for Descriptors 1, 2, 4 and 6.

2. Approaches to Target setting and indicators

- See Descriptor 1 information on habitats.
- Indicators on physical state (Descriptor 6) are rare and not well-defined, but may be more effective an approach than indicators on benthic fauna because they are tightly linked to human activities/pressures. There is a need to seriously consider development of suitable physical state indicators.

3. Overall level of coordination

- It is hoped that coordination will be improved by Member States using the national targets and indicators which were proposed at the ICG COBAM workshops and the potential common indicators incorporated into the OSPAR Biodiversity Advice Manual. Most of these potential common indicators are applicable to all OSPAR regions; however, the selection of species and the setting of targets requires a (sub)regional approach and a high level of coordination among Member States that border the same MSFD (sub)regions.

4. Action points to improve coordination and coherence

- Ongoing indicator development for Descriptor 6 is included in the work of the Habitats expert group under ICG COBAM.
- The work of ICG Cumulative Effects on pressure mapping should inform this expert group and close cooperation between the two groups is needed.

Descriptor 7 – Permanent alteration of hydrographical conditions does not adversely affect marine ecosystems

1. Summary

- Inventory returns were provided for this Descriptor from Belgium, France, Germany, the Netherlands, Spain, Sweden and the UK. Further information was provided by Ireland at the ICG MSFD meeting in December 2011. This meant a good comparison of approaches within the OSPAR region could be made.
- There is a relatively low level of coordination and commonality for this Descriptor across Contracting Parties. Higher level ambitions appear broadly in line although differences in detail and the language used means coordination and coherence could be significantly improved.
- Coordination and coherence could be improved by Contracting Parties making reference to their intentions to consider '*EUNIS level 3*' habitats, '*cumulative impacts*' and '*permanent modifications*' under this Descriptor in their qualitative determinations of GES. ICG MSFD has endorsed an operational target for Descriptor 7, reflecting the use of existing legislative frameworks i.e. EIA, SEA (see below). Contracting Parties should consider referring to this in their national articulation of GES targets and indicators.

2. Approaches to GES determination

- The determinations of GES are generally qualitative in nature and have been proposed at a Descriptor level, with the exception of Germany and Sweden who have made proposals at the Commission Indicator level. Germany has also made a quantitative determination at the level of the Commission Indicator.
- The qualitative descriptions of GES range from the language of the Descriptor itself to a more detailed description including reference years and/or the information on the hydrographical conditions to be considered. There are significant differences in the hydrographical conditions to be considered from salinity and temperature only, to particulate matter and sedimentation only.
- Most Contracting Parties refer to large scale impact and the permanent nature of the modifications of hydrographical conditions to be considered under Descriptor 7 in their GES determination.
- The GES determinations are relatively well aligned with respect to ambition despite the difference in the detail and language used however coherence would be significantly improved if common language was to be adopted.
- Regarding the scale of assessment, some Contracting Parties consider this Descriptor to be assessed at national level, whereas others consider it should be assessed at a subregional level. Spain will adopt a two scale approach - the impact of construction activities on hydrographical conditions will be assessed at a local scale and the impacts of global changes including climate change will be assessed at a broad scale (GES would not be defined at that broader scale).

3. Approaches to Target setting

- There is little commonality across the proposed targets. They are all new and mostly qualitative in nature, reflecting a mix of pressure, state, impact and operational targets. They apply either in national waters, in ecological assessment areas to be defined, or at the level of the subregion.
- The proposed operational targets have been linked to the management of human activities, either on a very general basis or more specifically through the use of impact assessment in existing regulatory frameworks, including inland projects (Ireland, the Netherlands, Spain and the UK).
- The proposed pressure targets relate to specific pressures arising from changes to hydrographical conditions e.g., systems of channels, building in coastal areas etc (e.g. Belgium, Germany and Sweden).
- The proposed state targets are linked to specific characteristics of the ecosystem i.e. tidal flats, salinity (Germany).

The proposed impact targets are linked to the impacts on habitats arising from modifications to hydrographical conditions (Germany and the Netherlands).

4. Overall level of coordination

- Overall there is a relatively low level of coordination and commonality with respect to this Descriptor. This may be a result of low priority given to the descriptor and limited information and discussion both at EU and OSPAR level i.e. there was no specific Task Group installed by the European Commission as under all other Descriptors.
- Coordination could be significantly improved by establishing regional operational targets referring to the use of existing legislative frameworks to manage human activities i.e. EIA, SEA while carefully scrutinising whether these are sufficient to fulfil the requirements of the MSFD, in particular concerning an adequate consideration of cumulative impacts.
- The following aspects were considered for their potential to improve the level of coordination and coherence with respect to this Descriptor.
 - *Spatial scales for pressures and impact:* Currently no coherence exists across approaches with respect to the scale at which a pressure is assessed, largely due to the fact this will differ depending on the type of pressure being considered and on the specific environmental conditions. Greater coherence could be achieved regarding the scale at which an impact is considered based on the advice from EIHA that EUNIS Level 3 habitats should be used (endorsed by COG(2) 2011).
 - *Cumulative impacts:* This is an important aspect of this Descriptor and coherence could be improved if all Contracting Parties included reference to cumulative effects in their definitions of GES.

- *The components of the ecosystem to be considered (species, habitats, and physical conditions):* A good degree of coordination could be ensured if the ecosystem components to be considered were to be based on commonly agreed lists, i.e. those determined by ICG COBAM.

- *Reference year:* Some Contracting Parties have defined a reference year for hydrographical conditions, which reflects the availability of data whilst others use existing regulation as a basis for determining whether GES is being achieved. For this reason further harmonisation is not likely to be possible or necessary.

- *Temporal scales:* A key consideration for this Descriptor is the notion of “permanent modifications”. Further work is needed to define a relevant and harmonised temporal scale associated with “permanent modifications” if greater coordination and coherence is to be achieved.

- *Hydrographical conditions:* Coordination and coherence would be greatly improved if those hydrographical conditions to be considered under this Descriptor were to be listed and prioritized (based on already existing work in document ICG MSFD(4) 11/2/2-E).

- Following discussion on the level of coordination for this Descriptor in the ICG MSFD, a number of Contracting Parties are likely to include a similar operational target in their national Marine Strategies, reflecting the use of existing legislative frameworks (i.e. EIA, SEA) in supporting the achievement of GES, based on the following language:

All developments must comply with the existing regulatory regime (e.g. EIA, SEA, and Habitats Directives) and regulatory assessments must be undertaken in such a way that takes into consideration any potential impacts arising from permanent changes in hydrographical conditions, including cumulative effects, at the most appropriate spatial scales following the guidance prepared to this end.

5. Action points to improve coordination and coherence

ACTION	DUE	RESPONSIBILITY
a) To ensure reference is made of the following concepts in Contracting Parties' qualitative definitions of GES: <ul style="list-style-type: none"> ◦ Spatial scale of impact, i.e. referencing 'EUNIS level 3' habitats ◦ Referencing 'cumulative impacts' ◦ Temporal scales, i.e. referencing 'permanent modifications' 	Pre July 2012	Contracting Parties
b) To prioritise the list of ecosystem components which should be taken into account under this Descriptor	Post July 2012 - Pre 2018	Physical components (hydrographic conditions) to be progressed by EIHA. Biological components (habitats and species) to be progressed by ICG COBAM.
c) To draft and agree a common definition of appropriate temporal scales, i.e. what constitutes a permanent modification of hydrographical conditions considering cumulative and synergetic effects	Post July 2012 - pre 2018	To be progressed by EIHA
d) To reflect and agree necessary additional actions which would ensure a greater degree of coordination and coherence regarding GES and targets for Descriptor 7 is reached.	Post July 2012 - Pre 2018	To be progressed by EIHA
e) To assess the efficiency of current existing regulation (EIA/SEA, WFD, HD) in ensuring GES is achieved and maintained for Descriptor 7.	Post July 2012 - Pre 2018	To be progressed by EIHA, taking into account work underway in the UK to develop specific case studies
f) To implement the proposed long-term actions as outlined in the OSPAR advice document for Descriptor 7 (ICG MSFD(4) 11/2/2-E)	Post July 2012 - Pre 2018	To be progressed by EIHA

Descriptor 8 – Concentrations of contaminants are at levels not giving rise to pollution effects

1. Summary

- Initial inventory returns were provided for this Descriptor from Belgium, Germany, the Netherlands, Spain, and the UK. For the second round an additional return was provided by Sweden and updates were received from Belgium, the Netherlands, Spain and the UK. France and Portugal presented their approaches at the ICG MSFD meeting in December 2011.
- The level of ambition is well aligned with good coordination across Contracting Parties. The determination of GES is generally defined qualitatively at the Descriptor level with some Contracting Parties also providing quantitative determinations at the level of the Commission Indicator.
- There are no significant differences across the overall approaches adopted by Contracting Parties although there appear to be differing interpretations of pressure and state with respect to target setting and little commonality in how to address the Commission Indicator relating to significant acute pollution events (8.2.2).

2. Approaches to GES determination

- The level of ambition appears to be broadly comparable across Contracting Parties. All determinations of GES specify that contaminant levels should be below concentrations where adverse effects are likely to occur as determined by agreed levels i.e. OSPAR Environmental Assessment Criteria (EACs), and WFD Ecological Quality Standards (EQSs).
- Determinations of GES have been proposed by all at a Descriptor level. Additionally Sweden has articulated thresholds for GES at the Commission Criterion level and Germany, Sweden, France and Spain at the level of the Commission Indicator (Spain for 8.1.1 only).
- Contracting Parties determinations of GES are a mixture of qualitative and quantitative (where the Netherlands and the UK use a qualitative determination, Germany, France and Belgium a quantitative and Spain and Sweden a mixture) and all appear to be well aligned in ambition, reflecting closely the language used in the Commission Decision. It is to note that they all refer to meeting existing agreed levels, i.e. WFD, OSPAR. Therefore, they all actually use qualitative language to reflect the use of existing quantitative thresholds. Portugal indicated at an earlier meeting that they have sufficient data from the WFD for GES determination, but insufficient information on oil spills.

3. Approaches to Target setting

- All Contracting Parties primarily make use of Ecological Quality Standards (EQSs) and Environmental Assessment Criteria (EACs) (e.g. thresholds set under the WFD and assessment levels under OSPAR).
- With the exception of Spain, all Contracting Parties propose to use some of the OSPAR EcoQOs (or indicators based on them) in addressing pollution effects (8.2.1), i.e. oiled guillemots, imposex in gastropods and chemicals in bird eggs.
- All Contracting Parties propose a mixture of pressure, state, and impact targets with the exception of Germany where only pressure targets are proposed. Spain additionally has proposed an operational indicator with a focus on measures for hot spots.
- Only Belgium has proposed a (quantitative) target for indicator 8.2.2 (acute pollution events).
- Sweden proposed two additional indicators/targets related to input of metals via rivers and input of contaminant via atmospheric deposition.
- The Netherlands will focus its indicators for target setting on biota, expectedly in concurrence with WFD developments under the future revision of the EQS Directive, taking into account the recent technical guidance document for deriving thresholds. In this context, they will also focus on OSPAR EACs to address biological effects, thereby referring ecosystem status to levels where effects are absent. The Netherlands also mentioned that the levels of EAC's and EQS's mainly dealt with definitions derived from uncertainty about the effects of substances on the marine environment and that in order to narrow the gap of uncertainty towards more realistic assessment levels, knowledge coming from monitoring and biological effects needed to be brought together. Spain will likely address targets and indicators through EACs for sediment and OSPAR biological effects parameters. In the case of legacy pollution and measures already taken, the UK considers it appropriate in a legally binding framework to rely on exception clauses in the MSFD (e.g. disproportionate costs) if targets cannot be met by 2020.

4. Overall level of coordination

- Ambitions appear to be well aligned and a high level of coordination exists across all Contracting Parties approaches which all refer primarily to the achievement of EACs and EQS as set out under the WFD and OSPAR. In some cases OSPAR EcoQOs are also explicitly referred to whereas in other cases their use is inferred.
- There are no significant differences in the overall approach although there appears to be different interpretations of pressure and state. For example, is the concentration of contaminants in biota or water considered a state or pressure indicator? Belgium, Sweden and the UK consider this to be a pressure indicator whereas the Netherlands and Spain consider it to be state.
- Additionally there appears to be little commonality across approaches towards addressing the Commission Indicator relating to significant acute pollution events (8.2.2).

- From the language used and the perceived ambition levels it would appear a single common qualitative statement of GES could potentially be developed which could further articulate the quantitative elements, i.e. EAC's to be used. Alignment may also be possible with respect to articulating common biological effects/EcoQO's.
- Following discussion on the level of coordination for this Descriptor in the ICG MSFD, a number of Contracting Parties are likely to include a similar operational target in their national Marine Strategies, in relation to criteria (8.2.2) on acute pollution events, based on the following language:

Occurrence and extent of significant acute pollution events (e.g. slicks resulting from spills of oil and oil products or spills of chemicals) and their impact on biota affected by this pollution should be minimised through appropriate risk based approaches.

5. Action points to improve coordination and coherence

ACTION	DUE	RESPONSIBILITY
a) To explore further the possibility of aligning the EAC approach within OSPAR (currently under review in MIME/ICG EACs) with the developments of EQS under the WFD, bearing in mind the gaps in knowledge for setting thresholds with regard to marine organisms	Post July 2012 - Pre 2018	All Contracting Parties to ensure such discussions are progressed at an EU level in appropriate MSFD and WFD fora
b) To discuss further the practicalities of integrated monitoring at the appropriate scale for assessment of chemicals and their biological effects, taking into account the advice from ICES	Post July 2012 - Pre 2018	To be progressed by HASEC

Descriptor 9 – Contaminants in fish and other seafood for human consumption do not exceed levels established by Community legislation or other relevant standards

1. Summary

- For the initial inventory returns were provided for this Descriptor from Belgium, Germany, the Netherlands, Spain, and the UK. For the second round additional return was provided by Sweden and updates were received by Belgium, the Netherlands, Spain and the UK.
- There is a good level of commonality and coordination across Contracting Parties with determinations of GES and targets in the sense that EU food legislation is used as threshold values. So far, the descriptor has been given low priority and further clarification and common understanding of an assessment philosophy for determining GES under the MSFD is required. Ambitions differ slightly in some instances although with a little coordination effort these could be easily harmonised. However, no such attempt to harmonise approaches was undertaken between December 2011 and April 2012.
- GES is generally defined at the Descriptor level with some further detail provided at the Commission Indicator level. Qualitative language is predominantly used which refers to the use of quantitative thresholds i.e. existing regulatory levels.
- There are no significant differences although there appear to be differing interpretations of pressure and state.

2. Approaches to GES determination

- The overall level of ambition is fairly comparable with reference made (or inferred) to meeting existing regulatory levels from relevant legislation by all Contracting Parties. The language used reflects closely the Commission Decision. The UK goes one step further, indicating levels of substances should also not be seen to be increasing even if remaining under the threshold. On the other hand Spain states that 95% of individuals of a species/site presents concentrations of each legislated pollutant below the maximum permissible level.
- The Netherlands and the UK both describe GES at Descriptor level whereas Belgium and Spain describe GES at the level of the Commission Indicator and Sweden at the criterion level. Germany describes it at both levels.
- Approaches to the determination of GES differ with respect to their qualitative/quantitative nature. The Netherlands and the UK are taking a qualitative approach but refer to existing quantitative thresholds, whilst Belgium, Germany and Spain have taken a quantitative approach. Therefore, in effect, all Contracting Parties have either taken a quantitative approach or referred directly to specific quantitative thresholds in existing legislation. Despite this, all determinations of GES appear to share a high degree of commonality in the language used.

3. Approaches to Target setting

- The ambitions of the targets proposed by Contracting Parties do not appear to be exactly the same. The Netherlands, Sweden and Spain require that all contaminants should be below maximum levels. Belgium requires all contaminants to be below maximum levels or, if not, they should be decreasing. The UK requires a high rate of compliance with regulatory levels. Spain has set an additional operational target to ensure the traceability of commercial species in order to identify the geographic origin of their contaminant levels.
- In general it was felt there was a shortcoming in current food safety monitoring given it is often not possible to identify the origin of the sample in question. This may only be overcome through changes to existing monitoring methodologies or dedicated sampling cruises (UK), utilising stocks representative of national waters, or using species where origin is already known i.e. shellfish (Spain).
- No targets have been proposed by any Contracting Party for Commission Indicator 9.1.2 – frequency of regulatory level exceedences (although Germany refers to existing EU food legislation for quantitative thresholds under their determination of GES).

4. Overall level of coordination

- Overall there appears to be a high level of commonality and coordination across this Descriptor with few significant differences. All Contracting Parties refer to meeting relevant existing legislation.
- The levels of ambition, where defined qualitatively, appear fairly well aligned, which indicates a good level of coordination. However, consideration of the more detailed elements of Contracting Parties approaches does appear to indicate some differences in ambition levels i.e. across the targets. This could potentially be resolved by better alignment of language in order to improve coherence.

5. Additional information

- A report from France¹⁸ has been produced detailing the substances taken into account and maximum levels that will be used in order to assess GES for Descriptor 9 by Contracting Parties. Details are provided regarding the difference for some maximum levels due to regulatory updates during 2011 by some Contracting Parties, on additional studies and where further studies on contaminants are required. Thresholds for achieving GES are also discussed. The report is available from the OSPAR Secretariat on request.

¹⁸Reninger, J-C.(Ed), 2012. *Comparison between work within the framework of the MSFD performed in 2011 by OSPAR Member States for descriptor D9. Agence nationale de sécurité sanitaire de l'alimentation, de l'environnement et du travail, UMERPC/JCRI/2012-101 17pp.*

Action points to improve coordination and coherence

ACTION	DUE	RESPONSIBILITY
a) To consider whether there is a need to develop a common understanding of an assessment philosophy for the purpose of determining GES under MSFD	Post July 2012 - Pre 2018	To be progressed by Contracting Parties at HASEC

Descriptor 10 – Properties and quantities of marine litter do not cause harm to the coastal and marine environment

1. Summary

- Inventory returns were provided for this Descriptor from Belgium, France, Germany, the Netherlands, Sweden, Spain and the UK. Portugal provided further information indicating that GES would be determined using a qualitative method at the Descriptor level.
- Overall the level of ambition of OSPAR Contracting Parties is broadly aligned, with a good degree of coordination existing across the adopted approaches. The greatest degree of coordination exists with respect to beach litter, likely as a result of the OSPAR beach litter monitoring programme.
- The most significant difference can be seen in the approaches proposed for Commission Criterion 10.2 - impacts of litter, specifically with respect to the use of the OSPAR EcoQO on fulmar stomach contents. Whilst all the proposals rely in some way on the data generated for the EcoQO, levels of ambition and application as a target vary greatly. Further efforts should be made to clarify and as appropriate better align the use of the OSPAR EcoQO on fulmar stomach contents with MSFD requirements: that is in particular to clarify whether it is sufficient as an indicator to cover the relevant impacts of litter. Further investigation on impacts from marine litter in the OSPAR area is needed post July 2012. Also it should be noted that with the exception of Germany currently no Contracting Party proposes to develop a target on micro-particles in this cycle.

2. Approaches to GES determination

- Determinations of GES have been proposed by all at a Descriptor level with Germany and Sweden further elaborating where quantitative thresholds will be established in the future at the level of the Commission Indicator. All determinations of GES at the Descriptor level are qualitative in nature and appear to be well aligned in ambition, reflecting closely the language used in the Commission Decision.
- Other than the inclusion of proposed future quantitative elements in the GES determination from Germany and Sweden, the only other significant differences to note are the explicit reference to preventing litter promoting the introduction of non-indigenous species (Germany and France) and the explicit consideration of the human

health (France and Spain) socio economic, and navigational implications of litter (France). France also makes reference to litter not posing a significant risk to marine life at the population level.

3. Approaches to Target setting

- All Contracting Parties provided details of proposed targets, except France and Portugal where targets are currently being developed. The targets proposed for litter are predominantly pressure related and trend-based i.e. relating to a general reduction in levels or inputs of litter over time.
- All Contracting Parties are proposing targets addressing the Commission Indicator relating to beach litter (10.1.1).
- All Contracting Parties, with the exception of Spain, are proposing targets for the water column, seabed and impact elements of the Commission Decision (10.1.2).
- With the exception of Germany, currently no Contracting Party proposes to develop a target on micro-particles (10.1.3) in this cycle.
- With the exception of those proposed targets based around the OSPAR beach litter monitoring and the OSPAR EcoQO on fulmar stomach contents all the targets are considered to be new and not yet operational for MSFD purposes.

4. Overall level of coordination

- Approaches to addressing marine litter are relatively well aligned with the current lack of data meaning Contracting Parties are generally taking a qualitative approach.
- There is a good degree of coordination with respect to beach litter (10.1.1). Levels of ambition are well aligned, requiring an overall reduction/downward trend in the amount of litter items found on the beach based on data from the OSPAR beach litter monitoring programme. The UK have elaborated further by proposing a decreasing trend of litter items within specific litter categories
- A fair degree of coordination exists with respect to litter in the water column and on the seabed (10.1.2). All Contracting Parties proposing a target, except the UK, have adopted a similar approach to put forward for beach litter i.e. overall levels or inputs to decline in reference to current (baseline) levels. The UK favours a surveillance monitoring approach to enable more data to be collected to improve understanding of trends and sources of litter. In addition, Belgium has proposed a quantitative target relating to the decommissioning of structures on the seabed. Over the longer term greater alignment should be possible and this should be progressed through the OSPAR ICG ML.
- With the exception of Germany, no Contracting Party is proposing to set targets with respect to micro-particles (10.1.3) in this cycle, reflecting the need for further research and monitoring to reduce uncertainty. To ensure a good level of coordination is maintained, the discussion and agreement of targets and indicators by Contracting Parties should be progressed through the OSPAR ICG ML to the greatest extent possible.

- Less coordination exists with respect to Commission Criterion 10.2 - impacts of litter on marine life. Targets for this Criterion have only been proposed by Belgium, Germany, Netherlands and the UK and show considerable variance, despite all being based around the OSPAR EcoQO on litter levels in fulmar stomachs. Proposals range from adopting the EcoQO outright (Belgium), to declining trends (Netherlands, Germany), through to surveillance monitoring (UK) to enable more data to be collected, with a view to developing a target for 2018. In addition, Germany has also proposed the monitoring of seals and small cetaceans that are found dead. In order to improve coordination and alignment over the longer term, discussions should take place within the OSPAR ICG ML as to how to best apply this EcoQO to meet MSFD needs.
- Additional differences can be seen in the consideration of wider impacts such as entanglement and strangulation (Germany), the transport of invasive species (France and Germany) and the inclusion of socio-economic elements such as costs to communities, human health, navigation etc. (France and Spain). Targets/thresholds/indicators for these have not yet been included but discussions on their inclusion should be taken forward.
- Any discussions that take place within the OSPAR ICG ML must also consider and reflect upon those discussions taking place at an EU level within the TSG Litter.
- Following discussion on the level of coordination for this Descriptor in the ICG MSFD, a number of Contracting Parties are likely to include the same high level qualitative statement of GES for litter in their national Marine Strategies, as follows:

The amount of litter, including its degradation products¹⁹, on coastlines and in the marine environment is decreasing over time and are at levels which do not result in harmful effects to the coastal or marine environment.

- A number of Contracting Parties are also likely to include a target for litter on coastlines in their national marine strategies, based on the OSPAR Beach Litter Monitoring Guidelines, consistent with the following:

Overall reduction in the total number of visible litter items on coastlines by 2020 (e.g. based on a five year moving average)

¹⁹Degradation products of litter include small plastic particles and micro-plastic particles.

²⁰Relevant precautionary values are part of the German licensing of offshore wind farms.

5. Action points to improve coordination and coherence

ACTION	DUE	RESPONSIBILITY
a)Review how best to use the OSPAR fulmar EcoQO i.e. as an indicator of floating litter or impact.	Post July 2012 - Pre 2018	To be progressed by ICG ML
b)Provide advice on research gaps and options for coordinated monitoring for meso- and micro-litter and especially plastics.	Post July 2012 - Pre 2018	To be progressed by ICG ML
c)Consider potential improvements to the IBTS protocol for litter monitoring and the possibility of a shared target for seabed/ water column litter.	Post July 2012 - Pre 2018	To be progressed by ICG ML

Descriptor 11 – Introduction of energy, including underwater noise, is at levels that do not adversely affect the marine environment

1. Overview Summary

- Returns were provided for this Descriptor from Belgium, France, Germany, the Netherlands, Sweden, Spain and the UK.
- Overall levels of ambition are well aligned, although how this ambition is realised through targets/thresholds does differ.
- A good level of coordination and alignment can be seen across Contracting Parties with respect to the impacts of noise being considered at a behavioural/ecosystem level. Only Germany has further/in addition considered the direct physical impacts of noise.
- The most significant differences between Contracting Parties are the proposal for a quantitative target under Commission Criterion 11.1 (Belgium, Germany²⁰) or a qualitative target (the Netherlands), the inclusion of heat, light and electromagnetic energy (Germany), and the differing approaches to Commission Criterion 11.2 (ambient noise) where commonality exists between Germany and Belgium (trend based target proposed), and separately between the Netherlands and the UK (no target proposed).

2. Approaches to GES determination

- Determinations of GES have been proposed at a Descriptor level by all Contracting Parties. Germany has also elaborated where quantitative thresholds will be established in the future at the level of the Commission Indicator. All determinations of GES at the Descriptor level for noise are qualitative in nature, except those from Germany, which added quantitative thresholds to avoid certain impacts, and appear to be well aligned in ambition,

reflecting closely the language used in the Commission Decision. France has further specified that impulsive sounds should not be detectable by cetaceans or impact on their acoustic communications.

- In addition to noise Germany has proposed qualitative statements for light, electromagnetic and thermal energy. Indications of possible quantitative thresholds for thermal and electromagnetic energy have been included.

3. Approaches to Target setting

- The proposed targets reflect a mixture of approaches, covering pressure and impact elements as well as more operational options. There is also a combination of qualitative statements and absolute quantitative values.
- Broadly speaking the proposed targets are new although links to commitments under the Habitats Directive have been made (Germany).
- All Contracting Parties are proposing targets for Commission Criterion 11.1 - impulsive sounds apart from France, Sweden and Spain, which have yet to establish targets under this Descriptor. Targets range from absolute quantitative thresholds of sound levels (Belgium, Germany), to higher level qualitative statements of intent to prevent significant effects occurring (Germany, the Netherlands²¹), through to more operational targets to manage the pressure i.e. through the establishment of a noise registry (UK).
- With respect to Commission Criterion 11.2 - continuous sound, only Belgium and Germany have proposed targets which aim for a decreasing trend target. The Netherlands and the UK have indicated that further monitoring is required to support the development of a quantitative target in 2018.

4. Overall level of coordination

- Ambitions are well aligned and there is generally a good degree of coordination, in particular with respect to the higher level articulation of what GES should look like, with the overall aim generally being to prevent levels of noise from having significant/adverse effects.
- With respect to Commission Criterion 11.1 - impulsive sounds, compliance with Community legislation i.e. Habitats, Birds, and EIA Directives through national licensing processes will be crucial in meeting GES for all Contracting Parties.
- While there are differences in the target setting method there is a good degree of commonality under this Criterion with all Contracting Parties considering the behavioural or ecosystem level effects of noise.
- The most significant difference can be seen in the proposals by Belgium and Germany which specifically set absolute quantitative noise levels for GES. Such values have not been proposed by other Contracting Parties where a more qualitative approach is favoured.
- There is some alignment with respect to Commission Indicator 11.2 - continuous sound, however this is polarised into two distinct approaches - either the establishment of a negative trend in shipping noise (Belgium, Germany),

or the proposal to not establish targets at this time (the Netherlands and the UK). Discussions on how to better align approaches will need to continue post July 2012 if coordination is to be improved.

- Following discussion on the level of coordination for this Descriptor in the ICG MSFD, a number of Contracting Parties are likely to include the same high level qualitative statement of GES for noise in their national Marine Strategies, as follows:

Loud, low and mid frequency impulsive sounds and continuous low frequency sounds introduced into the marine environment through human activities do not have adverse effects on marine ecosystems.

- In addition a number of Contracting Parties are also likely to establish a 'noise registry' to record, assess and manage the distribution and timing of anthropogenic loud, low and mid frequency impulsive sound sources. Some Contracting Parties may also set an operational target related to this.

5. Action points to improve coordination and coherence

ACTION	DUE	RESPONSIBILITY
a) To develop a shared view of current evidence gaps	Pre July 2012	To be progressed by EIHA/TSG Noise
b) To describe the current measures in place related to the management of ambient noise i.e. shipping lane management	Pre July 2012	To be progressed by EIHA
c) Further develop the 'Number of pulse days' approach to target setting for impulsive sounds i.e. the development of a noise registry	Post July 2012 - Pre 2018	To be progressed by the TSG Noise
d) Develop a common view on the inclusion of other forms of energy	Post July 2012 - Pre 2018	To be progressed by EIHA
e) Ensure the need to monitor noise is reflected in the text of the JAMP	Post July 2012 - Pre 2018	To be progressed by the OSPAR Secretariat and EIHA
f) Consider the need for a shared database of monitoring to facilitate regional assessments, ensuring appropriate linkages with the work of the TSG Noise	Post July 2012 - Pre 2018	To be progressed by the OSPAR Secretariat and EIHA
g) Widen our understanding of noise impacts to cover other species beyond cetaceans i.e. fish, invertebrates etc	Post July 2012 - Pre 2018	To be progressed by EIHA

²¹The Netherlands' licensing requires preventive protection measures concerning pile driving for the construction of wind farms.



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