



**Overview Assessment of Implementation of
OSPAR Recommendations for Protection
and Conservation of Threatened and/or
Declining Species and Habitats**

Other Assessment



OSPAR

QUALITY STATUS REPORT 2023

2023

Overview Assessment of implementation of OSPAR Recommendations for protection and conservation of threatened and/or declining species and habitats

OSPAR Convention

The Convention for the Protection of the Marine Environment of the North-East Atlantic (the “OSPAR Convention”) was opened for signature at the Ministerial Meeting of the former Oslo and Paris Commissions in Paris on 22 September 1992. The Convention entered into force on 25 March 1998. The Contracting Parties are Belgium, Denmark, the European Union, Finland, France, Germany, Iceland, Ireland, Luxembourg, the Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

Convention OSPAR

La Convention pour la protection du milieu marin de l’Atlantique du Nord-Est, dite Convention OSPAR, a été ouverte à la signature à la réunion ministérielle des anciennes Commissions d’Oslo et de Paris, à Paris le 22 septembre 1992. La Convention est entrée en vigueur le 25 mars 1998. Les Parties contractantes sont l’Allemagne, la Belgique, le Danemark, l’Espagne, la Finlande, la France, l’Irlande, l’Islande, le Luxembourg, la Norvège, les Pays-Bas, le Portugal, le Royaume- Uni de Grande Bretagne et d’Irlande du Nord, la Suède, la Suisse et l’Union européenne

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Executive summary

The OSPAR List of Threatened and/or Declining Species and Habitats (OSPAR Agreement 2008-06, the OSPAR List) has been developed in response to Annex V of the OSPAR Convention *'On the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area'* which provides that Contracting Parties to the OSPAR Convention shall *'take the necessary measures to protect and conserve the ecosystems and the biological diversity of the Maritime Area'* and *'cooperate in adopting programmes and measures for those purposes for the control of the human activities'* (OSPAR Convention Annex V Article 2). The OSPAR List is based upon nominations by Contracting Parties and Observers to the Commission of species and habitats that they consider to be of particular concern in order to set priorities for its further work on the conservation and protection of marine biodiversity.

This overview assessment has been undertaken on the basis of requirements for regular reporting by Contracting Parties under Article 22 of the OSPAR Convention and aims to provide information on compliance and, as far as is possible, information on the effectiveness of the Recommendations.

This overview assessment is a contribution to the 2023 Quality Status Report (QSR). In particular, the overview assessment informs the chapters on responses and measures in the biodiversity thematic assessments.

As of 2019, the OSPAR List included 42 species and 16 habitats. OSPAR Recommendations have been adopted for almost all of the features on the OSPAR List. All OSPAR Recommendations for OSPAR listed features include actions to be implemented by Contracting Parties nationally and other actions to be implemented collectively.

Overall, the 2019 implementation reporting indicates there is a good level of engagement to implement the national actions within the Recommendations, in particular within the areas where the species and habitats are considered to be under threat and/or in decline. The level of engagement in collective actions is clearly at a lower level with some of the more complex actions not having been progressed and implemented.

This overview assessment provides information on the implementation of the Recommendations and the means to interpret implementation, with respect to where the species and/or habitats are of particular concern within the OSPAR Maritime Area. It considers similarities, differences, good examples, and barriers in the implementation of the national actions, and presents an analysis of progress against the collective actions. The implementation reporting templates and procedures were significantly more developed in the 2019 implementation reporting round compared to reporting in 2016 and 2013, however further improvements can be made. The report includes observations and recommendations for improving the reporting against the suite of Recommendations in advance of the next reporting round in 2025. Lessons learned from conducting this overview assessment will also inform OSPAR's ongoing work on developing an approach for evaluating effectiveness of OSPAR measures.

The information contained in the report will inform work implemented under the OSPAR North-East Atlantic Environment Strategy 2030 (NEAES 2030). Notably this overview assessment can be seen as a baseline for work under operational objective *'S5.05: By 2025 OSPAR will have implemented all agreed measures to enable the recovery of OSPAR Listed threatened and/or declining species and habitats and will take additional measures as needed'*. This overview assessment clearly shows that many national- and collective actions in the currently agreed measures have not yet been fully implemented, and therefore helps to identify priorities for work for Contracting Parties ahead of the next implementation reporting round due by 31 December 2025.

Conclusions of this overview assessment of 2019 implementation reporting of the Recommendations related to the OSPAR List will guide the further work of the Biodiversity Committee (BDC) and its Intersessional

Récapitulatif

La Liste OSPAR des espèces et habitats menacés et/ou en déclin ([Accord OSPAR 2008-6](#), [la Liste OSPAR](#)) a été développée pour répondre aux exigences de l'Annexe V à la Convention OSPAR '*sur la protection et la conservation des écosystèmes et de la diversité biologique de la zone maritime*', selon laquelle les Parties contractantes '*prennent les mesures nécessaires afin de protéger et de conserver les écosystèmes et la diversité biologique de la zone maritime*' et '*coopèrent en vue de l'adoption de programmes et mesures de nature à régir les activités humaines déterminées en appliquant les critères visés en appendice 3*' ([Article 2 de l'Annexe V à la Convention OSPAR](#)). La Liste OSPAR est basée sur les nominations des Parties contractantes et observateurs à la Commission des espèces et des habitats qu'ils considèrent comme particulièrement préoccupants afin de fixer les priorités pour son travail ultérieur sur la conservation et la protection de la biodiversité marine.

La présente synthèse d'évaluation a été effectuée conformément aux exigences de rapports réguliers par les Parties contractantes en vertu de l'article 22 de la Convention OSPAR et vise à fournir des informations sur la conformité et, dans la mesure du possible, des informations sur l'efficacité des Recommandations OSPAR pour la protection des espèces et habitats.

Cette évaluation contribue au Bilan de santé 2023. En particulier, elle étaye les chapitres concernant les réponses et les mesures qui figurent dans les évaluations thématiques de la biodiversité.

Au 2019, la Liste OSPAR comprenait 42 espèces et 16 habitats et des Recommandations OSPAR ont été adoptée pour la quasi-totalité des caractéristiques figurant sur la Liste. Toutes ces Recommandations comprennent des actions à mettre en œuvre par les Parties contractantes au niveau national et d'autres actions à mettre en œuvre par les Parties contractantes collectivement.

Dans l'ensemble, le rapport de mise en œuvre 2019 indique qu'il existe un bon niveau d'engagement pour mettre en œuvre les actions nationales dans le cadre des Recommandations, en particulier dans les domaines où les espèces et les habitats sont considérés comme menacés et/ou en déclin. Le niveau d'engagement pour les actions collectives est clairement inférieur, certaines des actions les plus complexes n'ayant pas progressé et n'ayant pas été mises en œuvre.

La présente synthèse d'évaluation fournit des informations sur la mise en œuvre des Recommandations et sur les moyens d'interpréter cette mise en œuvre, par rapport aux zones où les espèces et/ou les habitats sont particulièrement préoccupants dans la zone maritime OSPAR. Elle examine les similitudes, les différences, les bons exemples et les obstacles dans la mise en œuvre des actions nationales, et présente une analyse des progrès réalisés par rapport aux actions collectives. Les formulaires et les procédures de notification de la mise en œuvre ont été nettement plus développés dans le cycle de notification de la mise en œuvre 2019 par rapport aux cycles de 2016 et 2013, mais des améliorations supplémentaires peuvent être apportées. Ce rapport comprend des observations et des recommandations pour améliorer la notification pour l'ensemble des Recommandations avant le prochain cycle de notification en 2025. Les leçons tirées de la réalisation de cette synthèse d'évaluation serviront également à informer les travaux en cours d'OSPAR sur le développement d'une approche pour évaluer l'efficacité des mesures OSPAR.

Les informations dans la présente évaluation étayeront les travaux effectués dans le cadre de la [Stratégie pour le milieu marin de l'Atlantique du Nord-Est 2030 \(NEAES 2030\)](#), et notamment serviront de base pour

les travaux dans le cadre de l'objectif opérationnel S5.05 : *'D'ici à 2025, OSPAR aura mis en œuvre toutes les mesures agréées pour permettre le rétablissement des espèces et habitats menacés et/ou en déclin figurant sur la Liste OSPAR et prendra des mesures supplémentaires si nécessaire'*. Cette évaluation montre clairement que de nombreuses actions nationales et collectives dans les mesures actuellement convenues n'ont pas encore été pleinement mises en œuvre, et aide donc à identifier les priorités de travail pour les Parties contractantes avant le prochain cycle de notification de la mise en œuvre prévu pour le 31 décembre 2025.

Les conclusions de cette évaluation de la mise en œuvre de 2019 des Recommandations relatives aux espèces et habitats figurant sur la Liste OSPAR orienteront les travaux du Comité sur la biodiversité (BDC) et son groupe de travail intersessionnel par correspondance sur le suivi de la mise en œuvre de mesures pour la protection et la conservation d'espèces et d'habitats (ICG-POSH).

1. Introduction

The work of the OSPAR Commission under the OSPAR Convention Annex V 'On the Protection and Conservation of the Ecosystems and Biological Diversity of the Maritime Area' states that Contracting Parties to the OSPAR Convention shall 'take the necessary measures to protect and conserve the ecosystems and the biological diversity of the Maritime Area... and cooperate in adopting programmes and measures for those purposes for the control of the human activities...' (OSPAR Convention Annex V Article 2). The OSPAR North-East Atlantic Environment Strategy (NEAES) 2030 sets out that the OSPAR Commission will assess which species and habitats need to be protected to inform the prioritisation of this work.

The OSPAR List of Threatened and/or Declining Species and Habitats (OSPAR Agreement 2008-06, the OSPAR List) has been developed to fulfil this commitment. The OSPAR List is based upon nominations by Contracting Parties and Observers to the Commission of species and habitats that they consider to be priorities for protection. The purpose of the list is to guide the OSPAR Commission in setting priorities for its further work on the conservation and protection of marine biodiversity.

OSPAR Recommendations have been adopted for almost all of the species and habitats on the OSPAR List. These Recommendations define measures that require collective and/or national actions to further the specific protection and conservation of these species and habitats and to reduce the main threats from human activities and pressures.

This report is an overview assessment of implementation reporting on these Recommendations by Contracting Parties as reported in 2013, 2016 and 2019.

One of the Operational Objectives of the NEAES 2030 is that by 2025 OSPAR will have *"implemented all agreed measures to enable the recovery of OSPAR Listed threatened and/or declining species and habitats and will take additional measures as needed"*. This overview assessment provides a state of play as of 2019 and provides insight as to how implementation and reporting could be improved to move towards this ambitious objective.

2. Requirement to report on implementation

2.1 General reporting requirements

Under Article 22 of the OSPAR Convention, Contracting Parties shall *"report to the Commission at regular intervals on the national measures (legal, regulatory, or other) taken by them to implement the provisions of the Decisions and Recommendations adopted under the OSPAR Convention and on the effectiveness of these national measures."* This implementation reporting forms the basis for OSPAR to assess compliance with the Convention and ultimately to evaluate the effectiveness of programmes and measures under it.

Detailed provisions on implementation reporting and related assessments by OSPAR are laid down in OSPAR's Standard Implementation Reporting and Assessment Procedure (Agreement 2003-23, update 2005). The reporting requirements are included in Annex 1 in all OSPAR Recommendations.

Unless stated otherwise in the OSPAR instrument concerned, an implementation report should be submitted to the appropriate OSPAR subsidiary body in the intersessional period four years after the adoption of a measure and every four years thereafter until fully implemented. Implementation reporting does not apply to Contracting Parties with reservations (or non- acceptance) on an OSPAR measure unless and until the reservation (or non-acceptance) is lifted.

2.2 Implementation reporting requirements for OSPAR Recommendations for OSPAR Listed threatened and/or declining species and habitats

The OSPAR List included 42 species and 16 habitats in 2019. OSPAR Recommendations have been adopted for almost all the features on the OSPAR List (Table 1). The features on the OSPAR List for which Recommendations had not yet been adopted by 2019 were Azorean barnacle and Houting. OSPAR has agreed not to develop a Recommendation for Bluefin tuna and that there is no need to develop a Recommendation for Dog whelk.

Depending on the year in which the measures entered into force, OSPAR Contracting Parties have been required to provide implementation reports in 2013 or 2016 and for all Recommendations in 2019 (Table 1).

Table 1: Implementation overview of reporting on Recommendations for species and habitats on the OSPAR List

Rec Number	Feature name	Implementation report due		
		2013	2016	2019
2010/6	Angel Shark, Basking shark, Common Skate, White Skate	Yes		yes
2010/7	Orange roughy	Yes		yes
2010/8	<i>Lophelia pertusa</i> reefs	Yes		yes
2010/9	Coral gardens	Yes		yes
2010/10	Deep-sea sponge aggregations	Yes		yes
2010/11	Sea-pen and burrowing megafauna communities	Yes		yes
2011/1	Lesser black backed gull	Yes		yes
2011/2	Ivory gull	Yes		yes
2011/3	Little shearwater	Yes		yes
2011/4	Balearic shearwater	Yes		yes
2011/5	Black-legged kittiwake	yes		yes
2011/6	Roseate tern	yes		yes
2011/7	Thick-billed murre	yes		yes
2012/2	Short-snouted seahorse	yes		yes
2012/3	Long-snouted seahorse	yes		yes
2012/4	Zostera beds	yes		yes
2013/1	Littoral chalk communities		yes	yes
2013/2	<i>Sabellaria spinulosa</i> reefs		yes	yes
2013/3	<i>Modiolus modiolus</i> beds		yes	yes
2013/4	Flat Oyster, <i>Ostrea edulis</i> Beds		yes	yes
2013/5	Ocean quahog		yes	yes
2013/6	Leatherback turtle		yes	yes
2013/7	Loggerhead turtle		yes	yes
2013/8	Bowhead whale		yes	yes
2013/9	Blue whale		yes	yes
2013/10	Northern right whale		yes	yes
2013/11	Harbour porpoise		yes	yes
2013/12	Steller's eider		yes	yes

Rec Number	Feature name	Implementation report due		
		2013	2016	2019
2014/1	European sturgeon		yes	yes
2014/2	Spurdog		yes	yes
2014/3	Gulper shark		yes	yes
2014/4	Leafscale gulper shark		yes	yes
2014/5	Portuguese dogfish		yes	yes
2014/6	Porbeagle shark		yes	yes
2014/7	Spotted Ray		yes	yes
2014/8	Thornback ray		yes	yes
2014/9	Seamounts		yes	yes
2014/10	Carbonate mounds		yes	yes
2014/11	Oceanic ridges with hydrothermal vents and fields		yes	yes
2014/12	Cymodocea meadows		yes	yes
2014/13	Maerl beds		yes	yes
2014/14	Cod		yes	yes
2014/15	European eel		yes	yes
2014/16	Iberian guillemot		yes	yes
2015/1	Intertidal <i>Mytilus edulis</i> beds on mixed and sandy sediments		yes	yes
2015/2	Azorean limpet		yes	yes
2015/3	Sea lamprey		yes	yes
2015/4	Allis shad		yes	yes
2016/2	Intertidal mudflats			yes
2016/3	Atlantic salmon			yes

All OSPAR Recommendations for OSPAR Listed species and habitats include actions to be implemented by Contracting Parties nationally and other actions to be implemented collectively. The Contracting Parties are responsible for reporting nationally on the actions to be implemented nationally. Implementation reporting was agreed to be completed in 2019 for the collective actions.

3. Overview of compliance

All coastal Contracting Parties were invited to submit implementation reports on OSPAR Recommendations for listed habitats and species in 2013, 2016, and 2019 (**Table 1**). No reports were required from the EU, Finland, Luxembourg, or Switzerland as the Recommendations do not apply to Contracting Parties that do not have national waters in the OSPAR Maritime Area.

Table 2. Summary of overall reporting performance of Contracting Parties

Contracting Party	Reported in 2013?	Reported in 2016?	Reported in 2019?
Belgium	Yes	Yes	Yes
The Kingdom of Denmark	Yes	Yes	Yes
The Kingdom of Denmark on behalf of Greenland	No	No	Yes
France	Yes	Yes	Yes
Germany	Yes	Yes	Yes
Iceland	Yes	No	Yes
Ireland	No	No	Yes
The Netherlands	Yes	Yes	Yes
Norway	Yes	Yes	Yes
Portugal	No	No	No
Spain	Yes	Yes	Yes
Sweden	Yes	Yes	Yes
The United Kingdom	Yes	Yes	Yes

Appendix 1 provides information on the means of implementation by Contracting Party and Region

Appendix 2 provides details on the collective implementation reporting on collective actions.

Appendix 3 provides an analysis of national implementation reporting performance against each individual Recommendation. The appendix provides information on whether reporting has taken place for each Recommendation, analysis of implementation methods, the engagement index, and action highlights. [This appendix is not currently available but will be published as soon as possible]

4. Overview of implementation reporting

4.1 Implementation of national actions

This section provides an overview of national level implementation. Section 4.1.1 reviews where implementation has been reported for the various features and by which means. This is helpful in understanding whether there are efforts for implementation of Recommendations at least by those Contracting Parties where the species or habitats are of greatest concern. This chapter then looks at how reporting Contracting Parties have implemented the various actions within the Recommendations (section 4.1.2-5) and attempts to provide an overview for each of the listed species and habitats groups. For each it provides some observations regarding: common and different approaches to implementation as well as highlighting examples or interesting means of implementation (section 4.1.2); and challenges that have been identified in implementation (section 4.1.3).

4.1.1 Reporting on implementation and interpreting means of implementation (see Appendix 1)

The requirements for implementation reporting are provided in Annex 1 to all of the species and habitats Recommendations. The reporting template requests the Contracting Party to indicate if the measure is applicable and if so, provide information on the means of implementation, specifically whether this is by legislative action, administrative action or negotiated agreement.

Overall, the 2019 implementation reporting indicates there is a good level of engagement to implement the national actions within the Recommendations, in particular, within the areas where the species and habitats are considered to be under threat and/or in decline. The level of engagement in collective actions is clearly at a lower level with some of the more complex actions not having been progressed and implemented.

This overview of reporting has been broken down according to species and habitat groupings. This section should be read with Appendix 1. The Appendix provides a series of tables, spatial information reported on the geographic occurrence of the features across the OSPAR Maritime Area, where they are considered to be under threat and/or in decline, which Contracting Parties have reported on the implementation of the Recommendations, and by which means these measures have been implemented. The information concerning the geographic distribution of the feature by country is derived from the relevant published background documents.

With the current structure of reporting, it is not easy to determine how Contracting Parties are interpreting the means of implementation, whether it is consistently interpreted in how the actions are classified, how this response connects to the response against individual actions, or whether they are actions taken at a national level or through other forms of regional coordination. Contracting Parties have different national systems for implementing protective actions and different organisations and institutes have different legal mandates between countries. This can result in different Contracting Parties having interpreted and applied the three categories for means on implementation (legislative action, administrative action or negotiated agreement) differently.

When an action can be considered completed and having been fully implemented will require attention in future reporting rounds. The current reporting structure does not request any information on whether the action has been fully completed or whether the implementation work is ongoing. This also adds to the difficulty in interpreting the reported information as it is not clear whether all Contracting Parties that had reported implementing an action have done so fully or whether they have only initiated work or whether this

work is ongoing. To enable more detailed and informative analysis of the reported information, future reporting rounds could add specific questions on these aspects to the reporting template.

There are still some gaps and uncertainty in reporting, such as where the feature is perhaps particularly rare and/or has geographically restricted distributions (e.g. the bowhead whale) or where the feature is not easily accessible for monitoring or management actions (e.g. hydrothermal vents on oceanic ridges).

Invertebrates

The information relating to invertebrates is provided in Appendix 1, table 1. Reporting was due for Recommendations concerning three of the five invertebrate species. One of these, the Azorean limpet, has a very limited geographic distribution and there was no evidence of implementation reported for this Recommendation. The other two invertebrate species for which reporting was due have a wider geographical distribution across the OSPAR Regions. For the flat oyster there appears to be good implementation of the Recommendation with clear response from all but 3 relevant Contracting Parties. In Region II where flat oyster is listed as under threat or in decline, all Contracting Parties provided reported implementation. On the other hand, for the ocean quahog, implementation was only reported by three Contracting Parties. This could be attributed to the low population densities and lack of monitoring of ocean quahog as noted later in the report under considerations of barriers.

In terms of the means of implementation of the actions, administrative actions (44%) were identified as the most common, with the same number of Contracting Parties indicating they had taken legislative or negotiated actions (28% respectively).

Birds

When assessing the implementation of Recommendations for birds on the OSPAR List, it is worth noting where these birds occur and when during their breeding season (see Appendix 1, Table 2). Most of the birds on the OSPAR List have limited distributions: for five species, implementation and reporting is relevant to only one or two Contracting Parties. This means that implementation and reporting by these Contracting Parties has much greater influence on the status of these species, compared to those that are more widespread and responsibility is spread across more Contracting Parties. It also raises the question as to what collective actions are required and relevant for these species with limited distribution.

For birds it is useful to distinguish between breeding areas and non-breeding or wintering areas, because different pressures may be impacting the birds at different stages of their annual cycle. Four of the birds on the OSPAR List occur in the OSPAR Maritime Area throughout the year but are present in some Contracting Parties' waters only at certain times of year. It would be useful if, in future reporting, Contracting Parties distinguish which measures were being directed to breeding populations on land at colonies, and which were being targeted at non-breeding populations offshore.

Another point to note regarding the bird species on the OSPAR List is that some species are present in some Contracting Parties waters but only outside the OSPAR Maritime Area. This applies to the *fuscus* sub-species of lesser black-backed gull which occurs in Sweden and Finland, but only along their Baltic coasts. Neither Sweden nor Finland reported. Little shearwaters (see name change below) breed on the Azores (Portugal) within the OSPAR Maritime Area, but also breed on the Canary Islands (Spain) and Madeira archipelago (Portugal) which are outside of the OSPAR Maritime Area. Portugal did not provide an implementation report, but Spain did report on actions taken at colonies on the Canaries. Spain also reported on measures taken at the only colonies of Balearic shearwater which are in Spanish waters in the Mediterranean. It is worth

acknowledging the distribution of these species and providing guidance on whether Contracting Parties should be reporting on actions taken outside the OSPAR Maritime Area.

For the most part, evidence of implementation was provided by Contracting Parties where these species occur, however there are still some gaps (see table 1). The means of implementation reported for the bird species were legislative (in 45% of responses) and administrative actions (40%) with actions by negotiated agreement only representing 15% of reported responses.

Fish

Fish were divided into bony fish and elasmobranchs (Appendix 1 table 3a and 3b respectively).

With regards to bony fish on the OSPAR List, nine of the eleven species were reported on in 2019. There are some geographically distinct species, but others that are spread across the OSPAR Maritime Area where collective action will be highly relevant. For the most part, the reporting by Contracting Parties aligns with where the species occur and are considered to be under threat. Contracting Parties report implementation via a range of means, frequently a combination of legislative, administrative, and negotiated actions.

There are fish species that are listed that are also targeted commercially.

For the elasmobranchs, there appears to be good alignment between where the species are reported as occurring and reporting against the relevant Recommendations. There are some cases where the Contracting Parties have reported that the Recommendation does not apply, but the background documents indicate the species occurs or has occurred in within the waters of that Contracting Parties. Overall engagement in the reporting of implementation appears high with some notable gaps.

Once again, the reported means of implementation includes a variety of legislative, administrative and negotiated actions.

Reptiles

Information related to the two turtle species is provided as Appendix 1 table 4. Reporting indicates good engagement for the implementation of these Recommendations by the Contracting Parties for which the species are relevant (predominantly in Regions III, IV and V). In most cases, the Contracting Parties who are implementing the Recommendation indicated this is being done through a combination of legislative, administrative and negotiated actions. With three Contracting Parties using all three means, one Contracting Party using legislative and administrative means and one using only legislative action. There was one relevant Contracting Party that did not report.

Mammals

Information related to the four marine mammal species is provided as Appendix 1 table 5. There is more of a mixed picture in terms of implementation reporting and the Harbour porpoise is considered separately from the three whale species.

The Bowhead whale occurs only in Region I. No Contracting Parties provided information on implementation.

The Blue Whale and Northern Right Whale both have broad geographic distributions but are very rare. Interestingly the information collated on the occurrence from the background documents seems to contradict the implementation responses. Only a very limited number of countries reported implementation through legislative and administrative action (Four Contracting Parties reported implementing the Blue whale Recommendation and two for the Northern Right Whale)

The Harbour porpoise has a much wider geographic distribution, although under threat in Region II and III. Implementation of the Recommendation was reported by nine Contracting Parties, most indicating through a combination of legislative, administrative, and negotiated actions and two through legislative and administrative actions.

Habitats

The habitats were divided into coastal /shelf and deep-sea habitats (Appendix 1 table 6a and 6b respectively).

Nine habitat types were classified as shelf and coastal habitats, and of those the Recommendations for seven habitats were reported against in 2019. Two have very limited geographic range and are relevant to only two Contracting Parties. For the remaining five of the more broadly distributed coastal and shelf habitats, reporting indicates implementation through legislative, administrative and negotiated actions.

Implementation of the Recommendations for the deep-sea habitats appears to be a little more patchy, with more Contracting Parties identified as not being required to report, or reporting the Recommendation as not applicable. Habitats such as Carbonate mounds, Oceanic ridges with Hydrothermal vents and seamounts are occurring only in the most remote regions of the OSPAR Maritime Area. Monitoring and distribution data for the occurrence of such deep-sea habitats is less available and could explain the lower engagement for reporting.

4.1.2 Common and different approaches of implementation with highlights /examples

Invertebrates

Reporting against the actions identified in the Recommendation was effectively made for two of the five species (Ocean quahog and Flat oyster) and it is therefore difficult to draw generalisations across invertebrate species. It may also be worth considering whether it would be helpful to create links in reporting from a habitat and species perspective, e.g. for the flat oyster and oyster beds.

a. Common approaches to implementation

There was a common approach to have established national legislation to protect the flat oyster, noting that the species is not listed in the EU Habitat Directive ([92 /43 /EEC](#)).

For the Ocean quahog, five Contracting Parties stated that the Ocean Quahog was offered some form of protection through Marine Protected Areas (MPA) in their waters and four Contracting Parties reported MPAs established or proposed for the Flat oyster.

The development of fisheries measures to minimise adverse impacts on Flat oysters was reported by five Contracting Parties

There were commonalities also identified in the delivery of actions for raising awareness, with five Contracting Parties reporting campaigns for the Flat oyster and Flat oyster reefs with examples given, including to increase awareness in sectors that impact this feature and the need to take measures against the invasive Pacific oyster.

b. Differing approaches to implementation

One Contracting Party reported that as the Ocean quahog is sparsely distributed within its waters, there was a tendency to focus on implementation of habitat protection measures, rather than species protection. Another Contracting Party reported that the Ocean quahog was not threatened in their waters and therefore did not consider any further action to be necessary.

For the management of pressures affecting the flat oyster, one Contracting Party has taken measures through management of water quality under the European Union's Marine Strategy Framework Directive (2008/56/EC, MSFD) as an approach to protect this species. There appear to be differences in how the Flat oyster is monitored ranging from annual surveys to ad hoc studies and via localised Environmental Impact Assessments (EIA).

c. Highlights or interesting means for implementation

More than one Contracting Party noted that the Flat oyster is not included within the EU Habitats Directive, but as a long lived, structure forming species with low reproduction it is in need of protection and so the OSPAR Recommendation was considered to add value for this species.

One Contracting Party identified that there is an action plan in place, but due to the improved status of Flat oyster in their waters since 2015, there was a reduced priority to follow up on this.

Three Contracting Parties reported progress in developing projects to explore and test restoration for the Flat oyster and Oyster beds.

The European Native Oyster Restoration Alliance, established in 2017 to share knowledge on the science, restoration and recovery of the species was highlighted as playing a positive role in the efforts to protect the flat oyster.

Birds

It is apparent that some changes to the implementation reporting guidance for seabirds would help to improve and simplify future reporting. It also proved difficult to objectively assess some of actions under the bird Recommendations. It was sometimes difficult to assess if an action had been implemented fully or partially or if it had been effective. Given that all the bird Recommendations contain very similar if not identical actions, the next round of reporting may benefit from some generic guidance to Contracting Parties to make future reporting for birds simpler and more consistent.

Of the 9 listed species, implementation reports were submitted by 4 Contracting Parties for only three species (Roseate tern, Black legged kittiwake and Balearic shearwater), making it difficult to identify commonalities and differences in approach.

a. Common and differentiated approaches to implementation

Action: consider the introduction of national legislation to protect the species. For most species this was straightforward to assess, since most Contracting Parties have legislation that bans the deliberate killing or taking of chicks and eggs. However, hunting of Thick-billed murre and Black-legged kittiwake is permitted by some Contracting Parties, but it is regulated through legislation in all cases. It is unclear if statutory regulation of hunting should represent full or partial implementation of this action. It may be clarified if Contracting Parties provide evidence on the effect of the legislation on the impact of hunting on the species.

Action: take relevant conservation measures in key areas where significant numbers of the species occur. Reports for this action tend to duplicate what was being implemented under other actions. Some guidance for Contracting Parties would be useful that requested only additional measures be reported under this action, that are not covered under other actions.

Action: consider whether any sites within its jurisdiction justify selection as Marine Protected Areas for the protection of populations of and critical habitats for the species. Seabirds also require protection on land when they are breeding, and many Contracting Parties have designated seabird colonies as protected areas

for OSPAR Listed species. Therefore, there are 3 types of protected area: 1. Terrestrial (e.g. breeding colony); 2. Terrestrial with a marine component (e.g. to protect waters adjacent to a protected colony) 3. Marine (e.g. to protect inshore or offshore feeding areas). There was inconsistency between Contracting Parties in the reporting of these three types of protected area under this **action**: some Contracting Parties reported on only wholly marine sites while others reported all sites including terrestrial and marine. Guidance could clarify which types of site should be reported on under this **action**: e.g. those with a marine component (2 & 3); with terrestrial areas reported under the action on *relevant conservation measures in key areas* (see para 5).

Reporting on protected areas may be made simpler for Contracting Parties and enable more consistent assessment if they were asked to report on the extent of the protection (e.g. number of sites, % population covered by protected areas) and the nature of the protection (e.g. use OSPARMPA criteria to describe development and implementation of site management plans etc.). For the Black legged kittiwake, it was difficult to tell whether actions on MPA or awareness raising have had any effect on the key issue – which is **loss of prey**.

Action: *promote monitoring and assessment programmes for the species and contribute to the development of a data collation strategy.* The implementation of this action was difficult to assess without specific attributes against which current programmes could be assessed. There would be merit in developing standards for monitoring and assessment under collective action #5 (see Table 3) against which future reporting could be made and assessed.

Actions to address bycatch were taken by several Contracting Parties across the bird species, from improving bycatch observer schemes to mapping incidence to inform management (this was at the national level, as a contribution to the EU Plan of Action (PoA)) for seabird bycatch, and also contributing to the International Council for the Exploration of the Sea (ICES) working group on bycatch. One Contracting Party reported it planned to elaborate a National Action Plan for reducing seabird bycatch in fisheries.

Fish

The OSPAR Convention sets out in Annex V §4.1 the limitations regarding programmes and measures that can be adopted with respect to questions relating to the management of fisheries but encourages cooperation with the appropriate competent authorities. The reports concerning all fish Recommendations refer to actions being undertaken through relevant competent authorities that can and do contribute to the implementation of the Recommendation. Within the EU, fisheries actions are implemented through the EU Common Fisheries Policy ([Regulation \(EU\) No 1380/2013](#)), and environmental objectives via the EU MSFD. Outside of national jurisdiction reports cited implementation of NEAFC regulations.

There was very weak evidence of national measures being taken on highly mobile species, e.g. elasmobranchs partly because of reliance on fisheries management but also because of practical difficulties in targeting measures. In these cases, the emphasis could be placed more on collective actions to engage with the North-East Atlantic Fisheries Commission (NEAFC), the EU and other relevant competent fisheries management bodies and, for areas outside of national jurisdiction, build on cooperation through the collective arrangement ([OSPAR Agreement 2014-09](#)).

Bony fish

- a. Common and differentiated approaches to implementation

There was stronger evidence of national measures being adopted for diadromous species, in particular Atlantic salmon, noting synergies with the EU Water Framework Directive and tangible engineering solutions. The management measures identified for diadromous fish included a focus on water quality, control of hazardous substances, and engineering solutions to remove barriers between marine and freshwater environments and to facilitate safe passage where barriers cannot be removed. There are a number of examples provided, with some of the measures implemented for eels included in the highlight section below. With regard to the introduction of national legislation, nine Contracting Parties reported national legislation was in place for the protection and conservation of the Atlantic salmon, along with detailed management actions to address the key threats through its lifecycle, coordination in research and monitoring. Seven Contracting Parties reported using legislation to protect Sea lamprey; with two Contracting Parties using legislation to protect the habitat of Sea lamprey. Seven Contracting Parties use legislation to protect Allis shad with two Contracting Parties deciding to focus on protecting Allis shad habitat rather than the species, by seeking to improve water quality and reduce eutrophication. Four Contracting Parties use national legislation to protect the European sturgeon. One contracting party stated that keeping non-native sturgeon is regulated and requires their removal to prevent non-native populations being established in the wild. For those Contracting Parties that are also EU Member States, legislation within the EU MSFD, EU Habitats Directive, EU WFD was identified as relevant for these species. Restoration/recovery/re-stocking or re-introduction actions were also reported by a number of Contracting Parties concerning diadromous species including the European eel, Allis shad and Atlantic salmon, including measures to prevent the degradation of spawning habitats and the restoration of migration routes.

Eight Contracting Parties, who are also EU Member States, deploy legislation to protect Cod stocks including the use of Total Allowable Catch (TAC) and gear selectivity measures within the EU CFP and noted that the environmental objectives come under the framework of the EU MSFD. Another Contracting Party that is a not an EU Member State reported the use of legislation to protect Cod for the first three months of the year.

Targeting of Orange roughy is not permitted under the EU CFP, Contracting Parties identified regulation under NEAFC in areas beyond national jurisdiction. One Contracting Party prohibits the fishing for Orange roughy under the EU CFP while another Contracting Party protects the species using decisions from NEAFC.

Three of the reporting Contracting Parties use national legislation to protect Long and Short snouted seahorses.

As for other mobile species MPAs are a tool that forms part of a wider suite of management measures. MPAs offer the potential for the reduction or removal of activities and pressures in these critical locations that may have implications for the conservation status of fish species, especially with focus on vulnerable species with clumped or discrete population distribution. Examples reported within this species grouping included designation of MPAs for Seahorses, Lamprey and Cod, although one Contracting Party suggests that offshore MPAs have not proven to be an effective means to rebuild Cod stocks, another stated that Cod stocks do benefit in general from MPAs.

Reporting indicated that routines for monitoring were generally well established for this group of species. Monitoring of commercial species such as Cod was noted as forming a part of the regular fisheries management routines and one Contracting Party reported collaborating on Orange roughy assessment through ICES and other scientific groups. NEAFC have developed a methodology and standard for surveying deepwater habitats relevant to the Orange roughy.

An interesting variation was the Sea lamprey, for which monitoring was undertaken in freshwater environments. One report remarked this was due to the scattered distribution in their marine waters restricting detection, another report noted that the behaviour of Sea lamprey to detach from the host during capture made it difficult to monitor using fishery survey techniques.

Engagement and awareness raising activities were reported for a number of species, including stakeholder meetings, awareness raising campaigns regarding the species identification and stock status, sharing best fishing practice and producing guides e.g.:

- Allis shad Identification and handling guide for fishers
- Identification guidelines to promote release of Sea lamprey from fishing gear.

One Contracting Party shared a website for seahorse projects and provided information on researchers to help share information and connect stakeholders. <http://proyectohippocampus.iim.csic.es/proyectos.html>

b. Highlights or interesting means for implementation

One Contracting Party reported taking national measures on river continuity for rivers relevant to eels and other migratory species.

For Allis shad, there was good evidence of action being taken by key countries for this species, as well as some evidence for restoration/reintroduction activities in countries where the populations have become marginal.

Seven Contracting Parties have designated MPAs with Sea lamprey as a qualifying feature, coherence with protection and management of estuaries and rivers was noted as key. One Contracting Party reflected that the inland fisheries management authority is running a Sea lamprey-reporting project that may drive future site-selection. Six Contracting Parties have Allis shad as a designated feature at multiple MPAs, taking in areas important to Allis shad for foraging, breeding and migration routes.

Nine Contracting Parties have implemented national European eel management plans including measures like mitigation of impact of hydropower and trap and transport programs. One Contracting Party insists that when pumping stations are replaced, fish friendly pumps are installed. Another Contracting Party has a prohibition on fishing for European eel in September, October and November anyone breaking this order is liable for fines and confiscation of fishing gear, vessels and vehicles. One Contracting Party uses deflection screens in front of turbines at hydropower plants combined with bypass facilities.

Elasmobranch

a. Common and differentiated approaches to implementation

There was very weak evidence of national measures being taken on elasmobranchs partly because of reliance on fisheries management but also because of practical difficulties in targeting measures. In these cases, the emphasis could be placed more on collective actions to engage with NEAFC, the EU and other relevant competent fisheries management bodies and for areas outside of national jurisdiction build on cooperation through the collective arrangement.

Contracting Parties that are also EU Member States refer to following ICES and the EU's Scientific, Technical

and Economic Committee for Fisheries (STECF) advice for informing management. For sharks, EU Member States refer to the EU bans on landing and retaining these species. One Contracting Party that is not an EU Member State, specified that direct fishing bans are in place for the Leafscale gulper shark, Porbeagle and Spurdog and two Contracting Parties reported having implemented legislation to protect Portuguese dogfish. Seven Contracting Parties prohibit direct fishing for Porbeagle shark with bycatch recorded in logbooks. Eight Contracting Parties reported that they have no targeted commercial fisheries for Spurdog. Five Contracting Parties reported no need for further legislation to protect Spurdog as fishing for the species is prohibited. Two Contracting Parties reported using the EU MSFD as a framework for restoring populations of Gulper sharks.

There was some evidence of national measures for skate species, (e.g. Ireland, UK) in terms of MPAs and information. The main issue is fisheries and by-catch for skate species. Four Contracting Parties said that they take account of ICES and STECF advice when developing fishery management measures for Spotted rays.

There were different views reported by Contracting Parties with regards to the implementation of MPAs for the protection and conservation of shark species. In the main, Contracting Parties reported that these are species that are highly mobile, or occur in very low numbers or where it had not been possible to identify critical habitat and therefore not considered suitable for protection through MPA designation. One Contracting Party was undergoing consultation for a proposed MPA for protection of Basking shark, but the outcome was not reported. One Contracting Party has however reported MPAs in its waters that are relevant to some shark species including the Portuguese dogfish, Leafscale gulper shark and Gulper shark.

A number of Contracting Parties reported potential for MPAs as part of the protection and conservation of several skates and rays, with examples of designated areas for Spotted rays and Thornback rays. No sites have been selected for the Common skate.

The reporting indicated a high level of activity in terms of research and monitoring to improve knowledge on the distribution, life histories and behaviours of listed elasmobranch species. This ranges for commissioning new research to improvement of regular data collections. Several Contracting Parties indicate that they are working to improve the data that they provide to ICES to improve species assessments.

There were a few reports that Contracting Parties are using population size, condition and distribution for sharks and rays as an indicator for EU MSFD reporting. Data collection for some shark species appears to use a more varied approach, drawing on research projects, combining academic input and citizen science.

There are some good examples of awareness raising actions that were reported, including the development of identification guides and information campaigns. Several of these efforts were aimed at commercial fishers and on-board observers to help identify protected shark, skate and ray species and improve reporting of bycatch. Some examples are provided in the highlights section below. One Contracting Party reported increasing awareness across all levels of government, as well as involving academic experts on sharks in their discussions and another has a collaboration between fishermen and science aimed at raising awareness and implementing best practice.

b. Highlights or interesting means for implementation

Examples of shark, skate and ray action plans:

- A shark, skate, and ray conservation plan for the UK has been adopted (<https://www.gov.uk/government/publications/shark-skate-and-ray-conservation-plan-progress-review-2013>).
- The Angel Shark Project: Wales (<https://angelsharknetwork.com/wales/>) is a multidisciplinary project which seeks to safeguard these sharks through fisher participation, heritage, citizen-science and produce a Wales Angel Shark Action Plan. Additional projects and guidance supporting these actions are in place in the UK as detailed in (Defra, 2013).<https://www.gov.uk/government/publications/shark-skate-and-ray-conservation-plan-progress-review-2013>.
- “Sharks and rays back in the North Sea” project as part of the Dutch Shark Action Plan.

Examples of guides reported as part of the implementation of increasing awareness

- A guide has been created for commercial fishermen in Danish waters to help them identify protected rays, sharks and fish species.
- An identification guide of sharks, rays and skates has been developed by the Swedish Species Information Centre, on commission by the Swedish Agency for Marine and Water Management. The primary aim of the guide is to help in identifying different species of sharks, rays and skates and thus improve reporting of e.g. incidental bycatches. The guide has been distributed to all commercial fishermen in the Swedish part of OSPAR Region II.
- HAROkIt (<http://www.vliz.be/nl/harokit>): Project developed tools to supports fishermen to correctly identify sharks and rays.
- Shark Trust identification guides for all shark species with the support of government bodies. Their webpages provide a range of information on shark species, including the angel shark (www.sharktrust.org/).

The Sea Deep project (www.seadeepni.org), brings together fishermen and scientists to address issues, raise awareness, and implement good practice.

Reptiles

In general there has been a high level of activity in the reporting Contracting Parties relating to the specific actions identified in the measures. The two listed turtle species occur predominantly in OSPAR Regions IV and V, with some observations in Region III, although this is recognised as the northern extreme of their range.

a. Common and differing approaches to implementation

All reporting Contracting Parties indicated that national legislation was in place to protect both the Loggerhead and Leatherback turtles. Two Contracting Parties noted that these species are covered by the EU MSFD, EU Habitats Directive Annex IV, Convention on the Conservation of European Wildlife and Natural Habitats ([Bern Convention](#)), however it was not clear whether the actions under these different measures were complementary or how they overlapped in delivering the outcome.

Monitoring actions are in place in all the reporting Contracting Parties, 2 Contracting Parties reported the inclusion of turtles in the monitoring by fisheries observers and three included mechanisms for recording incidence of stranded animals. One Contracting Party reported using regular aerial surveys to monitor the distribution and abundance of sea turtles.

Two Contracting Parties have MPAs designated in areas where turtles are observed, and where turtles were a designated feature for one of the Contracting Parties.

With regard to implementation of OSPAR Recommendations on reducing pollution from offshore drilling activities and reducing marine litter, all the reporting Contracting Parties indicated their participation in the Fishing For Litter initiative ([OSPAR Recommendation 2016/01](#)) and two Contracting Parties identified national legislation in place with regards to pollution control relating to offshore activities.

Awareness activities targeting relevant sectors and the public are being developed and implemented widely by reporting Contracting Parties. There were also a number of reports regarding activities to strengthening information exchange between researchers and authorities with examples of collaboration with other regional and international organisations that work in countries that support the main populations of turtles occurring in the OSPAR Maritime Area, including in those overseas territories of OSPAR Contracting Parties.

b. Highlights or interesting means for implementation

In Spain a National Strategy for the Conservation of the Loggerhead Turtle and Other Marine Turtles is due to be approved. This administrative document includes, among others, a diagnosis of the conservation status, main threats and pressures, actions taken so far, necessary measures to be adopted and effective ways of collaboration among different administrations involved.

France reported the development of technical good practice guidelines for improving the chances of survival for sea turtles if caught. These have been distributed to fishermen and there are plans for training sessions with professional fishermen.

One Contracting Party identified that it was at the limit of the turtle range although there are sightings and some strandings. In the case of strandings, once recovered the animals are transported to be released in warmer sub-tropical waters.

Examples of awareness materials and campaigns provided:

- UK Turtle Code: This includes informing the public of what to do if entangled turtles found and is advocated by the UK Statutory Nature Conservation Bodies (SNCB) and NGO partners <https://www.mcsuk.org/downloads/wildlife/turtlecode.pdf>
- Citizen science campaign in France: *Signalez vos observations en mer* – for reporting observations: <https://www.latranchesurmer.fr/actualites/signalez-vos-observations-en-mer/>

Mammals

The measures to be applied at the national scale are rather different for the three whale species and the harbour porpoise. For the whale species, due to their rarity, the emphasis has been placed on collective actions. However, there are some national activities that have been reported.

Reporting was submitted by all Contracting Parties where the Harbour porpoise is considered to be under threat or in decline as well as other countries where the species occurs, with a high level of activity at the national level to implement the various actions of this recommendation.

a. Common approaches to implementation

National level legislation has been implemented to protect whale species in three of the relevant Contracting Parties where these whales are under threat.

National legislation or actions have been implemented that provide protection to the Blue whale and the Northern right whale in three Contracting Parties, and by one Contracting Party for the Bowhead whale

(noting this species only occurs in Region I). Research, survey or observation activities were reported for the three whale species, although it was noted that these tend to be generic cetacean surveys – not species specific.

For the Harbour porpoise, five of the Contracting Parties reported adoption of national conservation plans, and seven have reported the designation of MPAs for the protection of this species.

Generally for marine mammal species, awareness activities targeting relevant sectors and the general public are being developed and implemented widely by reporting Contracting Parties.

b. Differing approaches to implementation

One Contracting Party reported that based on a scientific study, there were no suitable sites for the protection of the Harbour porpoise within their waters, and so no MPAs had been designated for this species.

Whilst all reporting Contracting Parties described monitoring activities as part of their implementation of the Recommendation for Harbour porpoise, there are differences in the approaches that have been taken, with some Contracting Parties identifying their participation in the Small Cetaceans in European Atlantic waters (SCANS) assessments, but also national monitoring and via Agreement on the Conservation of Small Cetaceans of the Baltic, North East Atlantic, Irish and North Seas (ASCOBANS). It would be interesting to better understand the compatibility and comparability of the different programmes to see if and how these can better contribute to the regional knowledge base.

c. Highlights or interesting means for implementation

One of the challenges with the large whale species is their rarity in the waters of some of the reporting Contracting Parties, however one of the Contracting Parties (Ireland) identified that despite this their work has highlighted important information regarding the frequency and timing of Blue whale occurrence in their Maritime Area, linked to the annual life cycle and also potential foraging habitats during the migration phase.

A number of other competent international organisations were identified as relevant to the successful protection of the harbour porpoise, including ASCOBANS, the Trilateral Cooperation on the Protection of the Wadden Sea, work undertaken through relevant ICES Working groups, which links to the collective actions.

Some examples of information campaigns/citizen science initiatives were shared in the reporting that could be interesting to other Contracting Parties:

- The UK Cetacean Strandings Investigation Programme and Scottish Marine Animals Stranding Scheme engage through the web, social media, mobile apps, publications and campaigns to improve reporting and recording of stranded animals around the UK.
- ‘Rude to Intrude’ campaign to reduce disturbance of whales and dolphins (<https://bit.ly/2YE9IMu>);
- www.marinemammals.be is the result of a long collaboration between the Royal Belgian Institute of Natural Sciences (RBINS) and the University of Liege on marine mammals. The website provides information and data on the species, sightings and strandings as well as guidance on what people should do if they encounter a stranded marine mammal.
- The Irish Whale and Dolphin Group runs extensive public information campaigns on small cetaceans in Irish waters, including on the Harbour porpoise.

Habitats

Coastal and Shelf habitats

There was a lot of valuable information communicated by Contracting Parties in their reporting against the Recommendations for coastal and shelf habitats. This may be because these habitats are more accessible, interact with more human activities and link to obligations within other legislative frameworks. The information presented aims to give a flavour of the responses provided and highlight notable examples or responses.

a. Common and differing approaches to implementation

Several of the reporting Contracting Parties noted that national legislation has been adopted for the protection of many listed coastal and shelf habitats. Contracting Parties that are also EU Member States indicated that there are overlaps with EU legislation, including within the framework of the MSFD and through implementation of the Habitats Directive. In some cases the WFD was also reported as relevant (e.g. for *Zostera* beds and intertidal *Mytilus edulis* beds). Many Contracting Parties have included depth distribution and/or density of sea grass meadows as criteria for good environmental status in MSFD and/or good ecological status in WFD.

The Trilateral Wadden Sea Agreement applies to three Contracting Parties and relates to the protection of the natural values of the Wadden Sea, and to improve them where necessary making it a very relevant to a number of the listed coastal habitats.

As concerns the effectiveness of existing management measures, and need for more, Contracting Parties tended to report on establishing monitor activities in order to determine types of management required and their effectiveness. Where management actions are in place or considered, these are predominantly fisheries management, water quality management and also MPA designation. All concerned Contracting Parties have implemented fisheries management measures for Maerl beds. One Contracting Party is addressing the potential impact from human activities on *Cymodocea* meadows in national waters through an Environmental Impact Assessment process.

Most Contracting Parties reported actions relating to monitoring and mapping of coastal and shelf habitats, although it was not clear how coherent these actions are in terms of being able to compare across habitats and countries. Some Contracting Parties reported that habitat quality is not as widely monitored and that this would need to be addressed. That being said, the level of activity reported for monitoring, engagement and expanding the knowledge base for coastal and shelf habitats, is on the whole much higher, with much more detail provided in the national reporting on specific programmes and initiatives.

One Contracting Party is using NGO and volunteer information on Maerl beds to inform management, in addition to monitoring and scientific research. Another Contracting Party noted that there is no specific monitoring plan as the habitat of *Ostrea edulis* beds is no longer present in their waters. The study on of the Hinder bank (Houziaux, 2008) revealed the very rare occurrence of the species.

Littoral chalk is an interesting example where the habitat has a limited distribution and occurs in the waters of just two Contracting Parties. The two relevant Contracting Parties have implemented national legislation that can provide protection for Intertidal littoral chalk communities. These contracting parties also perform

regular monitoring of the habitat. It is not clear to what degree there is coherence in implementation or sharing of experience.

Many Contracting Parties reported the designation of MPAs to protect coastal and shelf habitats, noting that there are some examples where habitats are not included, for example two Contracting Parties reported that Sea-pen and burrowing megafauna habitats were currently not within their networks of MPAs. Examples of alternative approaches to area-based management were also noted: one contracting Party noted that Sea pen and burrowing megafauna occurs in an area of a proposed seabed protection area within the framework of the MSFD; another Contracting Party does not protect Sea pen and burrowing megafauna habitat directly but has proposed the designation of a 2000 km² 'seafloor protection area'.

There was an interesting note on the difference in definition of habitats. One Contracting Party noted that the OSPAR specification for Sea-pen and burrowing megafauna is slightly different from the national specification, which incorporates mudflats.

b. Highlights or interesting means for implementation

There were some examples reported where Contracting Parties considered the level of response to be effective for addressing the protection of the habitat. One Contracting Party considered the current legislation for *Sabellaria spinulosa* to be considered effective. There are few records of *Sabellaria spinulosa* reefs in Ireland. Another Contracting Party identified that more than 97% of *Cymodocea nodosa* surface in Andalucía (Atlantic areas) is already within protected areas.

The Recommendation for the protection of *Zostera* beds requests Contracting Parties to provide information on links between this habitat and other listed species, the two seahorse species, Cod and European eel were all identified as having links to this habitat. This could be a good example for highlighting the interconnection between the listed features, and where actions to protect one feature may have synergistic benefits for others.

Reporting of habitat restoration was noted by several Contracting Parties for *Zostera* and *Ostrea edulis* beds, with individual examples also noted for *Modiolus modiolus* beds, intertidal *Mytilus edulis* beds. One Contracting Party indicated there are active, local *Zostera* restoration projects being carried out via academic institutions at this stage. Some Contracting Parties report on measures to support the natural recovery of intertidal mudflats, and/or create new mudflats. Several Contracting Parties report on measures to support the natural recovery of Intertidal *Mytilus edulis* beds. One Contracting Party reported that projects designed to recover *Cymodocea* meadows in areas where they have been lost have only been successful in the short-term.

Some examples of habitat specific actions have been pulled out of the reporting:

- The European network "Native Oyster Restoration Alliance" (NORA) was launched at the end of 2017. Network members are representatives of nature conservation agencies, science, non-governmental organizations (NGOs) as well as oyster farmers.
- In Scotland: Community Marine Biodiversity Monitoring Handbook has been created to build citizen science skills for the collection of data that can be used in the condition assessment and management of MPAs and the wider marine environment.
- "Transition mussel sector transition and nature recovery Wadden Sea" agreement 2008.

- The Blue Mussel Management Plan – Germany.
- One contracting party reported on annual campaigns directed at holidaymakers to raise awareness of the ecological importance of Intertidal *Mytilus edulis* beds.
- Some contracting parties have launched specific awareness raising activities for *Zostera* beds, e.g. citizen science efforts and information campaigns in marinas.
- Most Contracting Parties report of extensive awareness raising activities regarding *Sabellaria spinulosa* reefs towards management authorities, relevant industries and the general public.

Deepsea habitats

These are habitats that are predominantly in Regions I, III, IV and V. There is scope for improving guidance for reporting against the national measures, and perhaps consolidating how these are reported against, as this current reporting included repetition of information for multiple actions. Given the cost and technical challenges in observing and managing these more inaccessible habitats, it may be practical to focus on collaborative actions.

a. Common and different approaches to implementation

Commonalities in approach to implementation within Contracting Parties falls into two similar types or groupings for the deep-sea habitats: for coral gardens, deep-sea sponge aggregations and *Lophelia pertusa* reefs and then the second group being Seamounts, Hydrothermal vents on oceanic ridges and Carbonate mounds. The location of many deep-sea features (e.g. Hydrothermal vents on Oceanic ridges, Seamounts) means they are difficult and expensive to map and monitor, depending on research activities to improve the knowledge base. Two Contracting Parties commented that monitoring the occurrence, distribution and status of seamounts requires expensive and complex surveys, restricting feasibility.

The implementation of legislation to protect deep-sea habitats was variable, for some (such as Seamounts) legislation is being considered but not established; but has been implemented for others such as *Lophelia* reefs, Coral gardens and Deep-sea sponge aggregations. These are principally around regulations to restrict fishing activities, in particular with bottom contacting gear and are implemented via EU legislation and also national legislation, (e.g. where Contracting Parties are not EU Member States (e.g. Norway, Iceland, UK) – but not exclusively so). A number of reporting Contracting Parties note their use of the EU Habitats Directive and other EU legislation, and another reported using the environmental objectives of the MSFD to help implement the action to introduce legislation to protect deep-sea habitats such as Seamounts, Deep-sea sponge aggregations and Coral gardens.

Two reporting Contracting Parties for Carbonate mounds identified implementation through national and regional (EU) legislation, in particular restricting fishing with bottom trawls below 800m, but allowing pelagic fishing that does not contact the bottom.

One Contracting Party reported implementation of national legislation to protect a range of deep-sea habitats “The Conservation of Offshore Marine Habitats and Species Regulations, 2017”.

There appears to be a good level of implementation of management actions to protect Coral gardens, *Lophelia pertusa* reefs and Deep-sea sponge aggregations at the national level, informed by a programme of work to understand the distribution of these habitats.

Where Contracting Parties had deep-sea fishing fleets, reports noted that there was cooperation with their fishing fleet to collect information to adapt management. One Contracting Party reported that it did not have a deep-water fishing fleet and so depended on multi-disciplinary survey and monitoring efforts. All reporting Contracting Parties also indicated mechanisms for accessing Vessel Monitoring System (VMS) data to inform management, although it was not clear if there are efforts to collate this information and it would be useful to connect the national implementation with reporting against collective actions. One Contracting Party noted that they make their VMS data available to the public and another that it is working on rolling VMS out to smaller vessels.

Reporting indicated information barriers relating to Deep-sea sponge aggregations appear to be increasingly addressed, along with more fisheries management measures.

In terms of efforts to expand the information base, a number of examples of EU co-funded, cooperative projects were identified as providing information to expand the knowledge base for deep-sea habitats, including for Carbonate mounds. There were also examples of national surveys, such as the annual deep-water Remote Operated Vehicles (ROV) surveys along the Irish continental shelf (Sea-Rover). Three Contracting Parties noted that surveys had either been completed or were underway to map seamounts.

Area based protection is noted as being an effective for the management of deep-sea habitats with most of the Contracting Parties reporting that they have designated MPAs to protect these features (with the exception so far of hydrothermal vents, but this could be because they are not a common feature within national jurisdiction). All three of the Contracting Parties reporting implementation of the Carbonate mound Recommendation identified designation of MPAs of this feature. One Contracting Party reported that areas had been effectively protected through fisheries closures, even though these are not reported as MPAs. One contracting party noted that additional fishery closures had been made following after an assessment of management measures with reference to Coral gardens.

b. Highlights or interesting means for implementation

Iceland had been acting for the fulfilment of this Recommendation by setting a ban for direct fishing where Hydrothermal vents are known to occur on the Reykjanes Ridge. Need for further restrictions are under consideration, including as to whether the known hydrothermal vent area should be protected as part of the OSPAR network of MPAs, although at this point no activity is taking place around the vent system, so the current management measures are considered effective.

For some deep-sea habitats that are also recognised as Vulnerable Marine Ecosystems (VME), protection is also afforded by measures taken by other competent organisations (i.e. are closed to bottom-contact fishing operations under the North East Atlantic Fisheries Commission (NEAFC) Recommendation 19 2014: Protection of VMEs in NEAFC Regulatory Areas, as amended by Recommendation 09:2015 and 10:2018.) EU regulation 2016/2336, which bans the use of bottom trawls in depths below 800 m in the North-East Atlantic, affords additional protection to carbonate mounds in depths below 800 m.

One Contracting Party reported that the occurrence of Carbonate mounds in their waters has been widely publicised through multiple media platforms, resulting in them being considered for research initiatives.

One Contracting Party noted their aim of completely mapping their Exclusive Economic Zones (EEZ) by 2030, with seamounts to feature as part of that survey work in future.

Collaboration with the fisheries sector was identified as important in the reports of several Contracting Parties as concerns most of the deep-sea features (Carbonate mounds, *Lophelia Pertusa* reefs, Coral gardens and Deep-sea sponge aggregations), both as a key pressure and important collaborating partner for increasing the evidence base and ensuring protection. Three Contracting Parties rely on fishermen themselves to provide information on this feature to increase the information base for *Lophelia pertusa* reefs and two Contracting Parties utilise observers onboard fishing vessels to increase the information base.

There was also an interesting example for *Lophelia pertusa* reefs where there is a collaboration between two neighbouring MPAs in two Contracting Parties.

4.1.3 Challenges encountered in implementing actions

Contracting Parties reported difficulties on implementation for each OSPAR measure, and in some cases also for the specific actions. Difficulties with implementation was reported using free text. There was no requirement to report difficulties, nor any specific instructions for how to complete this information. This resulted in some differences in reporting between Contracting Parties. Some Contracting Parties reported in detail on barriers with implementation, also for specific actions, whereas other Contracting Parties did not report any barriers.

With a view to supporting a comparative analysis, the reported information was categorised by the Secretariat using the 'barriers' categories generally used in the OSPAR Measures and Actions Programme. The categorisation has been used to identify some general patterns and highlight issues that could be further discussed and considered in OSPAR to improve implementation of the actions as well as future implementation reporting.

Table 3: Categorisation of the type of issues or barriers that need to be addressed to progress toward full implementation of OSPAR measures (source OSPAR TG MAP, HOD(2) 18/3/2)

ACCEPTANCE	FURTHER WORK NEEDED TO UNDERPIN ACCEPTANCE OF THE MEASURE, EG., BY CERTAIN STAKEHOLDERS
Financing	Finance needs to be secured.
Mechanism for implementation – national	There is a need to put in place a mechanism for the implementation at the national level, e.g. the necessary regulation or other mechanism required for implementing the measure has not yet been adopted or developed
Mechanism for implementation – regional	There is a need to put in place a mechanism for the implementation in another Regional Sea Convention, regional organisation or through bilateral arrangements, e.g. the necessary regulation or other mechanism required for implementing the measure has not yet been adopted or developed
Mechanism for implementation – EU level	There is a need to put in place a mechanism for the implementation at the EU level, e.g. the necessary regulation or other mechanism required for implementing the measure has not yet been adopted
Mechanism for implementation – International	There is a need to put in place a mechanism for the implementation at the international level, e.g. the necessary regulation or other mechanism required for implementing the measure has not yet been adopted
Technical implementation	There is a need to address technical difficulties which prevent a measure from being implemented
Cost effectiveness	There is new information on cost-effectiveness, i.e. either the measure is found not to be as effective as planned or the planned effect can only be achieved with higher costs

Data or information	Data or information need to be collected and evaluated to inform the implementation of the measure
Other	Any other reasons.

Barriers reported for implementation of measures

Deep-sea protected features shared similar barriers. Several Contracting Parties had struggled to implement the actions due to the technical and financial challenges with monitoring the features and the threats and pressures affecting them. Improving regional collaboration and coordination on monitoring efforts was highlighted as an important step in overcoming this difficulty. It was also noted that the features are affected by human activities regulated by states that are not OSPAR Contracting Parties, and therefore it would be important to ensure international cooperation as well as cooperation at EU level.

A special grouping of implementation difficulties was reported for fish species that are harvested commercially. There appears to be a low level of acceptance at a national level for some of the proposed actions for these species.

Coordination difficulties between regional/local authorities and national authorities were reported for some features, for example coastal habitats. Contracting Parties had struggled to communicate the need for taking actions as outlined in the OSPAR measures to local authorities.

Data and information gaps stood out as the only barrier for implementation for the two species of marine turtles. Information on the populations is collected through incidental sightings and strandings as well as telemetry studies of adults. One Contracting Party highlighted the difficulty of collecting information on the effectiveness of actions to rescue juvenile turtles with a view to moving them to more suitable habitats as telemetry studies are not possible on small individuals.

Another example is for the Ocean quahog – where only three of the Contracting Parties reported implementation, identifying challenges in monitoring due to limited monitoring data, in part due to rare distribution and low population densities. The solution proposed by some Contracting Parties was to implement habitat protection, rather than species protection.

The barrier category ‘other’ was most often assigned to represent difficulties experienced due to the species or habitat being very rare in national waters or only vagrant. Contracting Parties struggle to implement actions for such species and habitats, due to low acceptance for costly measures as well as a low level of information regarding the relevance of taking specific actions. This implementation difficulty was reported for most of the listed whale species by several Contracting Parties.

Timing was noted as a difficulty for some actions for which the category ‘other’ was assigned. For example, national plans to develop monitoring strategies was foreseen to be completed a few years after 2019 which was the OSPAR reporting deadline. In such cases work might be ongoing, however the national action had not been completed by reporting deadline.

Barriers reported for the implementation of specific actions

Issues with implementation were reported for some actions specifically, rather than for the whole feature and the measure overall.

Differing or conflicting priorities of local or national authorities was stated by some Contracting Parties as the reason behind actions not having been implemented. For example, action Flat oyster ([Recommendation 2013/4](#)) action 3.1.i “Consider individually addressing any of the actions outlined in §3.2”.

The aim of actions may not have been clear to Contracting Parties, where they only reported question marks as the reason for not having implemented the action. This result was provided for example action 3.1.f ‘follow

Shark Plans adopted within the framework of the FAO International Plan of Action for the Conservation and Management of Sharks for Angel shark ([Recommendation 2010/6](#)).

Existing EU legislation was reported as a reason for not implementing actions, in particular for fish species. For example, Common skate ([Recommendation 2010/6](#)) action 3.1.a 'consider the introduction of national legislation to protect the common skate species complex in all life stages'. Where this reason has been mentioned, the barrier category 'mechanism for implementation – EU level' has been selected. However, further consideration seems to be necessary regarding whether it appropriate to consider the action as not implemented, or whether in future reporting rounds, the response to such an action should be 'completed – no further implementation needed'.

Some Contracting Parties had not implemented the OSPAR actions if the feature had been given a lower category of threat or not included on national lists of threatened species. For example, for *Modiolus modiolus* beds, several Contracting Parties reported the feature as very rare or not occurring in their national waters whereas one Contracting Party reported the feature as common in their national waters with viable populations, less concern in national waters and a lack of systematic mapping of the feature. Further consideration may be needed in OSPAR on how to address action where national considerations only do not result in the feature and associated action being seen as a priority, however there could still be a relevance for implementing the actions if considered at a regional level. It could be considered if such issues would be better addressed under the collective actions rather than under national actions in the OSPAR programmes of measures.

Three Contracting Parties reported an implementation barrier for the action 3.1.d 'seek ways and means to broaden the information base on the occurrence of Sea pen and burrowing megafauna communities by involving commercial fishermen, and integrating environmental and fisheries research', one of which was categorised as 'technical implementation', one as 'other' and the third as 'data or information'.

The category '**Acceptance**' was allocated 16 times, but only to actions for listed fish species. Examples of actions for which this category was allocated include:

- *the possibility of introducing legislation to protect the Allis shad in all its life stages.*
- *Consider taking relevant measures to restore habitat accessibility and extent of suitable habitats (in particular in estuaries, lowland rivers, floodplains and backwaters) [for European eel].*
- *Consider supporting initiatives taken by industry and the recreational fishing sector in the development of techniques and equipment to facilitate the safe release of this species from fishing gears if and when this species is not targeted [of sea lamprey].*

The category '**Financing**' was allocated 26 times. Examples of actions where financing was mentioned as a barrier included:

- *support the development and implementation of National Plans of Action in accordance with the International Plan of Action for reducing incidental catch of seabirds in longline fisheries [of Balearic shearwater].*
- *Consider ensuring the implementation of its national eel management plans for the conservation and restoration of the European eel, where appropriate.*
- *reporting any existing and new data on the distribution, quality and extent of intertidal mudflats to OSPAR.*
- *Consider improving funding and undertaking research to identify critical Spurdog habitats, particularly pupping and nursery grounds, and other aggregation sites, and their temporal stability.*

The category '**Mechanism for implementation – national**' was allocated 97 times. Examples of actions for which this category was allocated include:

- *Consider where appropriate, addressing and minimising, adverse impacts on Carbonate mounds arising from human activities in areas under its national jurisdiction.*
- *assessing whether existing management measures for the protection of intertidal *Mytilus edulis* beds on mixed and sandy sediments are effective and determine whether further measures are needed to address the key threats*
- *consider the introduction of national legislation to protect sea-pen and burrowing megafauna communities.*

The category '**Mechanism for implementation – regional**' was allocated 7 times. It was not always clear from the reported information whether this would have been the most appropriate category. Examples of actions for which this category was allocated include:

- *Consider supporting further research on nesting populations, including those located in the overseas territories of Contracting Parties, that are the source of the Leatherback turtle population entering the OSPAR Maritime Area.*
- *Consider whether any of the key areas justify selection and designation as marine protected areas for the protection of spotted ray populations and whether such areas may become a component of the OSPAR network of MPAs.*

The category '**Mechanism for implementation – EU level**' was allocated 47 times. Examples of actions for which this category was allocated include:

- *In accordance with OSPAR Recommendation 2003/3 as amended by OSPAR Recommendation 2010/2, report to the OSPAR Commission on sites selected for inclusion as components of the OSPAR Network of Marine Protected Areas and develop appropriate management plans and measures [for white skate].*
- *take relevant conservation measures in key areas where significant numbers of these species [Angel shark] still occur.*
- *Consider facilitating and improving research and collecting trend data on populations and distribution of ocean quahog using suitable sampling methods to obtain quantitative reliable density estimates such as the combination of 'triple-D' dredges and box cores [ocean quahog].*

The category '**Mechanism for implementation – international**' was allocated 12 times. One Contracting Party reported that it is not relevant to involve international authorities in relation to deep-sea habitat protection as called for in action 3.1.i for coral gardens and *Lophelia pertusa* reefs. The action was categorised as 'Mechanism for implementation – international'. Future discussions in OSPAR could consider whether the action is still seen as relevant and should be retained among the national actions for implementation. Examples of actions for which this category was allocated include:

- *consider whether any sites within its jurisdiction justify selection as Marine Protected Areas for the protection of populations of and critical habitats for the Black-legged kittiwake.*
- *Consider the introduction of the Leafscale gulper shark as a protected species under relevant regional and international biodiversity conventions.*
- *whether any of the critical habitat or key areas justify selection and designation as marine protected areas for the protection and recovery of Atlantic salmon populations and whether such areas may become a component of the OSPAR network of marine protected areas.*

The category '**Technical implementation**' was allocated 17 times. Examples of actions for which this category was allocated include:

- *Consider the introduction of national legislation to protect the Common skate species complex in all life stages*
- *Consider promoting appropriate action in order to reduce the direct and indirect effects of pollution from oil and other pollutants (e.g. tar, chemicals) that may affect the Leatherback turtle.*
- *Consider collaborating on recommended monitoring strategies [for Ocean quahog].*
- *Seek ways and means to broaden the information base on the occurrence of Sea pen and burrowing megafauna communities by involving commercial fishermen and integrating environmental and fisheries research.*

The category '**Cost effectiveness**' was allocated once, to the action 'investigating the distribution, quality and extent of intertidal mudflats, by means of seabed habitat surveys and monitoring, in order to complete the knowledge base and provide indicators for the state and recovery of the habitat'.

The category '**Data and information**' was allocated 133 times covering all feature groups.

Several Contracting Parties reported as barriers to implementing actions regarding awareness raising and targeted information campaigns that such action was no longer needed. For example, one Contracting Party

noted that information campaigns targeting fishers is no longer needed as there are no longer any fisheries for deep-water species for action 3.1.f on Portuguese dogfish and Leafscale gulper shark. While another Contracting party noted that observers have been taught how to identify Gulper sharks and there is no need for further information campaigns as called for in action 3.1.f. These barriers were categorised in as 'data and information', and future discussion could be relevant on whether to retain reporting against these actions from those Contracting Parties that consider their work to have been completed.

Examples of actions for which this category was allocated include:

- *Regulate land reclamation, coastal constructions, including marinas and ports, and downscaling of water exchange between open sea and inshore shallow waters, e.g. lagoons [Zostera beds].*
- *Address any significant adverse impacts on sea-pen and burrowing megafauna communities arising from human activities in waters under its jurisdiction, where necessary, by working with appropriate international competent authorities.*
- *Consider the introduction of national legislation to protect the Long-snouted seahorse.*

The category 'Other' was allocated 346 times. This category includes many statements by Contracting Parties on the vagrancy or non-occurrence of the feature in their national waters as the reason for not implementing the action. The category was also assigned to several statements from Contracting Parties on the action not being seen as a national priority, not being seen as relevant or considered completed.

The category 'other' was applied to the action 3.1.e for Common skate 'in accordance with OSPAR Recommendation 2003/3 as amended by OSPAR Recommendation 2010/2, report to the OSPAR Commission on sites selected for inclusion as components of the OSPAR Network of Marine Protected Areas and develop appropriate management plans and measures' when one Contracting Party reported as an explanation for not implementing the action that all MPAs designated for this species had already been reported in 2016 and management measures are in place. To more accurately capture this type of information in future reporting rounds categorisations on having already completed the actions could be considered.

A barrier for action 3.1.b 'Consider taking relevant conservation measures (e.g. through conservation plans) for the Harbour porpoise, in particular where they are threatened and in key areas' was categorised as 'other' when a Contracting Party reported that no national action had been taken since implementation of this action was done through another legal instrument.

The category 'other' was assigned to the barrier reported by one Contracting Party on action 3.1.e. 'Consider whether any of the key areas justify selection and designation as marine protected areas for the protection of Portuguese dogfish' when the issue reported was that fishing mortality would not be reduced to any applicable degree by individual area closures for such a wide-ranging migratory species. For Orange roughy, one Contracting Party reported that action 3.1.b 'improve funding for deep-sea research' and action 3.1.c 'facilitate and improve research on the life history, biology and stock discrimination of Orange roughy and trend data on populations and distribution' had not been implemented since they were not seen as relevant for this species. These barriers were categorised 'other' and could be relevant for further discussion in OSPAR to conclude on whether the actions should be retained in the Programme of Measures.

4.1.4 Useful examples of reporting elements that could be considered for future reporting

Gap-analysis example from Sweden

In Sweden the extent of implementation of all measures in the Recommendations of OSPAR threatened and/or declining species and habitats was evaluated based on the criteria from work of the OSPAR Task Group on the Measures and Actions Programme (TG MAP) . Based on this evaluation, a simple gap-analysis was developed. The purpose of the gap-analysis was to get an overview of the level of implementation and identify areas where more work is needed.

Table 4. Criteria of implementation used by the OSPAR Task Group on Measures and Actions Programme that were used for the national gap-analysis example in Sweden

Fully implemented	<p>All components of the measure are implemented in space and time as planned. Measures comprising components of a continuous or repetitive nature are considered fully implemented when the first action in the series has been completed.</p> <p>Examples: legal or economic instruments have entered into force and are applicable; technical requirements (e.g. BAT/BEP) are fully operational with the planned spatial and temporal coverage of the measure; all or one in a series of planned policy actions (e.g. awareness raising) are in operation.</p>
Not yet (fully) implemented	<p>One or more planned components of the measure have been started but not yet completed. Implementation has started when it has passed the preparatory stage and has materialised in actions which allow the expectation of successful completion of the measure's implementation. Criteria for this stage are that financing of the measure is secured (measure is budgeted) and that affirmative action (e.g. draft legal or economic instruments are submitted to formal decision-making processes, technical work has started or all administrative procedures are completed to allow technical work to start) can be demonstrated.</p>
Implementation has not yet occurred	<p>Measure implementation has not yet started as defined under "not yet (fully) implemented". The measure is still in the planning and preparatory phase.</p>

The main conclusions from the Swedish gap-analysis can be summarised as follows:

- In some Recommendations most/many measures have been implemented. The species and habitats for which most measures have been implemented are all listed in the EU Habitats Directive, which means that there is strong legal protection in place and conservation measures have been taken or are underway. For some of the species, e.g. Atlantic salmon and European eel, management plans are developed on an EU-level and many of the measures addressed in OSPAR overlap with the measures in these plans.
- For some habitats the level of implementation is low. This is primarily due to severe knowledge gaps concerning the occurrence and extent of these habitats, as well as status and most relevant threats/pressures. For some habitats there are additional uncertainties concerning delineation and definition.
- Elasmobranchs stand out among the listed species. There is national protection in place for all the elasmobranchs on the OSPAR list (and additional EU regulations) and it is forbidden to fish or land these species. However, as the inflow of data via fisheries is limited the knowledge of distribution and status of these species in Swedish waters is generally poor. There is also lack of information on elasmobranch key areas, which hampers the possibility to take relevant conservation measures and/or designate MPAs for these species. Special efforts are needed to raise the knowledge level.

Sharing specific examples of outputs from implementation activities

Where they were provided, section 4.1.2 has gathered information reported by Contracting Parties on outputs from implementation activities, especially as relates to awareness raising campaigns. It could be helpful if reporting against the Recommendations provided an opportunity to share experience and resources in case these could help others.

Explanation of interpretation

The text of the actions within the measures were drafted to enable national level interpretation. Some Contracting Parties provided notes on how they interpreted the actions and reporting, which can also aid analysis.

4.2 Implementation of collective actions

Every OSPAR Recommendation defines actions where implementation should be done collectively by all Contracting Parties to OSPAR. Implementation of the collective actions in the OSPAR Recommendations has started slowly. With a view of developing a more collaborative approach to implement collective actions the OSPAR Commission agreed the **2017-2025 Roadmap for the implementation of collective actions within the Recommendation for the protection and conservation of OSPAR listed species and habitats (the Roadmap)**.

The Roadmap describes the various types of actions that OSPAR will work on over the coming years and provides a timetable to guide the achievement of these actions. The actions across the Recommendations have been clustered or grouped into a number of categories. These enable the implementation of the actions on a coordinated basis including defining responsibilities for their implementation both within the mandate of the Commission, as well as with regard to other competent authorities with which the Commission collaborates.

The objective of the Roadmap is the implementation of the collective actions of the habitats and species Recommendations, during an initial period from 2017-2025. The implementation of collective actions may inform, or support actions implemented at a national level.

Work to implement collective actions using the Roadmap approach had begun well in the two years between its agreement and 2019 implementation reporting. The lead country approach focused OSPAR attention on some of the grouped collective actions in the Roadmap and resulted in several deliverables and scoping studies to support future implementation steps. An information leaflet on the Roadmap was produced as an output of the collective action on communication activities to raise awareness of OSPAR Commission work on protection of species and habitats which was published on the OSPAR website.

Appendix 1 provides full details on the collective implementation report provided collectively on behalf of all Contracting Parties. The implementation reporting of collective actions was completed using a symbol and free text to provide additional details.






Two collective actions were reported as 'completed' implying they have been fully implemented and that further action would not be needed, namely:

- **Action 36** to Establish collaboration with ICES WG Bird on data collection storage and analysis for the species Black backed gull, Little shearwater, Balearic shearwater, Black-legged kittiwake, Roseate tern, Iberian guillemot, Thick-billed murre has been completed through the establishment of the OSPAR/HELCOM/ICES Joint Working Group on Seabirds (JWGBIRD). The group provides the expertise for collecting regional seabird data stored in an OSPAR biodiversity database hosted by ICES.
- **Action 41** to Enhance knowledge exchange between researchers, management authorities and OSPAR for Roseate tern has been achieved through the establishment of an expert group for this species (as in action 43). Knowledge exchange is achieved through the future meetings of the group.

There are a total of 46 collective actions where implementation reporting would only have recorded whether actions have been fully implemented or not implemented which would not provide an accurate reflection of progress made. Therefore, it was agreed to use five categories in the implementation reporting of collective actions. The categories indicate the stage of implementation, and furthermore identified actions that are considered as ongoing and for which there is no date of completion. In the first two years of working with the Roadmap it has also been identified that for some actions it may be more appropriate to work on implementation through an internal OSPAR process which would be structured around the regular status

assessments of the OSPAR listed features (as in JAMP B3, [Agreement 2019-05](#)) which have been separately categorised.

Table 5: Implementation reporting summary for collective actions

Symbols used for implementation reporting of collective actions		Number of collective actions
Symbol	Meaning	
	Not implemented	19 (41%)
	In progress / partially complete	9 (20%)
	Ongoing task	2 (4%)
	Part of the assessment-cycle	14 (30%)
	Implemented / Completed no further work required	2 (4%)

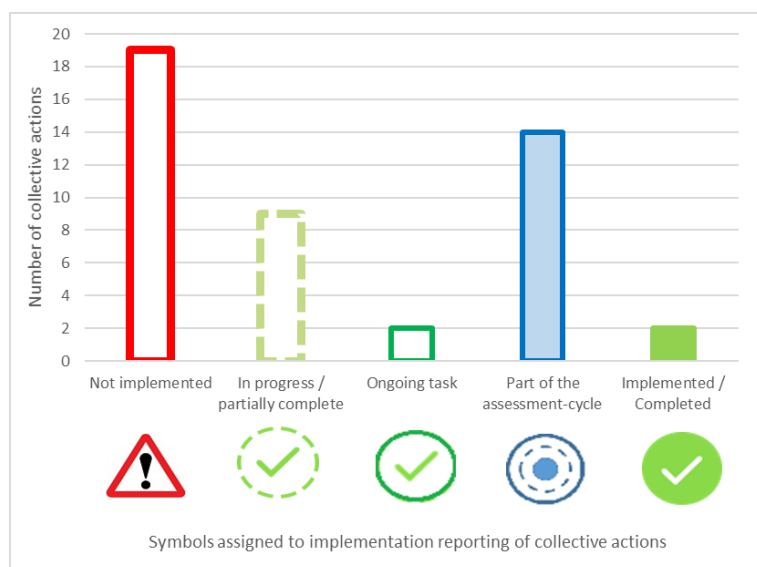


Figure 1. Graphical depiction of the Summary of implementation reporting on collective actions

Implementation of collective actions roughly creates three groups of actions where 1) they have been implemented or where implementation is ongoing, 2) actions where an alternative cyclical approach is needed and 3) actions where implementation has not yet been initiated.

Collective actions on birds

In assessing the usefulness of collective actions, it is worth first considering which Contracting Parties are likely to influence the status and threats of species. It could be assumed that collective action would add little to action by individual Contracting Parties for species that have a limited distribution.

Given the distribution of species of seabirds (see Appendix 1 for the table of distribution), it would appear that collective action is likely to add value to only 3-4 species: Black-legged kittiwake, Roseate tern and Balearic shearwater; and possibly Thick-billed murre. The latter is more debatable because Greenland, Iceland and Norway already work together with other Arctic nations on issues around Thick-billed murre via the Arctic Council and its working group CAFF.

The fact that Ivory gull is only found in Greenland and Norway and Lesser black-backed gull *fuscus* sub-species and Steller's Eider are confined to the Norwegian part of Region I, casts doubt on whether all of the collective actions for these species are relevant to implement collectively or whether a review of the Recommendations would be appropriate and to change some of the collective actions into national actions (in the Roadmap the actions are #5 and #37 and whether collective actions A #39 and #45 are needed). Likewise, the Macaronesian shearwater (referred to as 'Little shearwater') breeds only on the Azores (Portugal) within the OSPAR Maritime Area and then disperses across large tracts of the wider Atlantic where it is difficult to see what other Contracting Parties can do to protect it in addition to collective actions such as awareness raising.

Iberian guillemot, a local sub-species of Common guillemot that once bred in large numbers along the northern coast of Portugal and Spain, may be extinct. Among likely causes of its decline were the two large oil spills in the Bay of Biscay: the Erika off the coast of France in 1999 and soon after, the Prestige in 2002 – very close to their breeding areas in Galicia. The two collective actions that include Iberian guillemot (Roadmap #19 and #32) are concerned with reducing oil pollution. Undertaking these actions collectively may be appropriately done in collaboration with the Bonn Agreement.

5. Conclusions

Implementation reporting on Recommendations for OSPAR listed habitats and species was required in 2013, 2016, and 2019. Of the 12 Contracting Parties expected to report, nine have reported on every occasion, one has reported twice, one has reported once and one has never reported.

The implementation reporting round in 2019 was the first time in OSPAR history that implementation reporting was completed for all 50 Recommendations on the protection and conservation of species and habitats. The next implementation reporting is anticipated in 2025.

The implementation reporting effort covered 668 national and collective actions.

An overarching conclusion from the implementation reporting round was that some of the actions in the Recommendations have been drafted in a way that makes it challenging for Contracting Parties to complete implementation reporting. There seems to be a need to reconsider some of the actions included in the OSPAR measures to ensure that they are actionable and that it is clear to Contracting Parties what work is expected. In particular for collective actions there seems to be a need to reconsider whether all actions can be appropriately completed collectively given the very slow progress in completing actions in the *2017-2025 Roadmap for the implementation of collective actions within the Recommendation for the protection and conservation of OSPAR listed species and habitats*.

The implementation reporting overview assessment clearly shows that Contracting Parties have a good engagement on species and habitats protection. Contracting Parties have undertaken a large number of

protective actions in implementing the OSPAR measures.

5.1 Broad conclusions on implementation of national actions

The following summary observations are made on the current reporting of national actions:

- The 2019 reporting confirmed that there has been a significant effort in implementation of national actions. There are still some gaps in reporting, and indications that there are differences in opinion as to whether a species occurs and is under threat in the waters of particular Contracting Parties. This may need review.
- Implementation of protective actions has been easier for species and habitats that are stationary and more difficult for those that are mobile. It seems to have been most challenging to implement actions for rare, inaccessible, and migratory species.
- For those Contracting Parties that are also EU Member States there was overlap with actions being implemented in the context of EU legislation, including the Habitats Directive, Water Framework Directive and Marine Strategy Framework Directive. It was not clear to what degree these efforts contributed to the implementation of the OSPAR measures, or if there were differences. There was an example provided where a feature on the OSPAR List did not occur within the EU Habitats Directive and so the OSPAR measure provided added value (e.g. for the Flat oyster). There were also examples of where action implemented under the MSFD was taken to reduce key pressures on a species or habitat (e.g. use of the MSFD to take measures to reduce eutrophication or hazardous substances for the Flat oyster and for Harbour porpoise).
- The nature of how the information has been reported using predominantly free text response, means it is difficult to analyse the information in a meaningful way. The observations presented in the overview assessment are therefore subjective but aim to give a flavour of national implementation approaches across the different feature groups.
- It was helpful when Contracting Parties included references to tangible outputs from their implementation actions. One of the purposes of the overview reporting could be to share these examples.

Recommendation to improve national implementation

- Being able to gain an overview across the information provided for all measures and actions in a meaningful way is challenging. Greater use of structured multiple-choice responses in the reporting format could aid assessment of implementation of national actions both within and between feature groups. This would be desirable, for example where there are interactions between species and habitats (e.g. between seahorses and Zostera).
- There is merit in re-considering the approach taken for the next round of reporting to move towards a better linking the implementation of measures with the change in status of the species within the overall context of the drivers, activities and pressures. The work being undertaken for the QSR 2023 will also likely provide some insight into how reporting could better support understanding of effectiveness.
- Analyse all barrier responses categorised 'other', with a particular focus on those actions which have not been implemented due to differing national priorities or perceived irrelevance or appropriateness, with a view to concluding on whether it would still be relevant to include these actions for implementation reporting in 2025 or whether they should be aside. Lack of knowledge on

the species and habitats and the effectiveness of actions has been a barrier to implementing actions and focus should be on strengthening the information base for implementation in the coming years by sharing information and collating information regionally.

5.2 Broad conclusions on implementation of collective actions

Only 4% of the collective actions adopted in the measures are considered to be complete as of 2019. Implementation has started for almost two thirds of the collective actions, however 41% of collective actions have not yet been implemented, and another 24% are in progress. A third of the actions are considered to form part of the monitoring and assessment cycle.

Collective actions may need to be reconsidered:

- If it is found that the type of action required to protect the feature would more likely be taken at a national level rather than as a collective action. Examples where this could be the case were identified for certain seabirds or invertebrate species and some habitats, where the protected species have a very narrow geographic range within the national waters of one or two Contracting Parties and some of the actions for protection were not seen as appropriate for implementation as collective actions. A review and possible revision of the geographic application of the Recommendations could be appropriate:
- where there are collective actions that should be addressed through a regular cycle of assessment, including the development and implementation of monitoring and assessment.
- where re-grouping of features or pressures acting on them may bring more accuracy to the descriptions of the concrete actions that need to be implemented.

How collective actions can be coherent with and add value to other processes in other competent organisations could also be considered further, including coordinating advice from ICES on relevant issues, communicating with competent organisations on issues relevant to Article 4 of Annex V of the Convention (i.e. matters relating to questions of fisheries management and shipping).

5.3 Proposals to improve implementation reporting in 2025

The technical aspects on implementation reporting can be further improved with a view of decreasing the burden of work on Contracting Parties as well as improving the quality and comparability of reported information which would facilitate faster completion of overview assessments. The implementation reporting templates and procedures were significantly more developed in the 2019 implementation reporting round compared to the 2016 and 2013 implementation reporting rounds, however further improvements can be made.

Observations and resulting proposals for consideration when the 2025 implementation reporting round will be prepared have been collected in this report and are presented in no particular order of priority or significance:

- Add categories of the stage of implementation to be selected for each action; completed/on-going/initiated/not started. The template should provide guiding text on how to interpret each category. The information can in future be used for a more comprehensive evaluation or progress, and also to help set aside fully completed actions and focus attention on remaining actions.
- Bird species reporting templates to include a question on whether the activities being implemented are targeting breeding season and colonies or wintering season areas. Also specify whether to report

actions for the species taken only within the OSPAR Maritime Area, or also actions taken for the same species outside the OSPAR Maritime Area.

- For deep-sea habitats there is scope to improve guidance for reporting against the national measures, and perhaps consolidating how these are reported against, as this current reporting included repetition of information for multiple actions.
- Include a tick-box for 'action completed' which would indicate that the action has been fully implemented and no further work is needed on the action in the future, additionally a 'measure completed' tick-box could be added to indicate that all actions within one Recommendation have been fully implemented.
- Include 'barrier categories' to be used in addition to free text in the template for reporting implementation difficulties, with a view of increasing comparability of the reported information, include a category stating 'no difficulties in implementing the action / measure' to provide a standard response for clarity.
- Vagrant species: change the guidance for implementation reporting question 'species is present in national waters' so that 'yes – present' means species that regularly occur within national waters and excludes vagrant species. Subsequently for vagrant species there would be no need to provide an implementation report on actions taken in the reporting template.
- If a Contracting Party reported 'feature not present' in the 2019 implementation reporting round, then no template for that feature would be submitted to that Contracting Party in 2025 to reduce the workload.
- Prioritisation of measures: allow reporting of the reasoning for certain actions that have been selected and prioritised for implementation whilst others have been de-prioritised, with a view to collecting information on which actions are seen as most effective in specific national waters, and pressures in those waters to strengthen the knowledgebase in future discussions on effectiveness of measures and which actions and measures may need review and revision.
- Apply a similar type of categorisation for national actions as have been applied in the grouping of collective actions, to aid analysis of the degree of implementation for different types of actions to identify which actions have been easy to implement and for which types of actions there is a need to develop supporting information.
- Revisit arrangements for the management of data and information from the implementation reporting responses that can serve as a consistent archive of reporting across reporting periods and facilitate access by multiple authorised users to aid analysis.
- Consideration of how to facilitate a more coherent ecosystem approach to evaluating the implementation of measures, this is especially important for where there are associations, for example seahorses and *Zostera* beds.
- If the reporting template is being adjusted, consider if it would be possible to help identify where actions are contributing to meeting the NEAES objectives.

6. Next steps and use of the overview assessment report

This report provides an overview of implementation compliance and review of the means of implementation taken at the national level and collectively.

The report does not consider the effectiveness of these measures: i.e. are the adopted measures having desired effect of improving the conservation status of the listed features.

Understanding effectiveness and being able to identify gaps that will require possible new actions and measures is an important next step. This report and the information used to create it, will be used together with the status assessments and common indicator assessments through an approach being developed as part of the QSR 2023 assessment process.

This report will also inform work under the NEAES 2030. There are two elements in particular that are immediately relevant.

The first is Under strategic objective 5, Operational Objective 5 sets out that *“by 2025 OSPAR will have implemented all agreed measures to enable the recovery of OSPAR Listed threatened and/or declining species and habitats and will take additional measures as needed”*. This report and the lessons learned from it serve as an important resource in understanding how to progress implementation, and how it is reported in order to deliver against this ambitious objective.

Under Strategic objective 6, OSPAR commits to *“Restore degraded habitats in the North-East Atlantic when practicable to safeguard their ecosystem function and resilience to climate change and ocean acidification”* through two Operational Objectives:

- Operational Objective 1: *By 2023 OSPAR will identify habitats suitable for restoration and develop a common knowledge base on the most appropriate and effective methods for restoration of degraded habitats.*
- Operational Objective 2: *By 2025 OSPAR will develop a regional approach for including relevant qualitative and/or quantitative targets for restoration of degraded habitats suitable for restoration and will then implement actions to achieve the targets, as appropriate.*

The 2019 implementation reporting provides some good insights, examples and experience that should contribute to this work, as well as support discussions on approaches where focusing on restoration of one habitat could have positive synergistic effects for other associated habitats and species. There may also be experience to inform discussions regarding the re-establishment of species or habitats in regions where these have become extinct.

Appendix 1: Overview of the geographic occurrence of listed features, where they are under threat and in decline and status of 2019 implementation reporting

(See summary text in section 4.1.1)

Key: presence of species / habitats and where they are under threat (Source: Background documents)

	Species is known to occur
	Species occurs and is in decline or under threat
V	Vagrant/Sporadic
	Absent
Ex	Extinct

Key: reporting/ implementation status (source ICG-POSH 20/4/Inf.1)

-	CP not required to report
/	Reported as not applicable
X	No report submitted
R	Reservation in place
A	Administrative action as means of implementation
N	Negotiated action as means of implementation
L	Legislative action as means of implementation
?	Means not clearly indicated in reporting

Note: the EU, Luxemburg, Switzerland and Finland were not required to report.

Invertebrates

Table 1: invertebrates - Overview of the occurrence of listed invertebrate species across the OSPAR Maritime Area and where they are found to be under threat or in decline across the OSPAR Maritime Area with a summary of implementation reporting by Contracting Party for 2019. (N.B. There was no reporting with regards to Azorean Barnacle or the dog whelk – shown in grey text).

	I			II								III			IV			V		
Species	GL (Dk)	IS	NO	NO	SE	DK	DE	NL	BE	FR	UK	UK	IE	FR	FR	ES	PT	PT	IE	UK
Azorean Limpet (2015/2)	x	/	–	–	–	/	–	–	–	–	/	/	/	–	–	/	x	x	/	/
Flat Oyster (2013/4)	X	–	L, A	L, A	L, A, N	L, A	L, A, N	A, N	A, N	A, N	L, A, N	L, A, N	L, A, N	A, N	A, N	/	x	x	L, A, N	L, A, N
Ocean Quahog (2013/5)	X	–	?	?	?	?	L, A	A	/	/	L, A, N	L, A, N	–	/	/	–	–	–	–	L, A, N
Azorean Barnacle																				
Dog Whelk																				

Birds

Table 2: Birds - Overview of the occurrence of listed bird species across the OSPAR Maritime Area and where they are found to be under threat or in decline across the OSPAR Maritime Area with a summary of implementation reporting by Contracting Party for 2019.

Additional information relating to presence of species: (B) Breeding season, (W) = winter or non-breeding season. Dark grey indicates regular occurrence in substantial numbers; light grey indicates regular occurrence in small numbers and blank indicates absent or irregular (e.g. Vagrant).

Region	I			II								III			IV			V		
Species	GL (DK)	IS	NO	NO	SE	DK	DE	NL	BE	FR	UK	UK	IE	FR	FR	ES	PT	PT	IE	UK
Balearic shearwater (2011/4) (W)		/	/V	/V	/	X migrant	/V	X migrant	/V	L, A, N	L, A, N	L, A, N	L	L, A, N	L, A, N	L, A	X	X	L	L, A, N
Black-legged kittiwake (2011/5) (B) (W)		L, A	L, A	L, A	L, A, N	L	L, A, N	L, A	A	L, A, N	L, A, N	L, A, N	-	L, A, N	L, A, N	-	-	-	-	L, A, N
Iberian guillemot (2014/16) (B/W)		-	-	-	-	-	-	-	-	/	/	/	-	/	/	L	X	X	-	/
Ivory Gull (2011/12) (B/W)		/	L, A	L, A	-	/	-	-	-	-	/	/	-	-	-	-	-	-	-	/
Lesser Black Backed Gull (2011/1) (B)		?	L, A	L, A	-	/	-	-	-	-	/	/	-	-	-	-	-	-	-	/
Macaronesian / Litter shearwater (2011/3) (B)		/	-	-	-	/V	- V	-	- V	- V	/V	/V	L V	- V	V	L, A	X	X	L V	/V
Roseate tern (2011/6) (B)		/	/V	/V	/V	/V	/V	X, V	/V	L, A, N	L, A, N	L, A, N	L, A	L, A, N	L, A, N	L, A	X	X	L, A	L, A, N
Steller's Eider (2013/12) (W)		/	L, A	L, A	-	/	-	-	-	-	/	/	-	-	-	-	-	-	-	/
Thick billed murre (2011/7) (B/W)	V	L, A	L, A	L, A	- V	/	- V	- V	- V	- V	/V	/V	- V	- V	- V	-	- V	- V	- V	/V

Fish

Table 3a Bony Fish- Overview of the occurrence of listed bony fish species across the OSPAR Maritime Area and where they are found to be under threat or in decline across the OSPAR Maritime Area with a summary of implementation reporting by Contracting Party for 2019.

Region	I			II								III			IV			V		
Species	GL (DK)	IS	NO	NO	SE	DK	DE	NL	BE	FR	UK	UK	IE	FR	FR	ES	PT	PT	IE	UK
Allis Shad (2015/4)		-	/	/	/V	L, A Ex	L, A, N	L, A Ex	/Ex	L, A, N	L, A, N	L, A, N	L	L, A, N	L, A, N	?	X	X	L	L, A, N
Cod (2014/14)		-	L	L	L, A, N	R	L, A, N	A, N	L	R	L, A, N	L, A, N	L, N	R	R	-	-	-	L, A, N	L, A, N
European Eel (2014/15)		L, A	L, A	L, A	L, A, N	L, A	L, A, N	L, A, N	L	A, N	L, A, N	L, A, N	L, A	A, N	A, N	L, A, N			L, A	L, A, N
Long-Snouted Seahorse (2012/3)		/	/	/	/	/	/	A	A	N	L, A, N	L, A, N	L	N	N	A	X	X	L	L, A, N

Orange Roughy (2010/7)		X	L	L	-	/	-	-	-	-	L, A, N	L, A, N	L, A	-	-	A	X	X	L, A	L, A, N
Salmon (2016/3)		L, A	L, A	L, A	L, A, N	L, A, N	L, A, N	A	/	L, A, N	L, A, N	L, A, N	L, A	L, A, N	L, A, N	L, A, N	X	X	L, A	L, A, N
Sea Lamprey (2015/3)		/	L, A	L, A	L, A, N	L, A	L, A, N	L, A, N	/	L, A, N	L, A, N	L, A, N	L, A	L, A, N	L, A, N	A, N				
Short-Snouted Seahorse (2012/2)		/	/	/	/	/	/	A	A	N	L, A, N	L, A, N	L	N	N	L	X	X	L	L, A, N
Sturgeon (2014/1)		-	/	/	/	/	L, A, N, V	X	/	L, A, N	L, A, N	L, A, N	-	L, A, N	L, A, N	L, A	X	X	-	L, A, N
Bluefin Tuna*																				
Houting																				

*OSPAR Regions: The OSPAR List recognises that Bluefin tuna occur in Region V. This assessment recommends that the listing should be amended to recognise occurrence in Regions I, II, III, IV and V.

Table 3b elasmobranchs- Overview of the occurrence of listed elasmobranch species across the OSPAR Maritime Area and where they are found to be under threat or in decline across the OSPAR Maritime Area with a summary of implementation reporting by Contracting Party for 2019.

Species	I			II								III			IV			V		
	GL (D K)	IS	NO	NO	SE	DK	DE	NL	BE	FR	UK	UK	IE	FR	FR	ES	PT	PT	IE	UK
Angel Shark (2010/6)		-	/	/	/V	L	/	X	A, N	A, N	L, A, N	L, A, N	L, A	A, N	A, N	L, A	X	X	L, A	L, A, N
Basking Shark (2010/6)		X	L	L	L, A, N	L	/	X rare	A, N	L, A, N	L, A, N	L, A, N	L, A	L, A, N	L, A, N	L	X rare	X rare	L, A	L, A, N
Common Skate (2010/6)		X	A	A	/V	L	L, A	X	A, N	L, A, N	L, A, N	L, A, N	L, A, N	L, A, N	L, A, N	L, A	X	X	L, A, N	L, A, N
White Skate (2010/6)		x	/	/	/	/	/		/	A, N	L, A, N	L, A, N	L, A, N	A, N	A, N	L	x	x	L, A, N	L, A, N
Gulper Shark (2014/3)		/	/	/	/	/	/	X	/	A, N	L, A, N	L, A, N	/	A, N	A, N	?	X	X	/	L, A, N
Leafscale Gulper Shark (2014/4)		L, A	/	/	/	/	/	X	/	A, N	L, A, N	L, A, N	L, A	A, N	A, N	?	X	X	L, A	L, A, N
Porbeagle (2014/6)		L, A	L	L	L, A, N	L	/	X	/	L, A, N	L, A, N	L, A, N	L, A	L, A, N	L, A, N	X	X	X	L, A	L, A, N

Portuguese Dogfish (2014/5)		L, A	/	/	/	/	/	X	/	A, N	L, A, N	L, A, N	L, A	A, N	A, N	N	X	X	L, A	L, A, N
Spotted Ray (2014/7)		/	/	/	/	X	L, A, N	L, A, N	A, N	A, N	L, A, N	L, A, N	L, A, N	A, N	A, N	N	X	X	L, A, N	L, A, N
Spurdog (2014/2)		L, A	L	L	L, A, N	L	L, A, N	A	A, N	A, N	L, A, N	L, A, N	L, A	A, N	A, N	N	X	X	L, A	L, A, N
Thornback Ray (2014/8)		/	?	?	L, A, N	X	L, A, N	L, A, N	L, N	A, N	L, A, N	L, A, N	L, A, N	A, N	A, N	N	X	X	L, A, N	L, A, N

Reptiles

Table 4: Reptile- Overview of the occurrence of listed reptile species and where they are found to be under threat or in decline across the OSPAR Maritime Area with a summary of implementation reporting by Contracting Party for 2019.

Region	I			II								III			IV			V		
Species	GL (DK)	IS	NO	NO	SE	DK	DE	NL	BE	FR	UK	UK	IE	FR	FR	ES	PT	PT	IE	UK
Leatherback Turtle (2013/6)		/	X	X	/V	/	/	X	/	L, A, N	L, A, N	L, A, N	L, A	L, A, N	L, A, N	L	X	X	L, A	L, A, N
Loggerhead Turtle (2013/7)		/	-	-	-	/	-	-	-	L, A, N	L, A, N	L, A, N	L, A	L, A, N	L, A, N	L, N	X	X	L, A	L, A, N

Mammals

Table 5: Mammals- Overview of the occurrence of listed marine mammal species and where they are found to be under threat or in decline across the OSPAR Maritime Area with a summary of implementation reporting by Contracting Party for 2019.

Region	I			II								III			IV			V		
Species	GL (DK)	IS	N O	N O	SE	DK	DE	NL	BE	FR	UK	UK	IE	FR	FR	ES	PT	PT	IE	UK
Bowhead Whale (2013/8)		X	L, A	L, A	-	/	-	-	-	-	/	/	-	-	-	-	-	-	-	/
Blue Whale (2013/9)		X	L	L	/V	/	/	X	/	/	L	L	L, A	/	/	L	X	X	L, A	L
Harbour Porpoise (2013/11)		-	L, A	L, A	L, A, N	L, A, N	L, A, N	L, A, N	L, A, N	L, A, N	L, A, N	L, A, N	L, A	L, A, N	L, A, N	-	-	-	L, A	L, A, N
Northern Right Whale (2013/10)		L, A	/	/	/V	/	/	X	/	/	L	L	/	/	/	X	X	X	/	L

Habitats

Table 6a Habitats (coastal and shelf) - Overview of the occurrence of listed coastal and shelf habitats and where they are found to be under threat or in decline across the OSPAR Maritime Area with a summary of implementation reporting by Contracting Party for 2019.

Region	I			II								III			IV			V		
Species	GL (DK)	I S	NO	NO	SE	DK	DE	NL	BE	FR	UK	UK	IE	FR	FR	ES	PT	PT	IE	UK
<i>Cymodocea</i> Meadows (2014/12)		–	/	/	–	–	–	–	–	/	/	/	–	/	/	L, A	X	X	–	/
Intertidal <i>Mytilus Edulis</i> Beds (2015/1)		–	L, A	L, A	L, A, N	A, N	L, A, N	X	/	A, N	L, A, N	L, A, N	L, A, N	A, N	A, N	–	–	–	L, A, N	L, A, N
Intertidal Mudflats (2016/2)		L, A	L, A	L, A	L, A, N	L, A, N	L, A	L, A	L, A, N	A, N	L, A, N	L, A, N	L, A, N	A, N	A, N	A	X	X	L, A, N	L, A, N
Littoral Chalk Communities (2013/1)		–	/	/	/	/	/	X	/	A, N	L, A, N	L, A, N	–	A, N	A, N	–	–	–	–	L, A, N
Maerl Beds (2014/13)		–	–	–	–	–	–	–	–	A, N	L, A, N	L, A, N	L, A, N	A, N	A, N	–	–	–	L, A, N	L, A, N
<i>Ostrea Edulis</i> Beds (2013/4)		–	L, A	L, A, N	?	L, A	L, A, N	A, N	A, N	A, N	L, A, N	L, A, N	L, A, N	A, N	A, N	/	X	X	L, A, N	L, A, N
<i>Sabellaria Spinulosa</i> Reefs (2013/2)		–	/	/	/	/	L	A, N	/	A, N	L, A, N	L, A, N	L, A, N	A, N	A, N	–	–	–	L, A, N	L, A, N
<i>Zostera</i> Beds (2012/4)		A	L, A	L, A	L, A, N	L, A	L, A	A	/	A, N	L, A, N	L, A, N	L, A, N	A, N	A, N	L, A	X	X	L, A, N	L, A, N
<i>Modiolus Modiolus</i> Beds (2013/13)		L, A	?	?	L, A, N	L	/	x	/	A, N	L, A, N	L, A, N	L	A, N	A, N	/	x	x	L	L, A, N
Sea-Pen & Burrowing Megafauna (2010/11)		–	L	L	L, A, N	A, N	L, A, N	A	/	A, N	L, A, N	L, A, N	L	A, N	A, N	–	–	–	L	L, A, N






Table 6b Habitats (deep-sea) - Overview of the occurrence of listed deep-sea habitats and where they are found to be under threat or in decline across the OSPAR Maritime Area with a summary of implementation reporting by Contracting Party for 2019.







REGION	I			II								III			IV			V		
Species	GL (DK)	IS	NO	NO	SE	DK	DE	NL	BE	FR	UK	UK	IE	FR	FR	ES	PT	PT	IE	UK
Carbonate Mounds (2014/10)		/	–	–	–	/	–	–	–	–	L, A, N	L, A, N	L, A	–	–	L, A	X	X	L, A	L, A, N
Coral Gardens (2010/9)		?	L	L	L, A, N	/	/	X	/	A, N	L, A, N	L, A, N	L, A	A, N	A, N	L, A	X	X	L, A	L, A, N
Deep-Sea Sponge Aggregations (2010/10)		?	L	L	–	/	–	–	–	A, N	L, A, N	L, A, N	L, A	A, N	A, N	L, A	X	X	L, A	L, A, N






<i>Lophelia Pertusa</i> Reefs (2010/8)		L, A, N	L, A	L, A	L, A, N	/	/	X	/	A, N	L, A, N	L, A, N	L, A	A, N	A, N	L, A	X	X	L, A	L, A, N
Oceanic Ridges with Hydrothermal Vents (2014/11)		L	–	–	–	/	–	–	–	–	/	/	/	–	–	/	X	X	/	/
Seamounts (2014/9)		?	L, A	L, A	–	/	–	–	–	A, N	L, A, N	L, A, N	/	A, N	A, N	?	X	X	/	L, A, N



Appendix 2: Collective actions






The implementation report for collective actions was submitted by the 31 December 2020 and quality assured through a final review at BDC(1)2020.






SYMBOLS USED FOR IMPLEMENTATION REPORTING OF COLLECTIVE ACTIONS	
ANY ACTION ROW CAN HAVE UP TO 3 SYMBOLS	
Symbol	Meaning
	Not implemented
	In progress / partially complete
	Ongoing task
	Part of the assessment-cycle
	Implemented / Completed no further work required







No	Action	Habitats/ Species	Region	Lead Party (ies)	Lead party in place?	Action sheet developed?	Action implemented?	Implementation reporting comments
1	Building on existing material (e.g. OSPAR website) develop and implement a phased communications strategy for OSPAR listed species and habitat	All	All	Secretariat				<p>An information leaflet on the roadmap has been prepared www.ospar.org/site/assets/files/35421/posh_roadmap_info_doc.pdf</p> <p>Links to case reports and implementation highlights have been added to the species and habitats dropdown ospar.org/work-areas/bdc/species-habitats/list-of-threatened-declining-species-habitats</p> <p>A page on the implementation of species and habitats Recommendations has been created ospar.org/work-areas/bdc/species-habitats/implementation-of-species-and-habitat-recommendations</p> <p>A template for feature specific pages has been developed. The Secretariat will develop the feature specific pages and populate them with information as work progresses, and e.g. the feature specific status assessments are completed.</p>
2	Improve the OSPAR habitat mapping database in relation to all Habitats, and publish regularly updated quality assessments and distribution records	All habitats	All	United Kingdom				<p>A process has been set up ensuring that every 1-2 years (depending on requirements) a data call is sent out and point and polygon datasets of threatened and/or declining species and habitats are submitted for ingestion into the database. A draft version of the database is share with POSH and a final version with BDC. Data are publicly available through the EMODnet map viewer (https://www.emodnet-seabedhabitats.eu/access-data/launch-map-viewer/)</p>





3	Develop and implement an appropriate monitoring and assessment strategy addressing the distribution, extent and condition of coastal habitats, coordinating activities to build on existing monitoring work and where possible developing synergy with monitoring of other species and habitats.	<i>Sabellaria spinulosa</i> reefs; littoral chalk communities; <i>Ostrea edulis</i> beds; Zostera beds; <i>Modiolus modiolus</i> beds; Cymodocea meadows; and, Maerl beds	All	United Kingdom	 		<p><i>Implementation of this action needs to be reconsidered, considered to be addressed through a regular cycle of assessments.</i></p> <p>Consideration needs to be given to whether this can be delivered as a collective action as currently worded or interpret as national monitoring, with sharing of good practice and delivery through status assessments. Experts at ICG-POSH and ICG-COBAM were engaged in efforts to identify the final output which would be required from this action, but there was a lack of understanding about the purpose of the action making it difficult to proceed with the next step.</p>
4	Request and review ICES advice, and other fisheries assessments based on monitoring and fisheries survey information	Sturgeon, Allis shad, European eel, cod, orange roughy, sea lamprey), common skate species complex, white skate, Angel shark, basking shark, spurdog, gulper shark, leafscale gulper shark, Portuguese dogfish, porbeagle, spotted ray, thornback ray, quahog, Azorean limpet, harbour porpoise	All	(Secretariat and/or ICG-POSH conveners)			<p><i>Implementation of this action needs to be reconsidered, an alternative approach to the development of actions sheets may be needed.</i></p> <p>ICES advice in progress for Gulper shark, Leafscale gulper shark, Portuguese dogfish OSPAR 2019 to consider ICES advice request for 1) Angel shark, Common skate complex (Flapper skate and Blue skate), Spotted ray, Thornback ray/skate and White skate 2) Basking shark, Porbeagle and Spurdog.</p>



5	Develop and implement a monitoring strategy, as part of the JAMP, leading to the periodic assessment of the status of species, to promote and coordinate the collection of information on distribution, status of, threats to and impacts on the species, using as appropriate information from other competent authorities	Loggerhead turtle, Leatherback turtle, Bowhead whale, Blue whale, Northern right whale, Lesser black-backed gull, Ivory gull, Little shearwater, Balearic shearwater, Black-legged kittiwake, Roseate tern, Thick-billed murre, Steller's eider, Iberian guillemot, <i>Ostrea edulis</i> , long snouted Seahorse, short snouted seahorse	All			<p><i>Implementation of this action needs to be reconsidered, considered to be addressed through a regular cycle of assessments.</i></p> <p>JWG BIRD will address bird species. For other species Lead Contracting Party(ies), supported by France and United Kingdom. ICG-COBAM, ICG-POSH</p>
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6	In the context of Article 4 Annex V of the Convention and in line with the common understanding (OSPAR 13/13), cooperate with relevant competent organisations to develop a strategy to encourage commercial fishermen to report incidental by-catches key habitat forming species, including information about location and date.	<i>Lophelia pertusa</i> reefs, coral gardens, Deep-sea sponge aggregations, seapen and burrowing megafauna,	All	Secretariat	 		<p>Implementation of this action needs to be reconsidered, considered to be addressed through a regular cycle of assessments.</p> <p>The neighbouring Regional Seas Conventions OSPAR and HELCOM organised a joint workshop on 3-5 September 2019 to progress work on assessing the pressure from incidental by-catch of birds and marine mammals. The workshop was a forum to progress work on assessing the pressure from incidental by-catch and developing regional indicators. The workshop focussed on seabirds and marine mammals with the intention of developing concepts which could be applied to other species groups in the future (i.e. species of relevance to this action)</p>
7	Carrying out appropriate periodic monitoring, where appropriate this could include visual observation e.g. video of habitat presence and condition at selected sites, and evidence of pressures such as trawling damage, ghost fishing and percentage cover of live and dead or destroyed coral	Carbonate mounds, <i>Sabellaria spinulosa</i> reefs	III, V	United Kingdom			<p>No work has yet been taken as this action was due to be included in the next phase of the JAMP post 2021. Options for implementing this action through an alternative approach were considered at ICG-POSH 2019.</p>



8	Compile evidence on the species and habitats that form on carbonate mounds, hydrothermal vents and seamounts in the OSPAR Maritime Area and assess which are threatened by on going and potential human activities	Carbonate mounds; hydrothermal vents; seamounts	V	No Lead Supported by France, Norway and the United Kingdom , ICG- COBAM			<i>Implementation of this action needs to be reconsidered, considered to be addressed through a regular cycle of assessments.</i>
9	Evaluate the extent to which ecological data from commercial Nephrops stock assessment and commercial video footage and photographic evidence can be used to assess the status of sea-pen and burrowing megafauna communities, and as appropriate develop protocols for assessment purposes.	Seapen and burrowing megafauna	II, III	United Kingdom	 		An Action Development Sheet was submitted by the UK to ICG-POSH 2017 and updated in 2018. Informal discussions have continued, and other Contracting Parties are currently identifying lead contacts for a project steering group.




10	Monitor key pressures including loss and change of substratum, levels of eutrophication, removal of species, introduction and spread of non-indigenous species and physical damage	Littoral chalk	II			Implementation of this action needs to be reconsidered, considered to be addressed through a regular cycle of assessments.
11	Gather contextual information on activities, such as aggregate dredging, offshore development or fishing, likely to have an effect on <i>Sabellaria spinulosa</i> reefs in the vicinity of areas selected for monitoring	<i>Sabellaria spinulosa</i> reefs	II, III	Netherlands, UK and Norway		 Development of action sheet is not yet initiated due to other priorities.
12	Analyse whether any of the key areas justify selection as MPAs for the protection of whales populations and whether such areas may become a component of the OSPAR MPA network	Bowhead whale, Blue whale, Northern right whale, Harbour porpoise	All	Germany	  	Steps taken include a completed literature and data review, and preparatory work on the model approach. Sophisticated modelling is to be conducted to identify key areas. Development of a sound scientific modelling approach will require input from modelling experts. Expert consultations are envisaged in 2020. Data deficiencies for some species may severely limit (or even make impossible) the development of sound scientific models. And as a consequence, tasks may need more time than originally envisaged. Data paucity for the Northern right whale, a species extirpated in the OSPAR Maritime Area, makes identification of key areas impossible. Thus, processing for the Northern right whale has stopped and Action 12 is considered 'completed' for this species.




13	Evaluate the extent to which critical habitat for the following species are already included within the OSPAR network of marine protected areas, and whether this coverage can be improved as a complementary measure to other conservation and management measures	Spurdog, Gulper shark, Leafscale Gulper shark, Portuguese dogfish, Porbeagle shark, Spotted ray, Thornback ray, Harbour porpoise, Atlantic salmon	All	Germany	 		<p>Steps already taken, e.g.</p> <ul style="list-style-type: none"> - literature and data review completed, - preparatory work on model approach conducted. <p>Sophisticated modelling has to be conducted to identify critical habitat. Development of a sound scientific modelling approach will require input from modelling experts. Thus, expert consultations are envisaged in 2020.</p> <p>Data deficiencies for some Action 13 species, especially for some deep-sea shark species, may severely limit (or even make impossible) the development of sound scientific models. And as a consequence, tasks may need more time than originally envisaged.</p>
14	Promote their inclusion as a protected species in other relevant biodiversity conventions	Sea lamprey, Allis shad, European eel, Sturgeon, Orange roughy, Atlantic salmon, Common skate, White skate, Angel shark, Basking shark	All	Lead Contracting Party(ies), Supported by France and the Netherlands ICG-POSH, BDC			<p><i>Implementation of this action needs to be reconsidered, an alternative approach to the development of actions sheets may be needed.</i></p>





15	<p>In the context of Article 4 of Annex V of the Convention and in line with the common understanding (OSPAR 13/13), draw to the attention of relevant competent organisations instances where fishing activities constitute a threat to relevant species and habitats and where appropriate encourage those organisations to take appropriate measures</p>	<p><i>Lophelia pertusa</i> reefs, Coral gardens, Deep-sea sponge aggregations, Carbonate mounds, Hydrothermal vents, Sea pen and burrowing megafauna, Seamounts; Maerl beds, <i>Ostrea edulis</i> beds Cymodocea, <i>Sabellaria spinulosa</i> reefs, <i>Modiolus modiolus</i> beds sturgeon, Allis shad, European eel, Cod, Orange roughy, Sea lamprey, Atlantic Salmon, Common skate, White skate, Angel shark, Basking shark, Spurdog, Gulper shark, Leafscale gulper shark, Portugese dogfish, Porbeagle, Spotted ray, Thornback ray, Iberian guillemot, <i>Ostrea edulis</i> and</p>	All	<p>Lead Contracting Parties for status assessments, Supported by France and the Secretariat</p> <p>ICG-POSH, BDC</p>			<p>Implementation of this action needs to be reconsidered, considered to be addressed through a regular cycle of assessments.</p>
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<i>Ostrea edulis</i> beds							
16	In the context of Article 4 of Annex V of the Convention and in line with the common understanding (OSPAR 13/13), draw to the attention of relevant competent organisations instances where other physical disturbance to seafloor (e.g. mineral extraction, biological and geological sampling, construction) constitute a threat to relevant habitats and where appropriate encourage those organisations to take appropriate measures	Hydrothermal vents; Seamounts; <i>Ostrea edulis</i> beds, <i>Cymodocea</i> , <i>Sabellaria spinulosa</i> reefs.	All	Lead Contracting Parties, supported by France, Norway and the Secretariat ICG-POSH, EIHA			Implementation of this action needs to be reconsidered, considered to be addressed through a regular cycle of assessments.





17	In the context of Article 4 of Annex V of the Convention and in line with the common understanding (OSPAR 13/13), draw to the attention of relevant competent organisations instances where ship noise and ship strikes constitute a threat to relevant species and where appropriate encourage those organisations to take appropriate measures	Northern right Whale, Blue whale, Bowhead whale, Harbour porpoise, Loggerhead turtle, Leatherback turtle	All	Lead Contracting Party(ies), supported by France ICG-Noise ICG-POSH, EIHA			<i>Implementation of this action needs to be reconsidered, considered to be addressed through a regular cycle of assessments.</i>
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18	In the context of Article 4 of Annex V of the Convention and in line with the common understanding (OSPAR 13/13), draw to the attention of relevant competent organisations instances where entanglement and ingestion of marine Litter and ADLFG constitute a threat to relevant species and where appropriate encourage those organisations to take appropriate measures	Leatherback turtle, Loggerhead turtle, Leafscale Gulper shark, Portugese Dogfish, Blue whale, Bowhead whale, Northern right whale	All	ICG-ML (Secretariat support)	 		In part this action will be implemented through a regular cycle of assessments. However, in addition OSPAR Common Indicators are in place for ingestion of marine litter by Fulmars and turtles, which provide evidence of changes in pressure. Future work in ICG-ML will provide further regional-scale evidence on harm, to be included in the thematic assessment for the OSPAR Quality Status Report 2023.
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19	In the context of Article 4 of Annex V of the Convention and in line with the common understanding (OSPAR 13/13), draw to the attention of relevant competent organisations instances where pollution from oil and hazardous substances constitute a threat to relevant species and where appropriate encourage those organisations to take appropriate measures	Loggerhead turtle, Leatherback turtle, European eel, Iberian guillemot	All	Co-Conveners to raise with HASEC and OIC supported by France and [Spain] HASEC			<i>Implementation of this action needs to be reconsidered, considered to be addressed through a regular cycle of assessments.</i>
20	Cooperate and coordinate with other relevant competent international organisations and bodies, drawing upon the actions and measures suggested in the Background Document (OSPAR publication 2010/480) to address threats from aquaculture activities	Cymodocea, Maerl beds, Atlantic salmon	All	Co-Conveners to raise with EIHA supported by Norway EIHA			<i>Implementation of this action needs to be reconsidered, re-grouping the features may help bring more accuracy to the description of the concrete action which needs to be implemented.</i> Only the Background Document for salmon refers to this specific action.






21	Cooperate and coordinate with other relevant competent international organisations and bodies, drawing upon the actions and measures suggested in the Background Document (OSPAR publication 2010/480) to address threats from habitat alteration or loss, obstacles to migration and pollution	European eel, Atlantic salmon	I, II, III, IV	Secretariat			<p><i>Implementation of this action needs to be reconsidered, re-grouping the features may help bring more accuracy to the description of the concrete action which needs to be implemented.</i></p> <p>Only the Background Document for salmon refers to this specific action.</p>
22	Identify whether further measures to maintain or improve water quality (contaminants and nutrients) are necessary to safeguard relevant habitats and implement if required	Maerl beds, Zostera beds, Mytilus edulis beds, Cymodocea; Intertidal mudflats	I, II, III, IV	Lead Contracting party for Status assessment HASEC			<p><i>Implementation of this action needs to be reconsidered, considered to be addressed through a regular cycle of assessments.</i></p> <p>Status assessment of Maerl beds was carried out in the meeting cycle 2019/2020 as a first step for this action.</p>



23	Consider whether existing and new measures to manage the impacts of pressures both within and outside waters under their national jurisdiction require additional action through the OSPAR Commission;	Littoral chalk, <i>Ostrea edulis</i> beds	II, III, IV	Lead Contracting Party(ies), supported by Belgium ICG-POSH			<i>Implementation of this action needs to be reconsidered, an alternative approach to the development of actions sheets may be needed.</i>
24	Developing, within the competence of OSPAR, effective mitigation actions against further anthropogenic threats to whale populations and incorporate them into appropriate measures for the protection of these species;	Blue whale, Bowhead whale, Northern right whale	All	Lead Contracting Party(ies), supported by France EIHA, ICG-Noise, ICG-ML			<i>Implementation of this action needs to be reconsidered, considered to be addressed through a regular cycle of assessments.</i> Status assessments of Blue whale, Bowhead whale, Northern right whale were carried out in the meeting cycle 2019/2020 as a first step for this action.







25	Develop and incorporate appropriate measures to mitigate habitat destruction (e.g. caused by degradation of spawning habitats through silting due to agriculture intensification or dams; maintenance dredging and sand and gravel extraction) and degradation of the water quality in estuaries;	Sea Lamprey, Sturgeon	I, II, III and IV	EIHA			Implementation of this action needs to be reconsidered, the action seems to group several different pressures and activities which may need to be re-grouped .
26	Develop and/or refine relevant measures and strategies for preventing and reducing impact on turtles of entanglement in and ingestion of marine litter (in particular plastic bags), pollution, collision and bycatch	Leatherback turtle, Loggerhead turtle	All	France	 		A Scoping Document has been prepared, based on elements provided by participating CPs, on the measures aiming to prevent or reduce impacts of human activities on turtles, with the objective to share national or/and local initiatives to provide an overview and help formulating recommendations on further actions.









27	Advocate management measures (for example, management measures in marine protected areas such as Natura 2000 sites, OSPAR MPAs or address necessary measures under the Marine Strategy Framework Directive (MSFD) with the appropriate authorities.	Ocean quahog	II	Co-Conveners to raise with ICG-MPA supported by the Netherlands and United Kingdom EIHA, ICG-MPA			<i>Implementation of this action needs to be reconsidered, the action appears to focus on issues under national competency and whether any aspects could be taken forward as collective efforts appears unclear.</i>
28	Where applicable, ensure the implementation of the Marine Strategy Framework Directive, by working to achieve good environmental status of habitats essential to the life cycles of cod and the cod stocks, including age and size structure of cod populations, as well as their role in the marine food web.	Cod	II and III				<p><i>Implementation of this action needs to be reconsidered, the action appears to focus on issues under EU competency to assess which could be proposed for further consideration to ICG-MSFD.</i></p> <p>BDC 2018 discussed whether Action 28 could be considered completed. The EU highlighted that Article 8 of the Common Fisheries Policy provide member states a mechanism to identify and take management action on Critical Habitats. The Netherlands highlighted the link to the MPA eco-coherence connectivity and lifecycle analysis that they were undertaking, highlighting that cod was one of the species where they had the best data.</p> <p>BDC agreed that Action 28 should remain in the roadmap and a link should be made to the work on eco-coherence in ICG-MPA.</p>








29	Develop guidelines on how to minimise the disturbing and/or harmful acoustic effects to harbour porpoises especially from seismic surveys, pile driving, shipping traffic, military activities and underwater explosions;	Harbour porpoise	II and III	Netherlands	 		This action is forwarded to ICG Noise. It was placed on the agenda of the autumn 2019 meeting. ICG-Noise is preparing an assessment of the risk of impacts from impulsive noise on harbour porpoise; an inventory of noise mitigation measures is partially complete – it will cover all major activities and is relevant to all sensitive receptors including harbour porpoise
30	Take measures to further reduce discharges, emissions and losses of relevant hazardous substances to a level, that is compatible with breeding success of European eel, referred to in the background document;	European eel	I, II, III and IV	Lead Contracting Party(ies), supported by France HASEC			Implementation of this action needs to be reconsidered, relevant action is taken by other actors and competent authorities and the added value of OSPAR collective action needs to be identified before further steps can be taken.
31	Develop measures within OSPAR's competence to reduce or eliminate the impact of habitat alteration from human activities on the <i>Ostrea edulis</i> and <i>Ostrea edulis</i> beds through bottom disturbance	<i>Ostrea edulis</i> and <i>Ostrea edulis</i> beds	II	Lead Contracting Party(ies), supported by Belgium EIHA, NORA network			



32	Develop relevant measures for preventing and reducing oil pollution within OSPAR Region IV;	Iberian guillemot	IV	Spain	 		<p>Steps to implement the action have not yet been taken.</p> <p>Preparatory work has been initiated and further action is foreseen starting in 2020.</p>
33	Improve coordination of research to improve understanding of life history, distribution, track trends in populations and address specific issues identified in the Recommendations	Sturgeon, Allis shad, European eel, Cod, Orange roughy, Sea lamprey, Atlantic salmon, Common skate, White skate, Angel shark, Basking shark, Spurdog, gulper shark, Leafscale Gulper shark, Portugese dogfish, Porbeagle, Spotted ray, Thornback ray	All	<p>Lead Contracting Party(ies), supported by Norway</p> <p>ICG-POSH, ICG-COBAM, Science Needs Agenda</p>			<p><i>Implementation of this action needs to be reconsidered, considered to be addressed through a regular cycle of assessments.</i></p> <p>OSPAR issued an advice request to ICES in 2018 to assess gulper shark, leafscale gulper shark and Portuguese dogfish. Two additional advice requests were issued to ICES in 2019 to assess common skate, white skate, angel shark, basking shark, porbeagle, spotted ray and thornback ray. The status assessments would form the basis for any further action.</p>

34	<p>Coordinate with fisheries research and funding agencies to consider the establishment of a collaborative fisheries-independent research programme to evaluate the status of the species, monitor stock recovery and track movements, and identify any networks of critical habitats;</p>	<p>Common skate, White skate, Angel shark, Basking shark, Spurdog, Gulper shark, Leafscale gulper shark, Portugese Dogfish, Porbeagle, Spotted ray, Thornback ray</p>	All	<p>No lead</p> <p>ICG-POSH, ICG-COBAM, ICG-MPA, BDC</p>			<p>Implementation of this action needs to be reconsidered, an alternative approach to the development of actions sheets may be needed.</p>
35	<p>Maintain cooperation with ICES and fisheries organisations to get regular advice and to coordinate monitoring and research programs. Link with IUCN and wider academic research networks for non-commercial species.</p>	<p>Sturgeon, Allis shad, European eel, Cod, Orange roughy, Sea lamprey, Atlantic salmon, Leatherback turtle, Loggerhead turtles</p>	All	<p>No Lead, Supported by France and Norway</p> <p>ICG-POSH, ICG-COBAM</p>			<p>Implementation of this action needs to be reconsidered, an alternative approach to the development of actions sheets may be needed.</p>

36	Establish collaboration with ICES WG Bird on data collection, storage and analysis	Black backed gull, Little shearwater; Balearic shearwater; Black-legged kittiwake; Roseate tern; Iberian guillemot; Thick-billed murre	All	Germany and United kingdom	 		<p>This action has been completed.</p> <p>OSPAR/HELCOM/ICES Joint Working Group on Seabirds (JWGBIRD) has been established. The group provides the expertise for collecting regional seabird data stored in an OSPAR biodiversity database hosted by ICES. JWGBIRD provides annual updates to ICG-POSH and ICG-COBAM.</p>
37	Bring to the attention of relevant competent authorities the status of and threats, and the need for further research and data collection	Lesser black-backed gull; Ivory gull; Little shearwater; Balearic shearwater; Black-legged kittiwake; Roseate tern; Thick-billed murre	All	No Lead, supported by Norway ICG-POSH, ICG-COBAM, JWG Bird			<p><i>Implementation of this action needs to be reconsidered, considered to be addressed through a regular cycle of assessments.</i></p>
38	Further research on source populations, status and distribution and other causes for decline. This means to develop a research agenda on this topic/ species in national waters and ABNJ	Leatherback turtle, Loggerhead turtle	All	No Lead, supported by France ICG-POSH, ICG-COBAM, BDC			<p><i>Implementation of this action needs to be reconsidered, an alternative approach to the development of actions sheets may be needed.</i></p>

39	Undertake further research the causes of decline in the Steller's Eider, in particular through the Norwegian-Russian Environmental Commission	Steller's eider	I	Norway	  	<p>Initial survey/census of the total European winter population at approximately 10 years cycle was conducted in 2009. Discussions have been undertaken by Norway and Russia for a repeated survey.</p> <p>Annual ongoing monitoring of the Varanger winter population in combination to periods with frequent monitoring (monthly-winter 2016/17) contributes to a better understanding of their habitat usage and behavioural patterns</p>
40	Seek advice on the latest knowledge of species and habitats supported by seamounts located within the OSPAR Maritime Area, then evaluate possible inclusion of these biological communities in the OSPAR List of Threatened and/or Declining Species and Habitats	Seamounts	I, IV, V	Norway and UK	  	<p>A scoping study covering ca 100 surveyed seamounts has been completed. The study confirmed that seamounts are "hotspots" for biodiversity and VME's.</p> <p>Plankton, benthos and fish have been studied at 11, 24 and respective 16 seamounts, out of the estimated (modelled) 160 seamounts, in the OSPAR Maritime Area.</p> <p>The scoping study species list represents only 1.3% of all fish species on Earth, but 25% of all families and 45% of all orders. Very few seamounts in the OSPAR Regions I, IV and V have been subjected to extensive and systematic studies on plankton diversity. There has been no or little research on the ecological significance of seamounts or status of these vulnerable ecosystems.</p>
41	Enhance knowledge exchange between researchers, and between researchers, management authorities and OSPAR	Roseate tern	II, III, IV and V	No lead ICG-POSH	 	<p>This action has been completed.</p> <p>The implementation of Action 43 is anticipated to result in the establishment of an expert group on Roseate tern, which is considered to achieve the promotion of necessary knowledge exchange on this threatened seabird as per the goal of Action 41 through this WG future meetings</p>

42	Compile and promote a list of useful future research areas that would inform the protection and conservation of <i>Sabellaria spinulosa</i> reefs to relevant scientific funding bodies and existing national monitoring programmes	<i>Sabellaria spinulosa</i> reefs	II and III	Netherlands			Development of action sheet not yet initiated
43	Promote implementation of the European Commission Species Action Plan for the species	Balearic shearwater, Roseate tern	II, III, IV and V	Spain	 		Implementation has been initiated. The lead party has identified experts from several Contracting Parties who would support implementation. A workshop to be held in Spain, February 2020, would bring together the experts to work on implementation of the action. A foreseen outcome is to establish an expert group of researchers and managers, along with the participation of JWGBIRD and BirdLife partners.
44	Promote the updating and implementation of the Arctic Council CAFF Action Plan (1996)	Thick-billed murre	I	No Lead, supported by Norway, ICG-POSH			Implementation of this action needs to be reconsidered, an alternative approach to the development of actions sheets may be needed.
45	Develop and implement an OSPAR action plan for Lesser black-backed gull	Lesser black-backed gull	I	No Lead, Supported by Norway, ICG-POSH			Implementation of this action needs to be reconsidered, an alternative approach to the development of actions sheets may be needed. A supplementary explanation to the action needs to be developed with the aim to clarify the intention behind developing an 'action plan' and to what extent this document would go beyond actions in a Recommendation.

46	Request the international Council for the Exploration of the Seas (ICES) to continue to improve its assessment of the effectiveness of European and national management plans	European eel	I, II, III and IV	Secretariat			<i>Implementation of this action needs to be reconsidered, an alternative approach to the development of actions sheets may be needed</i>
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Appendix 3: Analysis of national implementation of OSPAR Recommendations for OSPAR Listed threatened and/or declining species and habitats

To be completed



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Our vision is a clean, healthy and biologically diverse North-East Atlantic Ocean, which is productive, used sustainably and resilient to climate change and ocean acidification.

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