Marine Strategy Framework Directive consultation: Programme of Measures

A joint response from Wildlife and Countryside Link, Scottish Environment LINK, Wales Environment Link and the Northern Ireland Marine Task Force

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Introduction

Wildlife and Countryside Link, Scottish Environment LINK, Wales Environment Link and the Northern Ireland Marine Task Force work together to achieve better protection for marine wildlife and effective management of all UK seas. Each is a coalition of environmental voluntary organisations, united by their common interest in the conservation and enjoyment of wildlife, the countryside and the marine environment. A list of the constituent members of each coalition is provided in Appendix 1 to this response.

The EU's marine environment was once incredibly rich, productive and diverse. Today, whether looking at marine species or habitats, less than 20% of all biodiversity features are considered as being in Good Environmental Status[1] (GES). In UK seas alone, 28 species of mammals and fish are considered to be threatened[2] and it is calculated that landings of demersal fish stocks per unit of fishing power have declined by 94% since 1884[3]. *Charting Progress* and *Charting Progress 2*, as well as numerous peer reviewed scientific studies and the 2011 National Ecosystem Assessment (NEA), have demonstrated the chronic widespread degradation that bottom trawling has on benthic habitats, including reef, sediment and deep sea habitats.

The Marine Strategy Framework Directive (MSFD) is the first all-encompassing piece of European legislation specifically aimed at the protection of the marine environment. Its ultimate objective is to achieve a GES in all European waters by 2020 at the latest. The implementation of the Directive so far shows many weaknesses. In February 2014, the Commission published its review of the 2012 reports by Member States, as required by Article 12 of the MSFD. The 'Article 12 report' stated that *"The EU is still very far from enjoying healthy oceans and seas. Meeting this objective by 2020, in less than seven years, implies renewed and intensified efforts and rapid and important change in the way Member States, the European Commission, Regional Seas Conventions and other relevant organisations work together"*[4]*.*

The Joint Links support this appraisal and believe that Member States including the UK need to develop comprehensive and intensified Programmes of Measures to achieve GES by 2020.

[1] European Environment Agency. 2014. Marine Messages: Our seas, our future – moving towards a new understanding.
[2] IUCN (2011). International Union for Conservation of Nature Red List of Threatened Species. Version 2011.2.
[3] Thurston, R.H., Brockington, S., Roberts, C.M. (2010). The effects of 118 years of industrial fishing on UK bottom trawl fisheries. *Nature Communications* 1:15
[4] The European Commission's assessment and guidance {SWD(2014) 49 final}: The first phase of implementation of the Marine Strategy Framework Directive (2008/56/EC). Report from the Commission to the Council and the European Parliament. http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/implementation/reports_en.htm

The Joint Links welcome the opportunity to provide feedback to the proposed Programme of Measures (PoM) for the delivery of Good Environmental Status under the MSFD. We agree that existing initiatives and programmes should form the basis for the majority of measures. However, some new measures will also be needed to fill gaps in existing programmes to achieve GES and we are very concerned that the consultation only lists existing measures. We therefore believe that in order to achieve GES, the UK Government needs to:

- Fully implement existing measures outlined in the consultation, recognising that there is still some time before all existing commitments will be fully developed and implemented.
- Recognise that for some Descriptors, existing measures are not sufficient to achieve GES and additional measures, as recommended below by the Joint Links, are needed by UK and devolved Governments if we are to achieve our statutory requirements.

With regard to existing measures we are positive that many policies are in place and progress is being made. However, we are also concerned that there is still much that needs to happen to complete the delivery of various measures. While progress is being made to complete an ecologically coherent network (ECN) of Marine Protected Areas (MPAs) much still needs to be done to complete the network and ensure it is well-managed. Many gaps in the ECN of MPAs still need to be filled, particularly with regard to representivity (such as sites to protect mobile species, key prey species and pelagic features) and adequacy (such as sediments and mud). Achieving favourable conservation status in sites takes time and so strong management measures need to be introduced swiftly if the network is to make its contribution to achieving GES.

Marine spatial planning is gradually progressing and, if implemented using an ecosystem based approach (EBA), will be fundamental to supporting management of MPAs and contributing to achievement of GES. We believe that UK guidance is needed on how marine plans can implement EBA and support achievement of MSFD Descriptor targets. At present we have concerns that Marine Planning is primarily supporting new development which will inevitably result in Marine Plans preventing rather than contributing to achieving GES.

We are pleased with the reformed Common Fisheries Policy (CFP) and if implemented comprehensively we are confident that it will make a major contribution towards GES. While the annual assessments from the International Council for the Exploration of the Sea (ICES) indicate that there has been some improvement, there is still much more that needs to be achieved - 60% of the stocks in the North Sea remain unassessed, and of the 40% which are assessed only 64% met GES for fishing mortality.

Overall there remain a considerable number of concerns and problems with respect to the various components of the UK's ecosystems. In particular, the UK's Initial Assessment raised concerns about the status of threatened and vulnerable species such as sharks, skates, rays, deep sea species, for which data are still deficient, and diadromous fish such as the European eel and salmon. It highlighted the need for improved information on oceanic sharks and the causes of declines in diadromous fish populations. The Feeder Report for Charting Progress 2 identified lampreys, sturgeon and shads as requiring additional research. In some regions, there has been a long term decline in the rate of capture of adult eels and recruitment of elvers; signs of a long-term decline in twaite shad populations; and dramatic declines in salmon numbers from a number of rivers in the Minches and Western Scotland regions since the 1970s. It is also recorded that the diversity of deep-water fish communities has been reduced in areas subject to deep-water fisheries.

With respect to marine mammals, recent significant declines in harbour seal populations in some areas are of major concern while declines since the mid-1990s are also evident in a

number of populations of breeding seabirds. Although there was an increase in breeding seabirds between the late 1960s and late 1990s, between 2000 and Charting Progress 2 (2010), the Seabird Monitoring Programme showed the number of UK breeding seabirds to have declined by around 9% (around 600,000 birds), with particular declines in black-legged kittiwakes (-61% between 2000 and 2013), Arctic skua (-74%), lesser black-backed gull (-48%) herring gull (-30%). These declines are regionally specific, with particularly severe declines in Northern Scotland islands, such as Orkney and Shetland.

The UK's Initial Assessment refers to the overall assessment of the plankton community as experiencing "some problems". It explains that changes have been observed in plankton communities as a result of rising sea temperatures. Changes include a large increase in phytoplankton biomass over the past two decades in some areas; many phytoplankton species groups blooming earlier in the year resulting in them being out of phase with zooplankton and fish larvae that rely on them for food; and a progressive shift northward in warmer water zooplankton and a retreat to the north of colder waters species over the past 50 years. The UK's Initial Assessment points out that it is unclear to what extent natural variability and pressures, including climate change, ocean acidification and cascading effects from fishing, may be influencing the changes seen in plankton distributions and plankton communities. There is evidence of significant change in the composition, abundance and spatial and temporal abundance of both phytoplankton and zooplankton.

The Charting Progress 2 assessment of the six broad-scale habitats concluded that while intertidal rock is generally in a good condition, human pressures have adversely affected moderate to large areas of intertidal sediments, particularly mudflats and saltmarshes. Additionally, large areas of both shallow subtidal sediments and shelf subtidal sediments as well as deep-sea habitats have been impacted by mobile fishing gear. The Feeder Report for Charting Progress 2 anticipates that further localised losses of some habitats will occur in the future as a result of development for renewable energy (wind, wave and tidal) and container port facilities and marinas at the coast. In addition, while the intensity of pressure is anticipated to remain relatively stable for the next one to two decades, it is not clear what additional pressure will result from climate change, e.g. establishment and range extension of non-native species, coastal squeeze as sea levels rise, along with changes in seawater salinity and temperature.

With respect to marine litter, there is a large and growing volume of evidence on the harm that ingestion and entanglement is having on marine wildlife, and the potential repercussions for marine ecosystems and human health. Marine litter is now considered a major threat to marine biodiversity. Over the past 20 years, UK beach litter levels have increased by 135% and plastic litter by 180%, a trend which has not abated in recent years. It is inconceivable that current measures, which have been in place for a number of years and have thus far failed to achieve a downward trend in marine litter, will be sufficient to reverse the increasing trend and achieve GES by 2020. As well as improved implementation and enforcement of existing legislation, new measures are required to prevent specific sources and types of litter.

In light of the extensive catalogue of damage that has occurred and in many cases continues today, alongside marine spatial planning and a well-managed ecologically coherent network of MPAs, a wider range of complementary measures are required to ensure that developments and activities are managed soundly and cumulatively, with minimal or carefully managed impact on the ecosystem.

Work is still required to complete the elaboration of targets, indicators and monitoring programmes for a considerable range of marine biodiversity, and in particular for some fish groups, cetaceans, seals, seabirds and pelagic and benthic habitats. Indeed it is questionable if it is possible to achieve GES by the 2020 deadline for considerable elements of Descriptor 1.

We are also concerned at the very limited reference to any consideration of the consequences of climate change on achieving GES. In particular there is no consideration of the consequences of acidification and warming seas, but also rising sea levels and the increased possibility of non-indigenous species gaining a foothold. Opportunities for adaptation and mitigation must be considered, with specific measures identified, if GES is to be delivered.

Given the clear declines in marine biodiversity as referred to above, it is evident that existing measures are not sufficient to achieve GES. We are seriously concerned that the lack of new measures proposed for inclusion in the PoM means that the ability of existing initiatives and programmes to deliver GES will be seriously compromised. As a result, we believe that many gaps remain and that additional measures must be incorporated into the PoM to support the achievement of GES by 2020 including, for example, measures to:

- ensure that all MPAs contributing to the ECN are well managed in line with respective legislation, so that they actively contribute to the achievement of GES,
- establishing adequate baselines, by conducting necessary surveillance monitoring,
- eliminate damaging practices, in all MPAs, and consider increasing the coverage of UK waters that are subject to minimal human activity (e.g. no-take),
- increase spatial management of fisheries in our wider seas through zoning,
- establish recovery and restoration plans for a range of species and / or habitats,
- improve understanding of ecosystem food webs, to ensure healthy wider ecosystem,
- strengthen guidance for Environmental Impact Assessments (EIA), Strategic Environmental Assessment (SEA) and Habitats Regulations Assessments (HRA),
- address bycatch (of mammals, seabirds and non-target fish),
- improve implementation and enforcement of existing legislation related to species and habitat protection and litter prevention,
- introduce new measures to prevent marine and terrestrial sources of marine litter,
- introduce an indicator to understand and limit noise production, to understand and minimise cumulative injury and disturbance impacts,
- introduce exclusion / buffer zones to reduce the impacts of unmitigated impulsive noise,
- improve understanding and regulation of recreational fisheries,
- develop prevention, early warning and rapid response programmes to address the introduction of non-indigenous species, and
- introduce key measures for reducing underwater noise from infrastructure installation and ships.

This represents a selection of the additional measures which are identified and elaborated on further in this response. In addition to the Joint Links response, the WWF-led Celtic Seas Partnership project has used a stakeholder-led approach to identify a number of suggested new measures, some of which are included here. As part of the Celtic Seas Partnership,

several task groups are developing stakeholder initiatives to support delivery of MSFD in key descriptor areas. These are referred to in the text below.

Response to Part 1: Section 4 – How the UK Programme of Measures was developed

The implementation of the Directive so far shows many weaknesses. In February 2014, the Commission published its review of the 2012 reports by Member States, as required by Article 12 of the MSFD. The 'Article 12 report' stated that *"The EU is still very far from enjoying healthy oceans and seas. Meeting this objective by 2020, in less than seven years, implies renewed and intensified efforts and rapid and important change in the way Member States, the European Commission, Regional Seas Conventions and other relevant organisations work together"*[5].

In their assessment of the first phase of implementation of the MSFD (2008/56/EC), the European Commission noted a lack of coherence within the EU and within marine regions/subregions. It is crucial that the UK works together with neighbouring countries to implement MSFD, in order to optimise synergies and reduce conflict. Particularly for transboundary issues (e.g. contaminants, non-indigenous species and litter), it is important that the UK coordinates its programme of measures with those of other countries in the North East Atlantic via OSPAR and more widely in Europe via the relevant EC working groups. This could include sharing ideas for effective measures, extending existing measures to neighbouring countries, and identifying opportunities for developing new measures that would be more effective at a transboundary scale.

It is important to ensure that public participation and consultation processes are fully compliant with the rights guaranteed by the Aarhus Convention. The Convention provides for public participation in the preparation, modification or review of "plans and programmes relating to the environment". The MSFD (Art.19 (1)) stipulates that the public are to be provided with 'early and effective opportunities to participate.' Joint Links have been disappointed not to be engaged more by the UK and devolved Governments in developing the Programme of Measures to date. Stakeholders should be seen as part of the solution to determining what measuers are needed and actively consulted early in the process. Even so we assume that the consultation to date is very much a work in progress and proposals for new measures and edits to existing measures will be seriously considered.

In addition to Generic Measures that apply to all UK countries, the consultation has identified existing national measures that contribute to Descriptor targets. We welcome these references to initiatives that Devolved Administrations are undertaking, however it is not clear within the consultation whether there will be a requirement, or at least encouragement, for all UK Administrations to adopt these measures if not already doing so. For example, Wales has the 5p carrier bag charge, England currently does not; Scotland has a National Marine Litter Strategy, Wales does not; Wales has a Scallop Order for all Special Areas of Conservation but England, Scotland and Northern Ireland do not. To ensure a coordinated approach to achieving GES in the UK, we believe *consistent* implementation of existing initiatives across Administrations would be appropriate.

We are aware that Defra is proposing several exemptions to achieving GES under Article 14 of the Directive, taking the view that '*no significant risk'* or '*disproportionate costs'* is a justified exemption potentially for Descriptors D2 (Non-indigenous Species), D10 (Marine Litter) and D11 (Underwater Noise). Where '*disproportionate cost*' is proposed as an exemption from achieving GES for these Descriptors by 2020, we seek further clarity on to who exactly this cost applies and the reasons for this.

[5] The European Commission's assessment and guidance {SWD(2014) 49 final}: The first phase of implementation of the Marine Strategy Framework Directive (2008/56/EC). Report from the Commission to the Council and the European Parliament. http://ec.europa.eu/environment/marine/eu-coast-and-marine-policy/implementation/reports_en.htm

We are aware that Defra are proposing to deviate from the Article 14 exemptions criteria for D10 (Marine Litter), specifically for achieving GES for 'litter on the seafloor' and 'litter in the water column'. We are concerned that to put forward 'further monitoring' as an exemption for litter when there is currently not a clear strategy for monitoring will inevitably result in the failure of Defra to meet GES for marine litter in the foreseeable future. The UK MSFD Monitoring Programme suggests that the strategy for benthic monitoring of the seafloor would be determined by Cefas in 2014. However, we are currently unaware of the outcome of this decision and therefore whether proposed monitoring will be sufficient to enable Defra to determine whether further measures are needed. This is not in line with the precautionary approach to ecosystem-based management, as required in Article 147 of the Treaty[6]. Furthermore, in the case of a proposed exemption to achieving GES for Descriptors Article 14 (1) requires Member States to *"continue pursuing the environmental targets, to prevent further deterioration in the status of marine waters"*.

[6] Treaty Establishing the European Community (as consolidated)

Response on Generic Measures (Part 3: Section 2)

Cross-cutting measures

NEW MEASURES NEEDED:

Cross-Cutting Measures

- The creation of memorandums of understanding across government departments / agencies in respect of the achievement of GES would be valuable.

Marine Planning and marine licensing

The Consultation identifies that the UK marine planning system will make a positive contribution towards the achievement of GES, if sustainable development of marine resources and the management of human activities are undertaken using an ecosystem-based approach. The application of an ecosystem-based approach to marine planning should apply throughout the decision-making process, from early draft Plan stage through to review of the adopted Plan, not just, for instance, within the Sustainability Appraisal. However, to date we have had concerns that marine planning in the UK is potentially detracting from, rather than contributing to GES due to its support for development.

- National marine plans must be practical "fit for purpose" tools which provide guidance and assist and support future planning in the marine environment. They should facilitate decision-making on the integration of sustainable use, protection and, where appropriate, enhancement of the marine environment, address conflict resolution, and advise on management at the land / sea interface and across sea-boundaries (inshore / offshore and nation to nation)

- Marine planning should include a central goal supporting delivery of ecosystem-based management, which should integrate environmental management with the social and economic requirements of marine plans. Marine Plans should not focus solely on economic or sustainable growth.

- Plans should identify the environmental limits of the plan area (and wider ecosystem) - defining environmental limits is an important requirement of the Sustainability Appraisal if Marine Plans are to be able to successfully determine whether Plan policies are sustainable.

- Plan policies should be informed by best available evidence and guided by the precautionary principle. Where evidence gaps are identified, the marine plans should signpost priority research areas to be undertaken.

- Marine plans should include specific objectives and strategies to tackle climate change by reducing emissions, and addressing mitigation and adaptation to climate change to support the delivery of GES for a number of Descriptors.

- Plans should also include detailed assessment of cumulative impacts, and show how different plan policies interact with each other in a given area. They need to identify potential areas of conflict and include guidance on addressing conflict resolution.

- Detailed assessment of the value of ecosystem goods and services, including the intrinsic and non-use value of biodiversity, needs to be incorporated in the development of all marine plans.

- Marine plans should incorporate, alongside spatial planning for activities and developments, the ecological coherent network of MPAs and should be used as key tool for consideration of the combined pressures of human activities on the network as a whole. Marine Plans should provide the necessary level of spatial direction to ensure that marine activities and developments avoid the most sensitive areas.

- Marine planning authorities should proactively seek to coordinate MSFD targets and marine planning targets where they align and, where this occurs, incorporate these into monitoring programmes for marine plans rather than duplicate work. Such monitoring would help to review the success of the environmental objectives of the Plan.

- To date the development of marine plans has lacked vision for the future of fisheries. During the development and implementation of marine plans Planning Authorities should include consideration of targets for Descriptor 3 and ensure that plans actively support the delivery of GES, e.g. through the identification and mapping of spawning and nursery areas. Marine activities should be directed away from these important areas if necessary. Furthermore, co-location should be promoted and encouraged through cross-sectoral discussions and appropriate incentives. Fisheries management should become integrated into marine planning and vice-versa.

- Marine Plans should directly (and indirectly) seek opportunities to further the delivery of specific MSFD Descriptor targets, for instance, by mapping of INNS and prevailing hydrographical conditions of the plan area. Online planning portals are useful tools for amalgamating such data, ensuring regulators and commercial marine users have access to all necessary environmental information. Marine Plans could also develop a coordinated marine litter strategy for the Plan area (such as in the Firth of Clyde Marine Spatial Plan), which encourages agencies and local authorities to work collaboratively to tackle this issue.

- For further recommendations on how marine planning can support delivery of Descriptor targets under the MSFD, please refer to the Joint Links paper 'Effective UK Marine Planning: Delivery of Good Environmental Status by 2020'.

NEW MEASURES NEEDED

Guidance for marine plans on supporting delivery of GES

- The development of UK guidance for marine plans on how to support the delivery of GES would be particularly useful. Such guidance could incorporate the requirements outlined above.

Environmental Impact Assessment / Strategic Environmental Assessment / Habitats Regulations Assessment

We agree that Environmental Impact Assessment (EIA), Strategic Environmental Assessment (SEA) and Habitats Regulations Assessment (HRA) are all fundamental to marine planning as well as the protection of habitats and wildlife and therefore to the delivery of GES, however nothing further to existing requirements is proposed for inclusion in the PoM i.e. further development of Cumulative Effects Assessment. As a minimum it would be valuable to stress the importance of these tools, when utilised correctly to include consideration of the consequences of the proposed development or activities for the delivery of GES, and for any guidance on EIA, SEA and HRA to be updated to this effect.

NEW MEASURES NEEDED

Update Guidance on EIA, SEA and HRA

- Guidance prepared for the undertaking of EIA, SEA and HRA should be updated to recognise the need for assessments to include consideration of cumulative and in-combination effects, and consideration of the impact of a development or activity on the delivery of GES.

Guidance on Annex II Species

- Habitats Regulations Assessments Guidance is also needed with respect to consideration of Annex II species.

Guidance on consideration of biotopes and species in impact assessments

- Guidance on assessments should require the full range of biotopes and species present in an area to be considered in the impact assessments.

Common Fisheries Policy

The Joint Links agree that implementation of the reformed Common Fisheries Policy (CFP) will be fundamental to achieving GES. For further comment relevant to the CFP see the response under Descriptor 3 and also relevant measures under Descriptor 1. In particular, we propose a tightening of the assessment and management of fish stocks, including setting the fishing limit for all commercially exploited fish stocks at or below F_{MSY}; improvements to the integration of fisheries management and the development of an ecologically coherent network of MPAs; and integration of fisheries management and development into marine spatial planning; strengthening of the management of recreational fisheries.

Marine Protected Areas

The Joint Links agree that the development of an ecologically coherent network of MPAs is essential to the achievement of a number of the GES characteristics and targets. For further comment relevant to the MPA network please see our response under Descriptor 1 and in particular D1 & D6 section on page 29 – 35.

Proposed UK Programme of Measures for the MSFD Descriptors (Part 3 Section 3)

General Biodiversity (Descriptor 1)

The protection of biodiversity is central to the delivery of GES, yet the whole approach proposed from the setting of targets and indicators through to the identification of measures for inclusion in the programme of measures contains significant gaps. With less than six years remaining for GES to be achieved, there is still a lot that is not yet operational e.g. targets, indicators and monitoring programmes to comprehensively address deepwater fish, cephalopods, coastal fish, cetaceans, seabird bycatch, pelagic and benthic habitats.

While we welcome progress on our overriding priority measure for D1, 4 and 6 of an Ecologically Coherent Network of well managed Marine Protected Areas, there is still much to be done to designate the whole network let alone manage it effectively. For example we have calculated that approximately only 1% of the entire UK Continental Shelf is legally protected from trawling and dredging. If we are to really achieve GES and maintain our biodiversity and seafloor habitats we need to do much better.

In addition to considering measures in relation to fish, birds, marine mammals, pelagic habitats and benthic habitats some general biodiversity measures are required.

NEW MEASURES NEEDED

Completion of targets, indicators and monitoring programmes

- Extend and / or complete work to elaborate targets, indicators and monitoring programmes for biodiversity not adequately addressed including deepwater fish, cephalopods, coastal fish, cetaceans, seabirds, pelagic and benthic habitats. A number of Priority Marine Features still remain unprotected by designated MPAs in Scotland, many of which are vulnerable and declining - urgent attention should be given to improving the evidence base for these features and incorporating them into existing or new MPAs.

Transboundary collaboration

- The Government should work with other EU member states to ensure that the full range of biodiversity can be maintained across borders and to address the protection of migratory and mobile species which move from country to country including reptiles, fish, seabirds and marine mammals.

Funding

- Levels of funding should be maintained, and if necessary enhanced, to ensure that measures can be implemented and enforced, and to allow for site specific monitoring, population monitoring and for research where or when required. Innovative monitoring initiatives should be investigated such as training and making use of commercial vessels for monitoring and survey needs. (Note that this is being taken forwards by the Celtic Seas Partnership Biological Diversity task group).

Enforcement and compliance

- Consideration should be given to opportunities to promote marine stewardship and to incentivise enforcement and compliance of existing biodiversity duties.
- To promote a level playing field between fishers, and ensure compliance with management measures, new technologies such as inshore vessel monitoring systems (iVMS), should be trialed, and, where appropriate, adopted throughout UK waters.

- Fines need to be punitive.
- A review of existing legislative powers to determine if these are being fully utilized, or implemented fully should be undertaken to ensure effective enforcement is possible across the UK administrations.
- Harmonisation of minimum landing sizes across UK administrations and consideration given to maximum landing sizes to ensure stock recovery.

Education and awareness

- Enhanced education and awareness programmes are required for a range of measures relevant to the protection of biodiversity. A dedicated programme aimed at enhancing existing education and awareness initiatives and creating new initiatives, particularly aimed at stakeholders but also at the wider public should be created in conjunction with relevant stakeholders including non-governmental organisations.

Fish (Descriptors 1, 4)

The UK's Initial Assessment recognises that there are over 330 species of fish found in the waters of the British Isles, and it will be imperative that the PoM developed does not focus solely on commercial fish species.

For Good Environmental Status (GES) to be achieved for fish diversity it is essential that the targets and indicators are developed, along with monitoring programmes, for all the functional groups identified for the purposes of the MSFD assessments and relevant to UK waters i.e. diadromous fish, coastal fish, pelagic fish, pelagic elasmobranchs, demersal fish, demersal elasmobranchs, deep-sea fish, and deep-sea elasmobranchs.

ARE THE PROPOSED MEASURES FOR THIS DESCRIPTOR SUFFICIENT?

The Government's consultation on Descriptor 1 Fish sets out an array of existing measures designed to address the management and in some instances conservation of fish. However we are disappointed that no new measures are proposed beyond existing planned measures and that the measures identified are focused primarily on fish species of commercial interest. While the consultation recognises that specific measures are required to meet GES for sharks, skate and rays, deepwater fish and diadromous fish, it does not go far enough in identifying further measures. Furthermore, it identifies some existing measures which as currently being implemented would have limited value for fish species. This includes the designation of the 2nd tranche of MCZs, or where it is unclear what action the Government will be taking such as the Convention on Migratory Species Shark Memorandum of Understanding which could have a significant impact for sharks, skates and rays.

A specific concern with Descriptors 1 and 4 Fish relates to the necessity for species to be present in 50% of surveys for them to be included in assessment data. The analysis that shows the logic behind setting this threshold so high should be made publically available, because we are concerned that setting such a high threshold creates a baseline on species' ranges and abundance that are not reflective of GES. For example, many areas have lost species that were resident in the recent past but which have since been drastically reduced due to fishing pressure (e.g. common skate in the Southern North Sea).

ADDITIONAL EXISTING OR PLANNED MEASURES FOR THIS DESCRIPTOR

Development of targets and indicators

- Targets and indicators must be developed for all functional fish groups identified for the purposes of the MSFD assessments and relevant to UK waters including demersal fish, diadromous fish, coastal fish, pelagic fish, deep-sea fish and demersal, pelagic and deep-sea elasmobranchs.

Monitoring

- Establishing monitoring programmes will be essential to assess current status and trends of all functional fish populations, and to understand and quantify the pressures.

NEW MEASURES NEEDED

Recovery plans

- Fully comprehensive recovery plans should be developed for all fish species in decline, including habitat recovery projects.

Fish MPAs

- Designation of fish MPAs for the species for which critical habitat (feeding, nursery, spawning grounds) are identified in UK waters as a constituent component of the ECN of MPAs.

OSPAR large fish index

- A measure should be developed addressing the recovery of size composition of fish stocks both as a measure to assessing the biodiversity of fish (Descriptor 1), the health of the stock (Descriptor 3) and the health of the food web (Descriptor 4). Use should be made of the OSPAR large fish index to assess improvements in fish stock structure and healthy food webs.

Regulation and codes for recreational fisheries

- Greater understanding should be developed of the scale of recreational fishing and the threat to fish biodiversity including identifying the extent of traditional recreational fishing, recreational fishing for financial gain and recreational fishing as a side-line to commercial fishing. Measures should be developed and targeted appropriately e.g. regulations, codes of practice and improved awareness materials on which fish can be targeted, released or landed and at what times of the years, and distributed through angling, sailing and other coastal users clubs and websites. Improvements in enforcement of existing measures should also be considered a priority and recreational fishing measures should be kept in line with commercial measures to ensure sustainability (see Descriptor 3).

Demersal fish

The UK Initial Assessment (Defra, 2012) identifies that there have been improvements in the status of demersal fish populations probably due to a reduction in fishing pressure and that fish communities in estuaries have benefitted from improvements in water quality. However, there is no room for complacency as 60% of the stocks in the North Sea for example remain unassessed, (See Descriptor 3 for further measures relevant to demersal fish).

NEW MEASURES NEEDED

Demersal fish MPAs

- Designation of demersal fish MPAs for the species for which critical habitat (feeding, nursery, spawning grounds) are identified in UK waters as a constituent component of the ECN of MPAs.

Recreational fisheries measures

- Measures to address recreational fishing should be kept in line with commercial measures to ensure sustainability (see above and Descriptor 3 for full elaboration of recreational fisheries measures).

Sharks, skates and rays

The UK's Initial Assessment raises particular concerns about the status of threatened and vulnerable species such as sharks, skates, rays, deep sea species and diadromous fish such as the European eel and salmon, and highlights the need for improved information in relation to oceanic sharks. Reports indicate that angel shark and common skate have disappeared from the Southern North Sea, and some authors believe that a blue shark population has disappeared from the Rockall Bank and Trough region. The Charting Progress 2 Feeder Report regional assessment identified that thornback ray, angel shark and blonde ray have been absent from Start Bay on the southwest coast in recent years. Furthermore, recent data from surveys in the Celtic Sea suggests that the composition of catch has changed with higher trophic level species including sharks and rays decreasing markedly. In the Irish Sea a comparison of data collated between 1901 – 1907 and 1989 – 1997 found that some species had disappeared including angel shark while others have increased in abundance such as lesser spotted dogfish.

NEW MEASURES NEEDED

Shark and ray MPAs

- Designation of shark, skate and ray MPAs for the species for which critical habitat is identified in UK waters, e.g. basking shark, as a constituent component of the ECN of MPAs. These species should also be appropriately represented and replicated within the network (e.g. additional MPAs for common skate in remaining hotspots in Scotland).

Transboundary cooperation

- Transboundary cooperative efforts should be undertaken to ensure integrity of critical habitats for migratory shark and ray species, and to ensure compatibility of measures to minimise impact of fishing activities on sharks and rays.

Establish shark monitoring programmes

- Dramatic changes have already occurred in shark, ray and skate populations and establishing monitoring programmes for these populations in UK waters is fundamental to understand current trends, pressures and changes in the status.

Boat strike measures

- Measures, such as training and accreditation schemes and codes of conducts for boat operators, should be introduced to support the avoidance of boat strikes, particularly powerboats, for a range of marine wildlife including basking sharks.

Regulation and codes for recreational fisheries

- Greater understanding should be developed of the scale of recreational fishing and the threat to shark and ray biodiversity (see above and Descriptor 3).

Diadromous fish

The UK Initial Assessment highlights the need for improved information in relation to the causes of declines in diadromous fish populations and the Feeder Report for Charting Progress 2 identifies lampreys, sturgeon and shads as requiring additional research. With respect to diadromous fish, in the Western Channel / Celtic sea region there has been a long term decline in the rate of capture of adult eels and recruitment of elvers, and also signs of a long-term decline in twaite shad populations. Dramatic declines have been experienced in salmon numbers from a number of rivers in the Minches and Western Scotland regions since the 1970s. Between 1890 and 1896, around 400 to1000 Atlantic sturgeon were caught each year in the North Sea, but now it is rarely found.

NEW MEASURES NEEDED

Recovery plans

- Fully comprehensive recovery plans should be developed for all diadromous fish species in decline, including habitat recovery projects.

Diadromous fish MPAs

- Designation of diadromous fish MPAs for the species for which critical habitat is identified in UK waters as a constituent component of the ECN of MPAs.

Research and monitoring

- Establishing further research and monitoring programmes will be essential to assess current status and trends in diadromous fish populations, and to understand and quantify the pressures.
-

Regulation and Codes for recreational fisheries

- Greater understanding should be developed of the scale of recreational fishing and the threat to diadromous fish biodiversity (see above and Descriptor 3).

Deepwater fish

The UK's Initial Assessment identifies that while data are scarce for deep-water fish assemblages, the data that is available indicates that diversity of deep-water fish communities has been reduced in areas subject to deep-water fisheries.

NEW MEASURES NEEDED

Deepwater fish MPAs

- Designation of deepwater fish MPAs for the species for which critical habitat is identified in UK waters as a constituent component of the ECN of MPAs and, where appropriate, designation of vulnerable marine ecosystems to protect the habitat of deepwater fish species from deepwater trawls.
- The vulnerability of non-commercial deepwater fish species should be taken into account when assessing deep sea fisheries – the removal of even small numbers of some vulnerable species can have large population impacts and so must be considered in any management and conservation considerations.

There will also be a requirement for additional monitoring

- Expanding monitoring programmes will be essential to quantify the status and trends in deep-water fish communities and to quantify the pressures.

Marine Mammals (Descriptors 1, 4)

The MSFD stresses the importance of regional cooperation and collaboration, and the UK's Initial Assessment notes the more complicated scenario with respect to cetaceans. Cetaceans found in UK waters are generally part of larger biological populations, whose range extend into the waters of other States and / or the high seas, and as a result may be affected by pressures beyond UK waters.

We are concerned that the baseline for marine mammal targets will be 1992 or the closest best estimate, rather than making use of historical data. It is appreciated that historical data might not be available at appropriate spatial and temporal scales across the whole region, however it is clear from historical data that some cetacean populations have changed (declined) significantly over many decades and that using 1992 as a baseline for all cetacean populations will not provide an accurate, or adequate, assessment for GES.

We are concerned that bycatch of marine mammals in fisheries remains a major threat to individuals and evidence suggests may be exceeding sustainable levels for some species. Whilst the legislation is in place to protect these species, implementation of further and effective mitigation is urgently required.

We are extremely concerned about the ongoing work to develop appropriate "environmental limits for cetacean and seal by-catch". We understand that such tools are useful in order to determine population level impacts and for threats to be understood, measured and reduced. However, we do not support development of limits which are then used to derive an 'acceptable' number of individuals which can be removed from a population, as the result of fishing activities and other human activities for example renewable energy. In line with the strict protection which should be provided under existing legislation, including the Habitats Directive, mitigation measures should be developed with the ultimate goal of reducing the impacts to zero.

In conclusion, we are disappointed that no new measures are proposed beyond existing planned measures and we propose a number of essential new measures below.

Seals

ARE THE PROPOSED MEASURES FOR THIS DESCRIPTOR SUFFICIENT?

Recent significant declines in harbour seal populations in some areas, in particular in the Shetland Islands, the Orkney Islands, the outer Hebrides and the east coast of Scotland, are of major concern. The causes of the dramatic decline are not understood, though a number of factors are considered potentially relevant. We do not believe that the measures identified currently will necessarily be sufficient to secure GES for all seal populations.

NEW MEASURES NEEDED

Seal recovery plans

- Development of species recovery plans for seal populations identified as having declined historically or still in decline.

Natura 2000 designations and effective management for Seals in offshore waters

- Designation of a network of offshore SACs for seals in important foraging habitats.

Bycatch

- Measures to address the bycatch of seals through gear limitations, closed areas or closed seasons are required, in particular in static net fisheries in ICES subarea VII where bycatch totals were estimated at around 470 individuals in 2014 (Northridge et al., 2014). Further research is also needed to determine which populations are being impacted in order to ensure MSFD indicators and targets are met, particularly given the relatively low pup production of seal populations breeding locally in southern Ireland, Wales, Cornwall and France.

Preventing injuries

- Further research to fully clarify the cause of characteristic fatal 'spiral' injuries to seals, including an expanded programme of necropsies for dead stranded seals.
- Until it can be eliminated as a cause of death, measures should be introduced that require vessels with ducted propellers to fit guards or ban vessels with unprotected ducted propellers in the vicinity of well-established seal populations.

Fish farms and seals

- The siting of aquaculture facilities away from important sites for seals and harbour porpoises would reduce local impacts and associated requirement for other management measures.
- There should be a presumption against the use of Acoustic Deterrent Devices (ADDs) in favour of more robust and benign solutions. However, should ADDs be maintained, there should be strict adherence to the Code of Conduct for the Good Practice of Aquaculture (Scottish fin fish).
- Licensing of ADDs should be mandatory, especially where there is potential for disturbance to EPS, including where the presence of an ADD may cause a barrier to passage, e.g. around straits, sounds and embayments, or in favoured porpoise feeding habitat e.g. headlands and tidal upwellings (Northridge et al., 2010).
- Clear, transparent and precautionary guidance around the use of ADDs should be produced by SNCBs, including in circumstances where ADDs could be used / not used, and if used, what conditions are needed. Monitoring effectiveness and impact should be a condition for use of ADDs. Where ADDs are used, Northridge et al. (2010) recommend AAD units be well maintained to ensure the effective operation of all ADDs and to prevent a situation whereby the site is compromised. However, overall acoustic output could continue to have a disruptive effect on porpoise movements.

Noise related issues (see measures proposed under cetaceans)

- Establish exclusion zones and buffer zones where unmitigated impulsive noise would not be permitted e.g. in and around MPAs, but also recognizing that the noise exclusion zones could be seasonal dependent on the occurrence of affected species. (Also relevant to Descriptor 11).

Enhanced monitoring of seal populations

- Enhanced monitoring of seal populations, in particular harbour seal populations, plus

investigation and reporting on the causes of the recent declines in populations. This should also include monitoring of designated seal haul out sites[7] under the Marine (Scotland) Act 2010.

Minimise seal entanglement

- New measures are needed to reduce and minimize seal entanglement in priority areas. For example seals in the Southwest suffer the highest rates of entanglement of any pinniped species worldwide.

Cetaceans

ARE THE PROPOSED MEASURES FOR THIS DESCRIPTOR SUFFICIENT?

Charting Progress 2 (Defra, 2010) identifies a number of areas where further effort is need to meet EU requirements. This includes the development of a strategic monitoring and surveillance programme, further monitoring of static-net fisheries, information about the potential impacts of activities which generate noise, plus the possible synergistic effects of exposure to various environmental pollutants. While welcoming the designation of a number of (non-cetacean) nature conservation MPAs in Scottish waters in 2014 which will provide some level of protection for some cetaceans and the ongoing work in three "proposed MPAs" for minke whales (2) and Risso's dolphins (1) that we hope will go to public consultation in summer 2015, we believe that further cetacean sites are still required, particularly for cetacean species where there is critical habitat in UK waters. This includes for the white-beaked dolphin, that was identified as being suitable for MPA measures in Scottish waters but sites could not be determined due to a paucity of data and for harbour porpoises, through the designation of a network of SACs, including establishment of new sites in Welsh waters.

Further measures are also required to adequately address other significant threats to cetaceans in UK waters, in particular that of bycatch in fisheries, as well as the establishment of new measures under descriptors such as noise, fisheries and marine litter. Preliminary bycatch estimates for the whole UK fleet provide estimates of porpoise bycatch of around 1600-1900 porpoises per year as well as 320 common dolphins (Northridge et al., 2014). Although the legal basis for monitoring and conservation measures already exists under the Habitats Directive, existing implementation of bycatch mitigation measures may not be sufficient to meet GES *(ICES, 2014; ASCOBANS, 2014).* The full impacts of other threats in addition to bycatch, including a considerable increase in noise resulting from pile driving associated with wind farm development in future years, has not been considered.

ADDITIONAL EXISTING OR PLANNED MEASURES FOR THIS DESCRIPTOR

Cetacean indicators

- As a matter of urgency complete work to establish cetacean indicators for all cetaceans offered strict protection under the Habitats Directive, including those for which critical habitat has been identified in UK waters.

[7] http://www.gov.scot/Topics/marine/marine-environment/species/19887/20814/haulouts

NEW MEASURES NEEDED

Cetacean recovery plans

- Development of species recovery plans for all regions where the Charting Progress 2 assessment of cetacean populations is poor condition or moderate condition (Eastern Channel, Western Channel, Celtic Sea, the Irish Sea and the Minches and Western Scotland). Species recovery plans will have the added advantage of identifying the needed action to address cumulative impact of pressures on cetacean populations.

Cetacean MPAs

- Designation of cetacean MPAs for the six species for which critical habitat is identified in UK waters as a constituent component of the ECN of MPAs (harbour porpoise, bottlenose dolphins, white-beaked dolphins, Risso's dolphins, common minke whales and short-beaked common dolphins).

Bycatch measures

- Charting Progress 2 (Defra, 2010) identifies bycatch in fishing gear, which predominantly affects harbour porpoise and common dolphins (although many other species are caught) as the greatest threat to cetaceans, both historically and still today. It also recognises an entanglement problem with minke whales in nets in the Minches. More recently, ICES (2014) found that although uncertainty was high (due to variable and inadequate monitoring levels), current bycatch levels of harbour porpoise in the North Sea may exceed sustainable levels. The south-western waters of the Western Channel and Celtic Sea are also principal areas of concern for cetacean bycatch (Northridge et al., 2014). Further measures to address the bycatch of cetaceans through gear limitations, closed areas or closed seasons are required in line with existing requirements under the Habitats Directive.

Stronger targets for underwater noise (also relevant to Descriptor 11)

- Stronger targets are required to address underwater noise and ensure adequate protection for cetaceans. The existing targets and indicators fail to address understanding and reducing the impacts of underwater noise. For example targets could address the total area affected by underwater noise, trends in ambient noise levels particularly in areas of known concentrations of cetaceans, and / or targets relevant to developing and applying technological solutions to the level and extent of underwater noise.
- Collecting noise data under the two existing indicators alone will not enable GES to be met by 2020, where evidence already demonstrates short term noise impacts and increasingly, long term impacts. An indicator should be set to limit noise outputs and therefore to limit noise impacts to cetaceans.

Exclusion and buffer zones

- Establish exclusion zones and buffer zones where impulsive noise would be more heavily mitigated e.g. within and surrounding MPAs, although these could be seasonally dependent on the occurrence of affected species.

Noise reduction / mitigation

- Require and incentivise operators or developers introducing loud impulsive noises into the marine environment to investigate alternative options and contribute to the development of noise reduction / mitigation technologies before permits/consents are issued (also relevant to Descriptor 11) and ideally during planning stages so costs can be factored in early.

Minimise cetacean entanglement

- New measures are needed to reduce and minimise cetacean entanglement in priority

areas. Approximately 1/3 of cetacean strandings show signs of net entanglement, jeopardizing the stability of populations in and beyond UK waters.

There is also a requirement for enhanced monitoring programmes

- A strategy that includes enhancement of monitoring programmes to establish the status of coastal and offshore cetacean populations, particularly short-beaked common dolphin, Atlantic white-sided dolphin, Risso's dolphin, long-finned pilot whale, killer whale and sperm whale for which the status is unknown due to a lack of suitable abundance estimates, but also for harbour porpoise, minke whale, white-beaked dolphin and fin whale which are considered to be the most abundant of cetaceans in UK waters along with the bottlenose dolphin. Charting Progress 2 identifies a number of areas where further effort is needed to meet EU requirements for cetaceans including the development of a strategic monitoring and surveillance programme.
- Charting Progress 2, ASCOBANS and other scientific fora have identified that further monitoring and more effective mitigation of static-net fisheries where cetacean bycatch is greatest is required.

Birds (Descriptors 1, 4)

Seabirds

The UK's Initial Assessment recognizes that there have been declines in a number of populations of both seabirds and waterbirds since the late 1990s. Both Charting Progress 2 and the UK's Initial Assessment recognise that while many seabird populations have increased in size over the past century, declines since the mid-1990s are evident in a number of populations of breeding seabirds reflecting a combination of increasing human pressures and the impacts of climate change.

Despite the implementation of several of the existing measures identified, the Seabird Monitoring Programme (SMP) has shown a significant decline in the abundance of several seabird species, particularly since 2000, including black-legged kittiwake (-61%), European shag (-41%), common tern (-17%), lesser black-backed gull (-48%) and Arctic skua (-74%).[8] While this is likely to have been in part due to impacts from climate change, which are outside the scope of this Directive, the increasing demand for marine space and cumulative impacts of human activities such as fisheries, energy and recreation have also clearly played a large part, and measures to address these pressures have not to date succeeded.

Long term declines were also evident for Arctic skua, lesser black-backed gull, black-legged kittiwake, European shag, sandwich tern, northern fulmar, and great black-backed gull populations. In addition, in 2004, 2005 and 2007, the mean breeding success of twenty-one seabird species was at its lowest levels since the mid-1980s when monitoring began, with the species most acutely affected including black-legged kittiwakes and guillemots.

Furthermore, ICES assessments of the Ecological Quality Objective for seabird abundance (which corresponds to the UK MSFD target) concludes that throughout the period 2000-2012 this objective was not met, with particular declines in the North Sea since 2003 and in the Celtic Seas since 2005.[9] This is a clear "cause for concern" for ICES.

It therefore seems very unlikely that ongoing measures identified in this consultation will allow seabirds to be restored to populations consistent with GES, given that for most seabird species, a past baseline has been used, inferring the need to not just stop further decline, but reverse it.

ARE THE PROPOSED MEASURES FOR THIS DESCRIPTOR SUFFICIENT?

In light of recent declines in a number of seabird populations, we do not believe that the proposed measures will meet the requirements of the Directive and in particular are disappointed that no new measures are proposed beyond existing planned measures. We do, however, welcome and support planned measures for island restoration and seabird bycatch. A number of proposed new measures we believe are required are elaborated below.

ECN of MPAs

- Further effort is required to complete the MPA network, to include offshore SPAs for foraging seabirds, aggregations of tern species and inshore aggregations of wintering birds, as well as national MPAs for birds (such as black guillemot) and waters adjacent to breeding SSSIs, with all sites well-managed and in Favourable Conservation Status (FCS). Areas important for prey species, such as sandeels, should also form part of the network of sites.

[8] http://jncc.defra.gov.uk/page-3201

[9] http://www.ices.dk/sites/pub/Publication%20Reports/Advice/2013/Special%20requests/OSPAR_EcoQO_on_Seabird_Population_Trends.pdf

NEW MEASURES NEEDED

MPAs – key prey species and frontal systems

- Within the ECN of MPAs, protection of key seabird and waterbird prey species, including sandeels and other forage species, and protection of key frontal systems used by mobile species should be included.

Sustainable fisheries

- Ensure active delivery of sustainable management of fisheries under the reformed Common Fisheries Policy (CFP) by the Marine Management Organisation (MMO), and devolved administrations, including compliance with the requirements of the Habitats Directive.

OSPAR Recommendations for threatened and declining bird species

- Ensure full implementation of relevant OSPAR Recommendations for threatened and declining bird species.

Recovery and restoration

- Species/habitat recovery projects should be developed and implemented, including restoration of island habitats, removal of invasive predators and effective management regimes for long term colony success, followed by the implementation of a best practice set of biosecurity measures. Assessment of where the greatest conservation gains can be achieved with the simplest of intervention should be undertaken to prioritise sites for mammal eradication on key seabird breeding islands.

Materials, education and training for island restoration

- Develop and distribute biosecurity handbooks, protocols, and provide education and training programmes to prevent invasion or reinvasion, as part of a UK-wide prioritised programme of island restoration and biosecurity. We welcome and support reference to this in the consultation.

Support for NGO work on island restoration

- Leadership, coordination and resources should be provided for NGO work on island restoration.

Addressing recreational activities in and around seabird protected areas

- Develop and distribute Codes of Practice, and where necessary introduce regulation, for marine recreation in and around protected seabird areas.

Seabird bycatch

- Development and implementation of a “UK Seabird Bycatch Plan of Action” is needed. This should include the development of appropriate management and technical mitigation measures for eliminating seabird bycatch in fisheries. These need to be in partnership with fishermen, based on the identification of key areas of interaction and support collaborative programmes involving fishermen, NGOs, IFCAs and others to address local seabird bycatch hotspots.

Recreational gill net fisheries

- Develop a programme to appropriately manage the impacts of recreational gillnet fisheries.

All of the above relies on effective monitoring

- Breeding success in seabirds is very dependent on feeding conditions and events such as storms, but generally it is not expected that there would be persistent trends. However, downward trends have been apparent for a number of species in recent

years. Ongoing monitoring is essential to understand the trends, and existing surveys and monitoring programmes need to be supplemented in order to understand the link between the current pressures and the trends and ensure that action is effective.

Waterbirds

The UK's Initial Assessment[10] reports that the average number of waterbirds wintering in or migrating through marine areas in the UK doubled on average between the mid-1970s and the mid-1990s. However, since then average numbers have declined, although the mean abundance remains 85% higher in winter 2006/07 than it was in 1975/76. Of the waterbirds assessed only just over one-third have remained stable or increased in the ten years from the late 1990s and the trend for more than half of the waterbirds assessed over the past decade is downward, with some diving species and estuarine waders declining more than other species. Long term declines (i.e. over 25 years) are seen in a number of waterbirds including dunlin, oystercatcher, bartailed godwit, pochard, and goldeneye. The data also shows serious declines in the 10 years covered by the assessment in eider, shelduck, tufted duck, ringed plover, redshank, curlew, red-legged merganser, mallard, and great-crested grebe. Some species of diving duck and estuarine wader have declined more dramatically with 54% fewer dunlin, 43% fewer goldeneye and 28% fewer bar-tailed godwit in 2006/07 than in 1975/76. Pochard, goldeneye and red-breasted merganser are at their lowest numbers since 1975/76. While the cause of the recent downturn in a number of waterbird populations is not clearly identified, the UK's Initial Assessment highlights a shift in aggregation areas in response to climate change. There is evidence that waterbird populations are shifting from the south-west to the east coast, including possibly to overwintering grounds on the coasts of mainland Europe.The Initial Assessment highlights the possibility that the international importance of the UK's coast may diminish. The Assessment recognises that future assessments of waterbird populations would be strengthened by the inclusion of information on trends in the numbers of wintering waterbirds, in particular divers, grebe and seaduck. There is also a need to address knowledge gaps in the understanding of the impact of pressures on waterbirds.

The possible changes in waterbird populations also emphasises the importance of international / transboundary assessments of waterbird populations and collaboration, including cooperation over the minimisation of threats and identification of opportunities for mitigation and adaptation in response to a changing climate.

ARE THE PROPOSED MEASURES FOR THIS DESCRIPTOR SUFFICIENT?

In light of recent declines in a number of waterbird populations, we do not believe that the proposed measures will meet the requirements of the Directive and in particular are disappointed that no new measures are proposed beyond existing planned measures. While recognising it is necessary that there is continued implementation of existing initiatives and efforts, a number of proposed new measures are elaborated below.

ECN of MPAs for waterbirds

- Completion of the MPA network, to include comprehensive representation of waterbirds, with all sites well-managed and in Favourable Conservation Status (FCS) is an absolute priority for waterbirds, including protection of feeding sites adjacent to coastal protected areas which support breeding populations.

[10] Defra, 2012. UK Initial Assessment and Proposals for Good Environmental Status, March 2012.

NEW MEASURES NEEDED

Transboundary cooperation and collaboration

- As waterbird populations appear to be shifting in response to the changing climate, transboundary assessments, cooperation and collaboration will become increasingly important. Integration of coastal protected areas, MPAs and protection of foraging sites across national boundaries should be prioritized to ensure ecologically coherent networks for these species at the transboundary level.
- **All of the above relies on effective monitoring.** It is important that the gaps in data for waterbirds are addressed. The serious downturn in waterbird populations in recent years highlights the particular need for the monitoring programme for waterbirds to be strengthened. In particular, with respect to the collection of data on inshore waterbirds and the need for information on trends in numbers of wintering divers, grebes and seaducks. Knowledge gaps in understanding the causes and consequences of pressures on waterbirds should be addressed, particularly the possible impacts of climate change, but also the impact of other pressures too. Monitoring needs to be undertaken alongside appropriate measures to ensure that the measures are effective.

Pelagic Habitats (Descriptors 1, 4, 6)

The current status of pelagic habitats and the status of plankton need to be clarified. While plankton as a whole might be considered healthy and subject to few direct human pressures, this is not the same as the status of pelagic habitats. The UK's Initial Assessment (2012) points out that it is unclear to what extent natural variability and pressures, including climate change, ocean acidification and cascading effects from fishing, may be influencing the changes seen in plankton distributions and plankton communities. There is evidence of significant change in the composition, abundance and spatial and temporal abundance of both phytoplankton and zooplankton. Indeed, the UK's Initial Assessment refers to the overall assessment of the plankton community as experiencing "some problems". It explains that changes have been observed in plankton communities as a result of rising sea temperatures, Changes include a large increase in phytoplankton biomass over the past two decades in some areas; many phytoplankton species groups blooming earlier in the year resulting in them being out of phase with zooplankton and fish larvae that rely on them for food, and a progressive shift northward in warmer water zooplankton and a retreat to the north of colder waters species over the past 50 years.

Reptiles

One major gap relates to sea turtles. The UK's Initial Assessment identifies four species of turtle occasionally reported from UK waters, with the critically endangered leatherback turtle being the most commonly sighted and the only turtle regarded as a true member of British fauna. Some areas, such as Carmarthen Bay and Tremadog Bay are regarded as foraging grounds. According to the UK's Initial Assessment, the magnitude of key pressures, current status and trends, conservation status and predicted status cannot be assessed as existing data is too sparse. However, it recognises that leatherback turtles are critically endangered globally and that there is a need to collect data internationally around the western approaches to the European Shelf i.e. Celtic Seas and Bay of Biscay regions. Three lines of high priority research are identified - genetic and tagging studies to establish migratory patterns, analyses of bycatch data and monitoring. However, the proposed monitoring programme did not propose any monitoring with respect to marine turtles and no measures are proposed!

ARE THE PROPOSED MEASURES FOR THIS DESCRIPTOR SUFFICIENT?

The approach to delivering GES with respect to pelagic habitats is extremely limited and flawed in that it focuses purely on the planktonic community. There are very few measures directed towards protection and management of the pelagic ecosystem and no new measures proposed. Overall the approach to the protection of biodiversity of pelagic habitats is insufficient.

NEW MEASURES NEEDED

Designation of MPAs based on pelagic features

- Sites focused on pelagic features which act as foraging, rafting, spawning and / or nursery grounds should be included in the ECN of MPAs, with conservation objectives identified, including restoration of habitats (e.g. from the impacts of pollution, or mitigation as a result of climatic changes), for all sites.

Addressing turtles

- Develop targets, indicators and monitoring programmes and identify appropriate measures to achieve GES with respect to turtle species.

Research

- The status of other components of the pelagic ecosystem, including squid, cuttlefish and octopus, microbial communities, and pelagic fish species, particularly those not targeted by commercial fisheries should be assessed. Targets and monitoring programmes need to be established to determine current status and trends and to understand the impact of pressures on these components of pelagic ecosystems.

Monitoring

- The UK's Initial Assessment recognises that additional monitoring is likely to be needed for pelagic habitats and new monitoring relevant to pelagic habitats, to address gaps in terms of data availability, monitoring and analysis is due to be delivered in 2016 to provide a full monitoring programme. Monitoring will be essential to better understand the current status and trends and to begin to understand the relative impact of the pressures identified and should include all components of the pelagic habitats including plankton with a benthic life phase.

Eutrophication and pelagic systems

- Ensure that measures to tackle eutrophication (Descriptor 5) will also have benefits for the maintenance and restoration of food webs, for example, by reducing adverse effects of anthropogenic nutrients on planktonic assemblages. (Also relevant to Descriptor 4).

Benthic Habitats (Descriptors 1,6)

The UK's Initial Assessment, based on the conclusions of Charting Progress 2, identifies that impacts on seabed habitats are widespread and that the composition of seabed habitats has been altered over large areas. It also identifies that sediment habitats are generally more degraded than rocky habitats and subtidal habitats close to shore are generally impacted by a greater variety of pressures than habitats further offshore. The main causes of damage and degradation differ between the intertidal zone and the subtidal zone. Loss of habitat, hydrological changes and, to a lesser extent, pollution and nutrient enrichment have been identified as the main causes of damage and degradation in the intertidal zone, while demersal fishing activity, in particular benthic-towed fishing gear, is considered the main cause of damage and degradation in subtidal habitats. We as Joint Links agree with these aspects of the assessment as detailed in the "status of benthic habitats" in the consultation. Charting Progress 2's assessment of the six broad-scale habitats also went on to conclude that:

- intertidal rock is generally in a good condition,
- human pressures have adversely affected moderate to large areas of intertidal sediments, particularly mudflats and saltmarshes, in most regions,
- large areas of both shallow subtidal sediments and shelf subtidal sediments have been impacted by mobile fishing gear,
- limited areas of subtidal rock habitats have been impacted by human activity – although some are permanently damaged or have been removed by mobile fishing gear, and
- in some regions large areas of deep-sea habitats have been similarly affected by mobile fishing gear.

The Charting Progress 2 Feeder Report anticipates that further localised losses of some habitats will occur in the future as a result of development for renewable energy (wind, wave and tidal) and container port facilities and marinas at the coast. In addition, it suggests the intensity of pressure is anticipated to remain relatively stable for the next one to two decades, but this does not recognise that the combined and cumulative pressures of additional developments and activities over time all add to cumulative biodiversity loss. It is not clear what additional pressure will result from climate change. For example via the establishment and range extension of non-native species, coastal squeeze as sea levels rise, along with changes in seawater salinity and temperature. In addition, in light of recent tidal surges and flooding, changes in weather patterns should be considered, particularly for intertidal habitats. Moreover, it is not clear how the intensity and distribution of some activities, such as bottom trawling and aggregate dredging, will change in the future. Conversely the UK's Initial Assessment favours the possibility of the status of seabed habitats remaining stable or improving slightly as demersal fishing activity is predicted to decrease in spatial extent between 2010 and 2020. However, it is not clear why or where this may occur and unless areas are closed permanently from occasional trawls this will not contribute to GES and recovery. It also recognises that the development of tidal range devices may result in significant impacts on intertidal habitats along with coastal squeeze and that there are potential effects on biogenic habitats resulting from ocean acidification.

Overall it needs to be made much clearer that unless a good proportion of our benthic habitats are actually protected from all damaging activities and most notably bottom towed gear then recovery and achievement of GES will not occur. To date only 3080 km[11] square of the seabed are actually legally protected from trawling and dredging (within inshore English EMS) which amounts to only approximately 1% of the UKCS. While this will

[11] Area of sea now in byelaws introduced by IFCAs in their new approach to managing fisheries in European Marine Sites

gradually increase as damaging fisheries are increasingly managed to meet the requirements of the Habitats Directive all around the UK and MCZ and Scottish MPA management are introduced we are still a long way from providing sufficient protection of D1 and D6 Biodiversity and Benthic habitats to achieve GES.

At the EU level our once rich, productive and diverse marine environment is very degraded. Today, Member States' reports show that whether looking at marine species (fish, mammals, birds, invertebrates or reptiles) or habitats less than 20 % (often much lower) of all biodiversity features (i.e. species, habitats and ecosystems) are considered as being in Good Environmental Status[12]. This pattern is consistent throughout all the marine regions (except the Black Sea where the status of all biodiversity features is reported as 'unknown')[13]. Ambitious, strong and urgent measures are therefore needed to address this issue and implement the Biodiversity Descriptors of MSFD.

ARE THE PROPOSED MEASURES FOR THIS DESCRIPTOR SUFFICIENT?

We strongly welcome the proposed and planned measures to achieve an Ecologically Coherent Network of well managed Marine Protected Areas. If designated and if well managed an ECN will make a considerable step forward towards meeting D1 and D6 and hence achieving GES. As such designating an MPA network is specifically mentioned in the Directive under Article 13.4.

However, some new measures are needed too in order to meet these descriptors, given that the MPA network is unlikely to fully protect a very large area of benthic habitats. We are hence disappointed that no new measures are proposed and that achievement of GES is proposed to be based solely on existing measures or planned measures which have yet to be implemented.

It also imperative to the achievement of GES and to the delivery of an ECN of MPAs that there is no weakening of the current obligations in the Habitats and Birds Directives. We believe a clear commitment to support the existing Directive needs to be demonstrated by the UK Government if we are ever to meet GES.

ADDITIONAL EXISTING OR PLANNED MEASURES FOR THIS DESCRIPTOR

Completing the Ecologically Coherent Network of MPAs

We welcome re-affirmation of the UK's commitment to developing an ecologically coherent network under OSPAR. However, we think the first paragraph detailing the work Government has planned to implement to achieve this network needs to be much stronger and more committal given the ECN is the primary measure Government is taking to achieve D1 and D6 in particular the English MCZ sentence stating "it is anticipated" is very weak. We would like to see something more along the lines of:

- The UK will fulfil its commitments to complete designation of an Ecologically Coherent Network of Marine Protected Areas which will include:
- Completing England's contribution to the network through more tranches of MCZs, the second tranche to be designated in 2015 and further tranch(es) in 2016/17

[12] European Environment Agency. 2014. Marine Messages: Our seas, our future — moving towards a new understanding. ISBN 978- 92-9213-419-8
[13] European Environment Agency. 2014. Marine Messages: Our seas, our future — moving towards a new understanding.

- Completing Wales contribution to the network, designating new MPAs (of European and national importance) where needed to fill ecological gaps in their waters
- Completing NI contribution to the network, designating a network of MCZs by 2016
- Completing Scotland's contribution to the network with a few further MPAs as needed
- Completing the Natura 2000 network, which includes identifying, designating, management and enforcement of new sites of European importance for offshore aggregations of marine birds and for harbour porpoise.

To achieve an ecologically coherent network Joint Links believe that the principles of "adequacy" and "viability" as recommended by JNCC and Natural England in the Ecological Network Guidance need to be added to the OSPAR principles listed.

- **Adequacy** – For European Marine Sites alone the EC recommends protection of 20-60% of the listed habitats and species in their waters[14]. Scientists worldwide recommend similar with an average of approximately 30% for representative broadscale habitats. Meanwhile rare and threatened habitats need to be protected in their entirety to ensure no net loss of biodiversity. One route to determine what percentage should be protected is to use species-area curves. This was used to identify how much surface area of different representative habitats was required to be protected to 'capture' the vast majority of constituent species within the UK MPA network (Rondinini, 2011[15]). This science is not new, and allows nature conservation advisors to tell governments on how much of representative habitat space is needed to be protected in order to allow a significant proportion of the seabed to recover its natural range and climax status of marine species and habitats.

- **Viability** – sites should primarily be large in order to be viable protecting the majority of life-history stages of constituent species within the MPA boundary and to ensure that 'edge effects' of potentially damaging activities don't impinge on feature condition inside sites. Additional buffer zones will help ensure this protection;

- **Representivity** – All benthic habitats need to be adequately represented in order to prevent any net loss of biodiversity. In addition pelagic habitats and species need to be protected through the identification and designation of sites important for key life stage sites for mobile species including feeding, breeding, spawning and nursery grounds, thus ensuring that the full range of representative features is included in the UK network. Also species corridors should be fully investigated and designated along with sites of importance for the resilience of food webs in UK waters.

Best available evidence for designation of sites

- Best available evidence should be used and a lack of detailed information on broad scale habitat or species distribution should not be a reason to delay designation and management measures.

Ensuring MPAs are well managed

- Joint Links believes there needs to be much greater recognition in this section that much work still needs to be done to ensure that UK MPAs are well managed and actually protected. If MPAs are not properly protected they are just marine areas, no different to our wider seas. To date only approximately 3080 km square of the

[14] European Commission. Guidelines for the establishment of the Natura 2000 network in the marine environment.
[15] Rondinini, C. 2010. Meeting the MPA network design principles of representation and adequacy: developing species-area curves for habitats. JNCC Report *No. 439*

seabed is legally protected from all trawling and dredging which amounts to only approximately 1% of the UKCS. We believe the MPA network must be properly managed and protected from all damaging activities, most notably bottom towed fishing gear (due to its impact and spatial footprint). Well managed sites prevent damaging activities, allow seabeds to recover (allowing seafloor integrity to be restored), have the necessary monitoring mechanisms, and can be well-enforced. Most European Marine Sites (SACs and SPAs) still have inadequate management measures to prevent damaging activities.

While we welcome mention of the measures to limit the effects of fishing in English waters, the use of "under consideration" weakens this. We would prefer something stronger such as:

- The UK will work to ensure all its MPAs are well managed and sites are in favourable condition. This work will include implementing a new approach to fisheries in European Marine Sites throughout the UK's inshore waters as well as effective management of fishing in national MPAs and MCZs.

- For offshore MPAs the existing text could be strengthened to state the UK aims to ensure these sites are maintained or recovered to favourable conservation status but needs the support of the EU and other Member States to achieve this. While we are progressing reasonably well to protect inshore English EMS, the lack of protection for offshore sites prevents our ability to achieve D1 and D6.

- All sites should adopt a conservation objective for biodiversity recovery to achieve climax communities. Achieving the MSFD biodiversity descriptors will require existing management measures to be strengthened in some cases and for new management measures to be adopted in other sites.

- To ensure compliance, any fines utilised must be punitive with additional measures such as points on licences for vessels owners and masters, reduced access to fishing resource, etc, also considered. All measures used as enforcement must be proportionate to the breach. Effective enforcement will require investment and co-ordination of cross border monitoring of activities between Administrations.

- Achieving climax communities that exhibit 'The quality and occurrence of habitats and the distribution and abundance of species are in line with prevailing physiographic, geographic and climatic conditions' will likely require marine reserve status (i.e. no-take areas) to be extended to many more sites.

- A 'precautionary approach' should be adopted for all sites that contribute to the ECN of MPAs, excluding any potentially damaging activities until an impact assessment or an appropriate assessment has been completed showing the activity will not threaten the features the site was designated for. These assessments must take into account cumulative impacts.

OSPAR listed species and habitats

- We welcome the recognition that not all OSPAR listed habitats and species have programmes and measures, but it is not clear what measures Government will take. We believe the establishment of an ECN of MPAs in UK waters should include protection of sites for species and habitats of national importance identified by OSPAR's list of threatened and / or declining species and habitats.

Vulnerable marine ecosystems (VMEs)

- Under UN General Assembly Resolution 61/105 the UK is required to protect

vulnerable marine ecosystems (VMEs) from physical disturbance such as bottom fishing in all UK waters (within and beyond MPAs). Further action is needed to deliver on this commitment, such as the protection of VMEs from damaging activities.

Fish Stock Recovery Areas

- Under the reformed CFP there is a requirement to establish Fish Stock Recovery Areas. We believe areas of importance for spawning, nursery and feeding grounds need to be identified and designated accordingly. If these are permanent they will have benefits for D1 and D6 too. A report suggests a network covering 10-20% of our seas in such zones. [16]

Social and Economic benefits of MPAs

- An assessment of the social and economic benefits of the network of MPAs should be undertaken.

Cross-cutting approaches

- The development and signing of memorandums of understanding (MoUs) between government departments and agencies recognizing the need for collaborative effort in respect of the delivery of an ECN of MPAs. MoUs should ensure that new activities and developments in the marine and coastal environment do not undermine the integrity of individual sites, inter-connected sites or the ecologically coherent network as a whole.

Transboundary efforts

- Agreements or MoUs should also be developed between neighbouring governments to protect and appropriately manage transboundary sites.

Marine Plans

- Development of marine plans need to further consider how they can support the MPA network, including development and delivery of strategic objectives for protection and recovery of the network, and how they can contribute to protecting connectivity of the network.

[16] http://www.europarl.europa.eu/thinktank/en/document.html?reference=IPOL-PECH_NT%282012%29495827

NEW MEASURES NEEDED

Spatial (/ Zonal) management of fisheries

- The main pressure on benthic habitats leading to loss and degradation at a large spatial scale is demersal fishing (trawling and dredging) as detailed in the Initial Assessment and the consultation summary. We therefore believe that it is high time that we took the necessary action of managing and licensing fisheries spatially just as we do all other maritime industries. This would put these activities on a level playing field with those other industries and give them more rights to certain areas to trawl and dredge as they require, whilst also allowing larger areas of sea to be managed for benthic habitat and ecosystem recovery. Cefas has calculated that a large area of sea, possibly as much as 50% may not be regularly fished, so providing more formal licensing to key fishing grounds should not reduce the overall fished area[17]. The consultation document (p.85) states that Government are already taking measures under the CFP which govern where fishermen can fish, but these are generally temporal per species and hence of no permanent benefit to biodiversity and seafloor integrity which can be destroyed with one trawl. There are also byelaws to restrict fishing in European Marine Sites, but as stated this only amounts to 1% of the UKCS protected from all bottom towed gear. Spatial management of fisheries would need to be based on EiAs (and HRAs where appropriate) but should result in those areas of sea that are only very rarely trawled and generally less productive for fishing to be left to recover. While there may be some concerns with this new approach we think it could have the support of industry in the long term.

Recognition of linking habitat

- New measures are needed to protect habitats between designated conservation features. The changes observed after closures to benthic trawls in Lyme bay are illustrative of the improvements that are possible in benthic structure and diversity across a wide range of habitats, including areas previously viewed as un-important to conservation efforts. Sessile organisms colonised not only the reef structures assessed as important to conservation and designated under the Habitats Directive (i.e. reef) but also gravel and sandy areas between reef structures. This questions the validity of allowing trawling between conservation features in SACs, even if they use VMS technology (Atrill et al 2012:5-6; Defra & NE report).

Deep sea trawling

- New measures are required to reduce or stop the impacts of deep sea trawls on vulnerable marine habitats. This should be a focus of the UK government in the ongoing discussions on the reform of the Deep Sea Access Regime. Due to the vulnerable and fragile nature of deep sea habitats protection is likely to have to be substantial to ensure the long-term protection and recovery of the habitats.

Benthic – pelagic links

- Undertake bentho – pelagic food modelling to better understand the linkages between benthic and pelagic systems and support improvements to the protection of benthic species to support food webs.

Protection of benthic habitat and spatial direction

- Marine plans should incorporate, alongside spatial planning for activities and developments, the ecological coherent network of MPAs, and designation of VMEs, and provide spatial direction to ensure that marine activities, fisheries and

[17] Eastwood, P. D., Mills, C. M., Aldridge, J. N., Houghton, C. A., and Rogers, S. I. 2007. Human activities in UK offshore waters: an assessment of direct, physical pressure on the seabed. – ICES Journal of Marine Science, 64: 453–463.

developments avoid the most sensitive areas.

Seabed exploitation

- Licensing of sea bed development and exploitation must respect the designation of an ECN of MPAs throughout UK waters, and be sensitive to wider marine environmental management and protection.

Monitoring

- For our full comments on monitoring please see our previous consultation response, but we'd like to make one comment here: Proposed monitoring is likely to focus on intertidal habitats and some sub-tidal habitats, particularly sea grass beds, however effective monitoring of other shallow subtidal and shelf subtidal sediments, subtidal rock and deep-sea habitats must be addressed quickly, particularly as some of these habitats have experienced some of the most extensive damage. Comprehensive monitoring programmes will be critical to the further understanding of the current status and trends for seabed habitats and to assess pressures and measure progress towards GES, and special consideration should be given to the pressure on intertidal sediments due to rising sea levels and immobile coastal defence structures which could cause habitat loss over large areas; reductions in structural complexity and diversity for subtidal rock impacted by mobile fishing gear; impact on the structure and function of shallow subtidal habitats and shelf subtidal sediments as a result of the impact of fishing gears (trawling and scallop dredging, demersal fishing); and physical disturbance to deep sea sediments and damage to deep sea fragile seabed communities.

Food Webs (Descriptor 4)

We would highlight the importance of the ecological network of MPAs for Descriptor 4 Food Webs including pelagic habitats (as well as D1 and 6). In particular we would like to emphasise that all principles detailed in the Government's guidance on ecological networks for the MCZ projects need to be met including the importance of identifying important ecological areas as a critical element of applying an ecosystem-based approach and identifies a number of areas of additional ecological importance including areas of key life cycle stages and behaviours such as breeding, foraging, moulting, loafing, resting and wintering, including spawning aggregations and nursery areas for mobile species. The Guidance's justification of areas of additional ecological importance, recognises that areas of "comparatively high pelagic productivity" are important to the delivery of ecosystem-based management, and also refers to the improved possibility of protecting mobile species which return to specific foraging areas or species which favour specific spawning and nursery areas. Based on the Government's commitments and advice, the coherent network of MPAs under development should include areas of high productivity and which support wide-ranging species, along with sites which are important for various stages of species' life-cycles i.e. breeding areas, spawning and nursery areas, feeding areas, etc. Scientific advice on representativity and replication of sites for a coherent network of MPAs recognises that for full representativity of England's marine biodiversity to be included in the MPA network, it would be necessary to incorporate information on pelagic habitats and species[18].

[18] Jackson, E.L., Hiscock, K., Evans, J., Seeley, B. & Lear, D., 2008. Investigating the existing coverage and subsequent gaps in protection and providing guidance on representativity and replication for a coherent network of Marine Protected Areas in England's territorial waters. Plymouth: Marine Life Information Network (MarLIN), Marine Biological Association of the UK. Natural England Commissioned Reports, Number 018.

NEW MEASURES NEEDED

In addition to the response laid out under Descriptor 1 the following measures are important to the delivery of GES in relation to Descriptor 4 on food webs.

Understanding of food web dynamics

- The Government should support efforts to increase the understanding of food web dynamics and indicators of a healthy system, including use of the OSPAR large fish index to assess improvements in fish stock structure and healthy food webs. The Celtic Seas Partnership Food Webs task group is developing an initiative to improve awareness and understanding of the importance of food webs among stakeholder groups, resulting in a network of sea users that can contribute to monitoring food web components.

Food webs and impacts of climate change

- The Government should commission research into the impacts of climate change on food webs, for example, the possibility of trophic shift.

MPAs to support resilience of food webs

- The development of an ecologically coherent network (ECN) of MPAs should be designed to ensure support for the resilience of food webs (see also D1).

OSPAR large fish index

- A measure should be developed addressing the recovery of size composition of fish stocks both as a measure to assessing the biodiversity of fish (see D1), the health of the stock (see D3) and the health of the food web (D4). Use should be made of the OSPAR large fish index to assess improvements in fish stock structure and healthy food webs.

Sea Floor Integrity (Descriptor 6)

We have covered this section under Benthic Habitats, following the consultation document approach.

Descriptor 2: Non-Indigenous Species (NIS)

The invasion by non-indigenous or alien species into new regions and territories is considered one of the major global threats to biodiversity. However, it isn't just biodiversity that is threatened; there are often socio-economic consequences too. A new EU regulation on the prevention and management of the introduction and spread of IAS provides for three types of intervention – prevention, early warning and rapid response, and management and control of established populations.

ARE THE PROPOSED MEASURES FOR THIS DESCRIPTOR SUFFICIENT?

We do not believe that the current proposed measures will be sufficient to meet the requirements of the Directive since current measures are inadequate and no new measures are proposed. The UK Initial Assessment for MSFD and the current Consultation identify a lack of information on abundance, distribution, pathways of introduction and impacts of NIS as a problem. It is proposed that the MSFD monitoring programme will provide the

necessary information and once the information is received, the government will keep under review whether any additional national measures will be necessary to achieve the targets for Descriptor 3. There is no indication given on timescales for delivery of information from the monitoring programme or for any review that might be undertaken.

We believe that even in the absence of full information on NIS, it is possible to introduce measures focused on prevention and early warning and to have in place a rapid response plan. A comprehensive strategy should be in place which fills gaps in the current list of existing and planned measures.

Furthermore, the new measures identified below should be introduced as a contribution to the PoM for Descriptor 3.

ADDITIONAL EXISTING OR PLANNED MEASURES FOR THIS DESCRIPTOR

Collaboration between Devolved Administrations

- Use current NIS strategies as best practise examples to be trialled elsewhere in the UK, for instance, the Invasive Alien Species strategy for Northern Ireland and the INNS MarinePathways Project currently being undertaken by Natural Resources Wales.

Invasive Alien Species Regulation

- Implementation of the EU Invasive Alien Species (IAS) Regulation which became effective from 1 January 2015, and requires Member States to take "all necessary steps to prevent the unintentional introduction or spread, including, where applicable, by gross negligence, of invasive alien species of Union concern". This should include the development of national lists of key invasive alien species together with appropriate controls for those species and action plans for priority pathways. It should be a priority to ensure that marine organisms are sufficiently represented on such national lists and marine pathways are also given adequate representation.

National Invasive Non Native Species Strategy

- Review and implementation of a revised GB Non Native Species Strategy (GBNNSS) including a focus on marine non-indigenous species.

Information and communication

- Improve information and communication exchange between Member States

Legal backing for NIS data collection

- Establish programmes to collect marine NIS data (as part of CFP Data Collection Framework).

HELCOM biopollution index

- Apply the HELCOM biopollution index in OSPAR MSFD subregions as recommended by the EU GES subgroup

Ballast Water Management

- UK Ratification of the 2004 International Maritime Organisation (IMO) Convention for the Control and Management of Ships' Ballast Water and Sediments (BWM). The convention sets out detailed guidelines and standards for the transfer, reception and sampling of ballast water and requires production of ballast water management plans. It is shameful that the UK has not yet ratified the Convention which was adopted 10 years ago after more than 10 years of international negotiation and which

has yet to come into force. UK ratification would not be sufficient to bring it into force, but it would move it closer and vessels flying the UK flag would have to apply the provisions of the Convention.

NEW MEASURES NEEDED

Central recording system for NIS

- Create a central recording system for NIS sightings and recordings for UK marine waters, which can include citizen science reporting data. Linked to other reporting / data collection systems (such as MARLIN, PANACHE and IAS recording http://www.nonnativespecies.org/index.cfm?sectionid=81), it could create an integrated central database for marine NIS.

Marine Planning Authorities

- Marine Planning Authorities should undertake a risk analysis with respect to their marine plan area. This risk analysis should include identifying existing introductions, potential pathways for further introduction, activities that pose the greatest risk, and vulnerable habitats for introductions. Mitigation and eradication plans should also be developed focusing on the most vulnerable habitats in correlation with the activities posing the greatest risk.

Research

- Establish a fund to support academic research to better understand, among other things: the effect of NIS on native species, communities, habitats, ecosystem functioning and ecosystem services, along with improving risk assessment, predictive habitat modelling for NIS, life cycle analysis and appropriate management methods.

International Cooperation

- Foster collaboration with global, regional and sub-regional organisations to address transboundary aspects of NIS and facilitate regionally coordinated measures and monitoring programmes

High Seas

- Create list of high seas NIS and associated appropriate controls on a regional basis. Lists should be precautionary, based on regional assessments with considerations to both regional environmental conditions as well as to human high risk activities, such as shipping, aquaculture, etc. Furthermore, considerations to longer time perspective must be taken given that in many cases negative effects caused by NIS appear after a considerable length of time (in some cases up to 50 years following introduction).

Prevention measures

Information and communication with public

- Improve information made available to the public on possible impacts of NIS, including health considerations, and education of the public particularly those with NIS in private collections.

Biosecurity protocols, codes of practice, and training

- The cost of preventing NIS is a fraction of the cost of dealing with them once arrived. Biosecurity protocols and codes of practice should be introduced for high-risk/vulnerable areas including within the management of all MPAs. They need to be supported by training on the prevention of introduction of NIS (see also harbours and ports below).

Regional seas biosecurity protocols

- Biosecurity protocols should also be developed at a regional seas scale addressing relevant activities and potential sources of non-native introductions to the region. The Celtic Seas Partnership Non-indigenous species task group is working on an initiative to identify and address gaps in the coverage of biosecurity protocols for marine non-indigenous species and create a Celtic Seas scale operational action plan to promote best practice.

Early warning and rapid response measures

Early warning system

- Set up an early warning system that will facilitate the rapid identification and early notification of NIS, as well as the mapping of their spread between and within the European regional seas. Such as system should also provide comprehensive information on the principle pathways and vectors of NIS and facilitate target lists for monitoring.

Strengthen and support citizen science on reporting of NIS

- Provide support for citizen science initiatives including monitoring of NIS or reporting historical information through national, regional, and European networks (CIESM JellyWatch Program, European Alien Species Information Network, Sealife tracker App http://www.brc.ac.uk/sealife_tracker/) to assist in overcoming the difficulties related to tracking the onset of biological invasions. Such activities must be linked to the GBINNSS.

Non-indigenous species app

- Develop a non-indigenous species reporting app similar to comparable litter reporting apps.

Emergency response fund

- Create a centralized, industry-funded emergency response fund for rapid response to NIS introductions including an emergency response mechanism.

Management and control measures

Management action

- Undertake management actions that do not focus on one vector of NIS but take into account all vectors. Undertake prevention, eradication, control or management of NIS taking into account climate change / environmental changes.

Eradication programmes

- Establish invasive mammal eradication programme for high risk or highly vulnerable seabird breeding island sites. Interventions could be prioritized following assessment to identify where greatest conservation gains can be made for simplest intervention (see also Descriptor 1 Seabirds).

Introduction of NIS via vessels

Pathway Action to address risk in harbours and ports

- Harbours and ports are the highest risk sites for introductions of marine NIS as a result of discharge of ballast water and through fouling of vessels' hulls. A pathway action plan including development of agreements between operators and users along with provision of guidance and training at major ports on the prevention of introduction of marine NIS, identification and rapid response would reduce the risks.

- Investment in information and education on marine NIS for non-commercial boat users

Aquaculture

Closed systems and disposal of effluent water

- Regarding aquaculture, use only closed systems to culture non-established exotic / non-native species so that no fingerling / mature fish or parasites / diseases spread from the system. Establish regulation to ensure the disinfection, correct treatment and disposal of their effluent water.

Recognition of impact of genetic introductions

- In the context of addressing NIS, genetic depletion caused by introduction of alien populations should also be mitigated for within measures.

Commercially Exploited Fish and Shellfish (Descriptor 3)

ARE THE PROPOSED MEASURES FOR THIS DESCRIPTOR SUFFICIENT?

We do not believe that the current proposed measures will be sufficient to meet the requirements of the Directive, particularly since no new measures are proposed. The UK Initial Assessment for MSFD recognizes that a significant proportion of indicator stocks continue to be harvested at rates that are unsustainable and / or have reduced reproductive capacity, and that further reductions in fishing pressure on approximately half of stocks in UK waters would be needed to ensure levels expected to provide the highest long term yield. While the annual assessments from ICES indicate that there has been some improvement there is still much more that needs to be achieved - 60% of the stocks in the North Sea remain unassessed, and of the 40% which are assessed only 64% met GES for fishing mortality. This means that over one-third of assessed stocks did not yet meet GES in the North Sea and in the Celtic Sea region 39% of stocks did not, as yet, meet GES.

Furthermore, we do not believe that the targets for D3 are adequate. We propose that the D3 targets should be reconsidered within the PoM, in particular consider strengthening targets as outlined below.

- D3.1 the fishing mortality for <u>all</u> commercial stocks is at or below F_{MSY} (fishing at F_{msy} should only be considered appropriate if the stock is at or above B_{msy}.)
- D3.2 the spawning stock biomass of <u>all</u> commercial fish and shell fish species above $B_{MSY.}$ as opposed to Bpa.
- D3.3 the age and size distribution should be indicative of a healthy population. It is felt this criterion must be included in the Defra PoM as the first two indicators alone cannot necessarily reflect changes to the structure and trophic function of the stock (also important for Food Webs). As noted below, a suite of potential indicators for this criterion have been recommended to be tested for suitability to indicate GES, and it is hoped that suitable indicators and targets for this criterion can be added to Defra's PoM following completion of these tests.
- The natural range of the species of commercially exploited fish or shell fish is restored or maintained unless scientifically explained as a shift due to climate change.

We would like to draw attention to the recent European Commission (DGENV) decision to consider a review of Descriptor 3 criteria, in particular for indicators D3.2 (reproductive capacity) and D3.3 (the age and size distribution should be indicative of a healthy population), the latter of which does not appear in the Defra PoM. Following a request from the Commission, ICES have undertaken a series of expert workshops (WKGMSFDD3) which have thus far provided recommendations to amend the indicators and targets for these two descriptors as follows:

- D3.2 target - stocks for which ICES advice is used as the basis for the assessment. The recommendation is that SSB≥MSY Btrigger where $MSYBtrigger_r$ marks the lowest boundary associated with SSBmsy.

D3.3 target – for this criterion a suite of candidate indicators capturing three relevant properties representing the state and pressure process have been identified: size distribution of the species (state); selectivity pattern of the fishery exploiting the species (pressure) and; genetic effects of exploitation on the species (state). At the most recent workshop (WKGMSFDD3), it was recommended that these candidates be individually assessed to establish their suitability as indicators.

ADDITIONAL EXISTING OR PLANNED MEASURES FOR THIS DESCRIPTOR

The commitment recognised by Defra in the new CFP to ensure long-term sustainable fisheries is a major step to achieving GES for descriptor 3. The achievement of MSY will be a key legal requirement to achieving this with the overall objective of "*restoring and maintaining populations of fish stocks above biomass levels capable of producing MSY*[19]". The main existing and planned measures highlighted by Defra for this descriptor will be essential for GES achievement. However, we feel that it is important to highlight key obligations and opportunities and to clarify our position on some.

Fish

- Fishing limits (Total Allowable Catch (TAC) and quotas) for all commercially exploited species should be set at or below F_{MSY},. Where stocks are at or above B_{MSY} fishing at F_{MSY} may be appropriate. However, F_{msy} **must** be a limit, not a target, i.e. any range of allowable F values must be bound at their upper limit by F_{msy}.
- Fisheries management within a mixed fishery should be based on the most at risk stock, and the long-term management should aim towards an ecosystem based approach to within mixed fisheries Multi-Annual Plans (MAP) ie progressively incorporate a greater range of effected species into regional management plans, including commercial and non-commercial fish, benthic species or other habitat indicator species (eg birds).
- There must be further improvement of scientific knowledge for all stock assessments and as a priority to allow for quantitative assessments of the most vulnerable, commercially important or susceptible species (e.g. as indicated by Productivity and Susceptibility Analysis).
- We would also highlight that while non-commercial species, such as bass, are not subject to the landings obligation it is important to progressively reduce by-catch of non-TAC and non-commercial species where possible either by including them in such measures as the landing obligation or through gear modifications and adjustments, (temporary) area closures, or other technical measures.
- Increase monitoring and compliance through the development and application of new techniques to support effective enforcement of non-compliant vessels and to address illegal activity. Additionally the real time information on boat movements, including shellfish harvest vessels and areas openings and closures to fishing for shellfish, should be collected where it is currently absent and made publicly available.
- We would additionally encourage the use of the OSPAR large fish index to assess improvements in fish stock structure and healthy food webs. A measure should be developed addressing the recovery of size composition of fish stocks both as a measure to assessing the biodiversity of fish (see D1), the health of the stock (D3) and the health of the food web (see D4).

As a priority we would like to highlight the requirement for the application of Article 17 of the CFP, including the need to set transparent criteria for the allocation of access to fishing resources (quota or days at sea) and include environmental, social and economic criteria to incentivise best environmental practice and low impact fisheries. This is an opportunity to develop measures to promote low impact fisheries which have been shown to provide great socio-economic benefit.

We believe that the landings obligation should be phased in as quickly as possible over a period of years between 2016 and 2019 and that a species approach would be the most appropriate way to ensure that all fisheries covered by the obligation are implemented as

[19] http://ec.europa.eu/fisheries/cfp/index_en.htm

quickly and robustly as possible.

It is important that no quota uplift is applied to a species until **all** catches (targeted or otherwise) are covered by the landings obligation. The **landings obligation** is a fundamental change to how EU fisheries are managed and it needs to be implemented robustly to ensure that it drives improvement in the monitoring and environmental performance of fisheries, in order to maximise stock recovery and maintenance of fisheries at MSY to achieve GES.

Shellfish

- As with fish, F_{msy} **must** be treated as a limit, not a target for shellfish stocks.
- The development of fishery management measures (stock specific as highlighted in the text) to ensure the regulated catch of shellfish at sustainable levels which includes the assessment of environmental impacts of different fishing methods used.
- A healthy age and size distribution for shellfish may require the inclusion of a maximum conservation reference size to allow for larger more fecund individuals to contribute to a healthy stock.

NEW MEASURES NEEDED

We are concerned that no new measures have been identified by Defra as being required over and above those already in place or planned.

As previously stated, we are concerned by the lack of ambition shown with regards to Article 17 of the CFP. This has the potential to not only improve the socio-economic and environmental returns, but also should have the potential to encourage and to reward best practice.

Fish recovery areas introduced in the new CFP could provide essential protection for spawning and aggregation areas. Their introduction should be considered as a measure to ensure GES.

Additionally we feel that the need for Habitats Regulation Assessments and EIAs of new fishing gear types is imperative. In particular, pulse trawling should be subject environmental assessment and monitoring over and above the regular requirements of the Data collection Framework, with a focus on benthic impacts of pulse trawling and wider ecosystem effects. There should be no further expansion of pulse licenses or effort until EIAs, particularly addressing potential impacts to benthic species, structure and function, are undertaken.

As highlighted by the recent situation regarding seabass, it is important to ensure that the recreational sector is incorporated within measures addressing the issues of particular stocks which may be of importance both commercially and recreationally. The recreational sector is an important industry for many communities, and thus improvements in enforcement of existing measures should be considered a priority to ensure that it is not negatively impacting local population's sustainability.

As a starting point greater understanding should be developed of the scale of recreational fishing and the potential threat to traditional, small-scale coastal fisheries. Measures including regulations, bag limits and codes of practice should be developed, targeted appropriately, and duly enforced. Improvements in enforcement of existing measures should also be considered a priority, and recreational fishing measures should be aligned with those by which commercial fisheries are bound, in order to ensure sustainability and equity of

responsibility (see D1 Fish). There is also a need for awareness-raising materials and outreach on which fish can be targeted, released or landed and at what times of the year, for distribution online to angling bodies, sailing clubs and other coastal users.

Descriptor 5 – Eutrophication

ARE THE PROPOSED MEASURES FOR THIS DESCRIPTOR SUFFICIENT?

No. The MSFD must not be passively reliant on the Water Framework Directive (WFD) and related Directives to achieve the MSFD targets for Descriptors 5 (and Descriptor 8), but should act proactively as an additional legal driver to secure improvements in resources, capacity and quality in the implementation of the WFD. This is particularly relevant as the concurrent consultation on the next phase of River Basin Management Plans (RBMPs) under the WFD have largely failed to reference or integrate the aims of the MSFD.

This reliance on the RBMPs under the WFD also hides the fact that a large proportion of coastal water bodies are not in Good Ecological Status (GEcS) after one cycle of the WFD. Indeed, in England particularly, 130 of 172 estuarine water bodies (76%) failed to reach GEcS in 2012[20], while interim reporting by the Environment Agency suggests 83% of transitional water bodies were not GEcS or Good Ecological Potential in 2012, with 2014 results unchanged. 64% of coastal water bodies were not specifically meeting GEcS/P in 2012, increasing to 67% in 2014.

Furthermore, under plans recently consulted, a number of water bodies have no commitment to reach GEcS/P, due to alternative objectives being set in the RBMPs. Most measures identified are voluntary in nature, and commitment to implementing regulatory mechanisms where necessary is low. There is a wider lack of basic measures which are required under Article 11 of the WFD, to deal with diffuse pollution from agriculture, which will directly influence the UK's ability to meet GES under the MSFD. Furthermore, Catchment Sensitive Farming (CSF) as mentioned in the MSFD consultation is limited to a few catchments, and the MSFD can be used to drive support and resources to wider implementation of this approach.

For several coastal water bodies, action is being avoided due to 'cause of adverse impact unknown' and/or 'unfavourable balance of costs and benefits'. Combined with a general lack of information and a reliance on expert judgment, a lack of action in these areas does not provide confidence that WFD targets for these bodies will be met, and in turn that GES for eutrophication in UK's share of the Celtic and Greater North Seas subregions will be met. Overall, it is likely that current management will fail to even maintain the status quo let alone deliver improvement, for the entire WFD and for coastal water bodies in particular.

For Natura 2000 sites, including where the WFD is explicitly identified as the driver to bring water-dependent features into Favourable Conservation Status (FCS), the ambition for achieving FCS in these sites has been further delayed. If the current RBMP plans for Natura 2000 sites identified in the current RBMP consultation are implemented, we would see just 44 Natura 2000 sites that were not meeting FCS in 2009 expected to meet the December 2015 deadline, 18 would be extended until 2021, whilst 60 sites have had their deadline extended until 2027. Notwithstanding the legality of allowing these extensions (based on a reinterpretation of Article 4.4 of the WFD) for meeting the requirement of Good Environmental Status by 2020 where these sites are in coastal waters, this is indefensible.

Finally, where there are aspects of sewage treatment works discharging directly to coastal waters, measures may be needed under MSFD. We do not see any such measures in this consultation.

FURTHER EXISTING or NEW MEASURES NEEDED

[20] http://jncc.defra.gov.uk/page-4250

We would like to see specific measures to reduce the impact of water discharges from sewage treatment works, particularly for coastal eutrophic water bodies. This includes the designation of further Sensitive Areas under the Urban Waste Water Treatment Directive.

The Urban Waste Water Treatment Directive sets secondary treatment as the normal standard, but requires tertiary treatment where qualifying discharges affect Sensitive Areas identified under the Directive. Sensitive areas are:

- Freshwater bodies, estuaries and coastal waters which are eutrophic or which may become eutrophic if protective action is not taken;
- Surface freshwaters intended for the abstraction of drinking water which contain or are likely to contain more than 50 mg/l of nitrates;
- Areas where further treatment is necessary to comply with other Council Directives such as the Directives on fish waters, on bathing waters, on shellfish waters, on the conservation of wild birds and natural habitats, etc.

Therefore areas identified with eutrophication within the MSFD's remit should be designated and managed as Sensitive Areas, while the MSFD should be added to the list of Directives requiring compliance under the third bullet point above. Current nitrate/phosphate limits on discharging into fresh waters/bathing waters should also apply to these vulnerable areas.

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

ARE THE PROPOSED MEASURES FOR THIS DESCRIPTOR SUFFICIENT?

No. The Marine Conservation Society (MCS) has been monitoring levels of beach litter around the UK for 20 years. In that time beach litter levels have increased by 135% and plastic litter by 180%. Therefore, it is inconceivable that current measures, the majority of which have been place for many years and have thus far failed to achieve a downward trend in marine litter, will be sufficient to reverse the increasing trend and achieve GES by 2020.

Defra itself has stated "Under the baseline scenario it is assumed that litter will continue to be a problem, accumulating in coastal areas and in the water column. The GES targets proposed for this Descriptor are unlikely to be achieved through existing legislation and policy commitments."[21]

The consultation document also states that the UK has signed up to the OSPAR Regional Action Plan (RAP). However little in the RAP is binding and it is not clear which elements of the RAP the UK is 'considering' implementing above and beyond activities that are already being carried out.

The MSFD document itself makes clear reference to the precautionary principle in the preamble – paragraphs 27 and 45:

Paragraph 27 - 'Member States should then establish and implement programmes of measures which are designed to achieve or maintain good environmental status in the waters concerned, while accommodating existing Community and international requirements and the needs of the marine region or subregion concerned. Those measures should be devised on the basis of the precautionary principle and the principles that preventive action should be taken, that environmental damage should, as a priority, be rectified at source and that the polluter should pay.'

Para 45 - 'Programmes of measures and subsequent action by Member States should be based on an ecosystem-based approach to the management of human activities and on the principles referred to in Article 174 of the Treaty, in particular the precautionary principle.'

The precautionary principle does not seem to have been considered by the UK in putting forward its planned measures for marine litter and is mentioned nowhere in the litter section. Under no circumstances should Defra's perceived 'lack of' data be used as an excuse for inaction. In reality there is a large body of evidence on litter levels in the UK. Defra itself used the 20 years of MCS beach litter data as a basis for MSFD monitoring and for its Charting Progress 2 report in 2012 which showed that litter levels were too high and that little change had occurred since the original Charting Progress report in 2005. There is also a large and growing volume of evidence on the harm that ingestion and entanglement is having on marine wildlife. Clearly, there is sufficient evidence to start acting now while collecting further, more detailed information.

The consultation document identifies a raft of legislation designed to prevent littering but has failed to review the efficacy of the legislation at preventing marine litter. Whilst existing legislation provides a strong framework for preventing marine litter, strong implementation and enforcement are essential to achieving the aims. For example, the Landfill Directive, Packaging and Packaging Waste Directive and Urban Waste Water Treatment Directive are

[21] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/82640/20120327-msfd-consult-ia.pdf p.18, para 40.

key to preventing terrestrial sources of marine litter, whilst the International Convention for the Prevention of Pollution from Ships (MARPOL) aims to prevent dumping of waste at sea. However inadequate implementation and enforcement are undermining their effectiveness.

The UK is currently facing infraction proceedings under the Urban Waste Water Treatment Directive due to inadequate treatment in five areas, including excessive spills from storm water overflows[22] which cause increases in the amount of Sewage Related Debris.

Landfills have been identified as a key source of marine litter and with 184 current and 1561 historic landfills in the coastal flood zone, further measures are required to prevent litter escape and reduce waste going to landfill, through increased inspections and fines, closure of non-compliant landfills and illegal dumpsites and ultimately a phase-out of landfilling of plastics and other recyclable materials**.**[23] Despite increases in enforcement last year, fly-tipping has increased by 20% since 2012/13, suggesting further investment in enforcement is necessary.

In the marine sector, sources such as shipping and fisheries have been identified as contributing 40% of marine litter in the North Sea – clear evidence that improved implementation and enforcement of the Port Reception Facilities Directive, the Ship-source Pollution Directive and MARPOL are required to reduce marine sources of litter, with amendments to existing legislation required to remove incentives to dump waste at sea.

Beyond improved implementation and enforcement of existing legislation, new measures are urgently needed to target specific types of litter. The UK spends approximately €18 million removing beach litter every year.[24] Coastal communities, many of which rely on the marine environment for their livelihood through tourism, fishing and recreational water sports, continue to pay the price for marine and coastal litter. Revenue is lost through spoilt fish catches and lost tourism income. This cost can only increase if the amount of litter is not reduced. Therefore, it is vital that new and effective measures be introduced. Not all measures will require huge amounts of funding and money spent now will produce savings in the future.

ADDITIONAL EXISTING OR PLANNED MEASURES FOR THIS DESCRIPTOR
The UK should:

- Ensure greater and better enforcement and implementation of existing legislation and higher fines to deter littering both on land and at sea.
- Ensure that marine litter is recognized as a specific problem and addressed in general waste legislation e.g. national waste policies.
- Encourage fishing for litter initiatives following the Kommunenes Internasjonale Miljøorganisasjon (KIMO) model, removing barriers to the processing or adequate disposal of marine litter collected, by ensuring that vessels can land non-operational waste collected at sea at any participating harbour at no extra cost.
- The bottle deposit/reverse vending systems trialed in Scotland have been very effective and Herriot-Watt University has pledged to continue the scheme indefinitely. The scheme could be widened to include the whole of the UK.
- Identify the individual actions the UK will take to implement the OSPAR RAP.
- Incorporate solid litter in the review of River Basin Management Plans. The inclusion

[22] http://europa.eu/rapid/press-release_IP-15-4672_en.htm
[23] CIRIA (2013) Guidance on the management of landfill sites and land contamination on eroding or low-lying coastlines, Report for Defra and the Environment Agency, 2013
[24] KIMO (2010), Economic impacts of Marine Litter

of measures to control solid litter in river basins and coastal ecosystems would greatly affect the input of litter into the marine environment.
- Incorporate marine litter in marine plans. All marine plans should include specific measures to reduce marine litter including spatial management of users to avoid gear conflicts and loss, requirements for waste management plans for marine-related developments that ensure minimisation and safe disposal of waste and regular consultations with stakeholders by relevant local authorities to ensure the adequacy of port reception facilities. Waste prevention and management plans should form a part of all licensing agreements.

NEW MEASURES NEEDED

1. Cross-cutting measures

Marine Litter Strategies

- England and Wales should develop national Marine Litter Strategies

As detailed with litter doubling over the last twenty years a concerted effort is needed to reduce it and to achieve this we need national litter strategies. Scotland and Northern Ireland have already produced their strategies and now England and Wales need to follow suit. These strategies should be coordinated with those of Scotland and Northern Ireland to integrate existing legislation, adopt a cross-policy approach between land and sea, and coordinate regional and national measures.

Meaningful and quantitative reduction targets

- We would encourage the UK to work towards the Seas at Risk target of a reduction of 50% by 2020 as a stepping stone towards achieving Good Environmental Status and to support binding EU waste prevention, resource efficiency and re-use/recycling targets.[25]

The current UK marine litter targets are extremely weak and undefined. This will not encourage effective action to prevent marine litter.

Giving waste a value

- Introduction of deposit/refund/levy schemes for single use items and bans where necessary.
- Implement individual producer responsibility (IPR) for key types of waste and expand extended producer responsibility (EPR) schemes.

Giving items such as drinks bottles a value through a deposit/refund system will greatly increase the return and recycling of these items. Extending and improving producer responsibility over the entire product life cycle promotes eco-design, financially incentivising manufacturers to reduce packaging and design products and packaging for reuse and recycling.

Preventing waste through a circular economy

- Adopt binding and ambitious waste prevention, resource efficiency and recycling targets and measures.

A circular economy maximises the sustainable use and value of resources, eliminating waste

[25] http://www.seas-at-risk.org/1mages/NGO%20priorities%20for%20PoM%20-%20%20with%20additional%20chapters%20-%20FINAL%2017%20October%202014_1.pdf

and benefiting both the economy and the environment. This can be achieved through setting rigorous standards for manufacturers to design products and packaging for reuse, repair and recycling, to use recycled materials, and to compel manufacturers to support product repair and recycling.

Such measures should include eco-design and product sustainability standards and producer responsibility schemes and be supported by binding UK resource efficiency and waste prevention targets. In line with proposed EU wide targets[26] these should include a binding resource efficiency target of at least 30%, a ban on landfill of recyclable waste by 2025 and a packaging waste recycling target of 80% by 2030, as well as additional reuse/recycling targets for specific materials.

Local authorities, manufacturers and retailers (in line with EPR principles) should be supported in improving waste collection systems to achieve recycling targets and improve the value of the recyclate in order to boost reuse and recycling of municipal waste to a minimum of 70% by 2030**.**[27]

Education – public, school, university and industry

- Public campaigns to not throw items down the toilet, reuse and recycle more and take rubbish home
- Incorporate waste and litter education including the problems caused by marine litter into school curricula, university inductions and shipping and fishing industries training of mariners and fishermen. The Celtic Seas Partnership Marine Litter task group is developing an initiative to expand the international Eco-schools programme to address marine litter.

Education on waste and litter issues is vital if we are to start reducing the problem of marine litter. However education alone will not achieve GES by 2020.

Beachcleaning

- Introduce “Polluter Pay” schemes so the main producers of pollutants e.g. the soft drinks industry, have to contribute to Local Authority beach cleaning.
- Local Authorities to increase beach cleaning through the winter, when litter from the seafloor will be deposited on beaches following storms.

2.Specific actions

Beverage containers - 10% of beach litter in 2014.

- Introduce a nationwide deposit scheme for plastic drink bottles and aluminium drink cans.
- Redesign bottles and tops to increase recyclability and prevent loss.
- Establish a network of public water fountains.
- Supply each child/university student with a refillable drinks bottle.
- Place a levy on single-use cups to encourage uptake of reusable cups.

Plastic bottles and their associated tops together with aluminium drinks cans are some of the

[26] Communication from the Commission to the European Parliament, The Council, the European Economic and Social Committee and the Committee of the Regions. June, 2014. Towards a circular economy: A zero waste programme for Europe. Available at http://eur-lex.europa.eu/resource.html?uri=cellar:50edd1fd-01ec-11e4-831f-01aa75ed71a1.0001.01/DOC_1&format=PDF

[27] European Commission (2014) Proposal for a DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL amending Directives 2008/98/EC on waste, 94/62/EC on packaging and packaging waste, 1999/31/EC on the landfill of waste, 2000/53/EC on end-of-life vehicles, 2006/66/EC on batteries and accumulators and waste batteries and accumulators, and 2012/19/EU on waste electrical and electronic equipment http://ec.europa.eu/environment/waste/pdf/Legal%20proposal%20review%20targets.pdf

most obvious pieces of litter to be found as beach litter. During the 2014 Beachwatch Big Weekend 7,672 plastic drinks bottles and 14,750 caps and lids were found together with 5,015 aluminium drinks cans. Plastic drinks bottles accounted for 2.8% of all litter and had a density of 69 items per kilometre. Caps and lids accounted for 5.4% of total litter with an average density of 132 items per kilometre. Cans accounted for 1.8% of litter with a density of 45 items per kilometre.

Research and redesign of these products needs to be undertaken in particular to increase the recyclability of tops and to ensure that tops stay with their bottles.

Recent research has highlighted the feasibility of introducing deposit or bottle refund schemes in the UK. The schemes examined were shown to bring a number of benefits including increased recycling, reduced costs, reduced littering and job creation.[28] [29]The expected reduction in disamenity impacts alone significantly outweighs the costs, and with the additional benefit of reduced environmental impacts there is a clear net benefit. Deposit-refund schemes in operation in other European countries and U.S. states have demonstrated significant reductions in littering.[30]

Water fountains around beach areas would reduce the use of plastic water bottles and associated waste. Research at the University of California, Los Angeles campus in the USA showed that given a taste test the majority of respondents preferred tap water and the main obstacle to their use was insufficient knowledge of where water fountains were and misconceptions about the quality of tap water. Both of these obstacles can easily be overcome with public information campaigns.[31]

Some schools already supply each child with a refillable water bottle to reduce the use of plastic waste and to encourage pupils to drink water rather than fizzy drinks. This sort of scheme should be encouraged and rolled out nationwide to schools and universities.

It is estimated that 2.5 billion takeaway cups are used and discarded every year, along with plastic lids and straws. Research and schemes implemented in other countries show that a financial incentive for consumers to switch to reusable containers is an effective way to encourage litter and waste prevention.[32]

Sewage Related Debris - 5.4% of beach litter in 2014

- Redesign of sanitary items, e.g. cotton bud sticks, tampons, wet wipes to exclude plastic and biodegradable in a shorter time period.
- Appropriate labeling of items such as wet wipes, cosmetic wipes, nappies and tampons as non flushable.
- A nationwide educational campaign telling the public not to use the toilet as a wet bin.
- Improved collection, treatment and disposal of waste water and maintenance of sewer systems, in order to reduce overflow frequency, including development of sustainable urban drainage systems (SUDS). Improved litter capture mechanisms for

[28] Hogg, D., Fletcher, D., Elliott, T. von Eye, M. (2010). Have We Got the Bottle? Implementing a Deposit Refund Scheme in the UK: A report for the Campaign to Protect Rural England. http://www.cpre.org.uk/resources/energy-and-waste/litter-and-fly-tipping/item/1918-have-we-got-thebottle

[29] Hogg, D., Fletcher, D., von Eye, M., Mulcahy, K., Elliott, T. (2011). From waste to work: the potential for a deposit refund system to create jobs in the UK

[30] CMS (2014) Report I: Migratory Species, Marine Debris and its Management http://www.cms.int/sites/default/files/document/COP11_Inf_27_Report_I_Marine_Debris_Management_Eonly.pdf

[31] https://static1.squarespace.com/static/525d8521e4b0fb1ebe6d288c/t/52895c4ae4b013f422367027/1384733770145/ART_TeamTap_FinalReport.pdf

[32] Eunomia Research & Consulting (2015). A clean sweep: Rethinking the way we tackle litter.

overflow sewers and improved inspection and enforcement of water treatment facilities.

Sewage related debris (SRD) includes sanitary items, cotton bud sticks, wet wipes and nappies. It is not only an eyesore and potential health hazard on beaches but is responsible for blockages in our sewerage systems costing water companies millions of pounds per year. Some of this cost is inevitably passed on to the consumer. Anglian Water alone spent £7million clearing blockages, 50% of which were avoidable; items recovered included 17,520 wipes and 4,380 nappies.

A survey in the UK revealed that 57% of the population had disposed of solid items down the toilet in the past year.[33] Existing measures have failed to produce a downward trend with the incidence of wet wipes rising by 50% in 2014, whilst other sewage related items rose by 20%.

Packaging Related Debris – More than 50% of plastic found in European Regional Seas

- Eliminate non-biodegradable and non-recyclable packaging.
- Strengthen eco-design and product sustainability standards, requiring manufacturers to minimise packaging, use recycled materials and design it for reuse and recycling.
- Improve extended producer responsibility (EPR) schemes for packaging waste.
- Improve waste collection and recycling.

More than half of the plastic found in European regional seas is composed of plastic packaging**.**[34] Measures that target packaging would therefore be highly effective at reducing marine litter. Amendment of the Packaging Regulations so that packaging must be reusable or recoverable through material recycling or composting/biodegradation would provide a much stronger incentive for the design, use and recovery of recyclable or biodegradable packaging, with a phase-out of packaging designed for energy recovery through incineration (i.e. a phase out of non-biodegradable, non-recyclable packaging not a phase out of incineration per se). Such measures could be taken in conjunction with proposals under the Ecodesign Directive [35] and EU circular economy package and must also be accompanied by measures to increase recovery and recycling rates.

Improved EPR schemes would also incentivise reductions in packaging, particularly where costs are based on the packaging material, weight, and the recycling expense. In line with EPR principles, local authorities, manufacturers and retailers should work in partnership to improve improving waste collection systems and achieve ambitious recycling targets.

Microplastics

- Halt the use of microbeads as an ingredient in all personal care products (e.g. face scrubs & toothpastes) and household cleaners.
- If voluntary action is ineffective at removal of microbeads from these products bring in legislation to ban them from being used in personal care and household cleaning products.
- Support development of a filter to catch micro plastic particles from washing

[33] CMS (2014) Report I: Migratory Species, Marine Debris and its Management http://www.cms.int/sites/default/files/document/COP11_Inf_27_Report_I_Marine_Debris_Management_Eonly.pdf
[34] http://ec.europa.eu/environment/marine/pdf/Integration%20of%20results%20from%20three%20Marine%20Litter%20Studies.pdf
[35] EEB (2015) Delivering resource efficient products: How Ecodesign can drive a circular economy in Europe http://www.eeb.org/index.cfm?LinkServID=EB5DE6FD-5056-B741-DBB2EBDF0E6E0AC5

machines, potentially by providing innovation grants. Studies have shown that a single synthetic garment in a washing machine can produce >1900 fibers per wash.[36] [37]

- Add microbeads to the list of pollutants managed by discharge consents.
- Widespread adoption of the plastic industries 'Clean Sweep' programme - a code of conduct for the safe handling, packaging and transportation of plastic pellets.

Microplastics in the marine environment can carry two types of organic micropollutants. Firstly, the additives and their degraded products such as nonylphenols (an endocrine disruptor), and secondly pollutants adsorbed from seawater such as Polychlorinated biphenyls (PCBs) and Dichlorodiphenyldichloroethylenes (DDEs).[38] Birds, mammals, invertebrates and fish (including commercially fished species) can ingest them;[39] ultimately these pollutants may then be passed up the food chain to human consumers.

Shipping waste and lost/discarded fishing gear (commercial and recreational) – 40% of litter in the North Sea, with fishing gear accounting for 11.1% of beach litter in 2014

- Better disposal /recycling facilities for fishing related waste, both commercial and recreational, at ports, harbours, marinas and popular fishing spots. These facilities would need to be lockable to prevent fly tipping and no-special-fee in order to incentivise disposal.
- MCS runs a fishing litter scheme for recreational fishers which provides specifically designed litter bins for old lines and hooks. Similar schemes should be rolled out across the country.
- Amendment of Port Waste Reception Directive to include a no special fee system throughout Europe.
- The inclusion of all vessels in the Port Waste Reception Directive.
- Harmonisation of the port waste delivery process to ensure (i) adequate and timely handling of waste; and (ii) port authority responsibility for managing and monitoring waste delivery, including tracking deliveries across ports and inspection and verification of vessel logs.[40]
- Increased enforcement capacity and introduction of higher minimum penalties for illegal dumping of wastes as a deterrent to polluters.
- A no blame reporting system for shipping and fisheries to report on the adequacy of port reception facilities.
- Marking/tagging schemes for fishing gear to increase recovery.
- Promotion of alternatives to expanded polystyrene (EPS) boxes for transport of bait/catch, for example reusable/recyclable polypropylene or fibre-based boxes. Establish deposit schemes for EPS boxes and recycling facilities at ports.[41]
- Leasing of fishing gear as opposed to individual ownership and/or deposit schemes on fishing gear.
- A no blame system for reporting lost fishing gear.
- Provide guidance and training on best practice and best available technology for vessel waste management on board and on delivery to ports and harbours.

[36] Browne, M.A., Crump, P., Niven, S.J., Teuten, E.L., Tonkin, A., Galloway, T., Thompson, R.C. (2011). Accumulation of Microplastic on Shorelines Worldwide: Sources and Sinks. Environmental Science & Technology. 45: 9175-9179.
[37] Leslie, H.A., van der Meulen, M.D., Kleissen, F.M., Vethaak, A.D. (2011). Microplastic litter in the Dutch marine environment: Deltares/IVM-VU Report No.1203792-000
[38] Takada H, Mato Y, Endo S, Yamashita R, Zakaria M (2006). Pellet Watch: Global monitoring of persistent organic pollutants using beached plastic resin pellets
[39] Ananthaswamy, A. (2000). Junk Food - a diet of plastic pellets plays havoc with animals' immunity. New Scientist, 20/01/01.
[40] Øhlenschlæger, J.P., Newman, S. and Farmer, A. (2013). Reducing ship generated marine litter - Recommendations to improve the EU Port Reception Facilities Directive. Report produced for Seas At Risk. Institute for European Environmental Policy, London.
[41] Arcadis (2012) Case studies on the plastic cycle and its loopholes in the four European regional seas areas, Report for DG Environment, 2012

- Implement compulsory industry training schemes in the shipping and fisheries sectors to raise awareness of waste prevention and management and the impacts of marine litter.
- Work with Inshore Fisheries Conservation Agencies and other stakeholders to identify hotspots for fishing gear loss and high risk gear types, and apply mitigation measures such as spatial management to reduce gear conflicts, reduced soak times in high risk areas and for high risk gears and other technical measures to reduce gear loss and aid recovery.
- Encourage participation in such schemes as the Responsible Fishing Scheme and Fishing for Litter schemes.

Due to high intensity shipping and fisheries traffic in the North Sea, 40% of marine litter is estimated to originate from sea-based sources.[42]

Lost or abandoned fishing gear is one of the most hazardous forms of plastic litter for wildlife indiscriminately catching or entangling a wide range of birds, turtles, fish, crabs and marine mammals. It also poses a threat to other sea users through fouling of ship propellers and active fishing gear.

Fishing debris washing up on beaches probably represents only a small proportion of that lost at sea. Despite this during MCS Beachwatch 2014, fishing related debris accounted for over 11% of total litter found on UK beaches.

Deliberate dumping as well as accidental losses remain an issue and research has identified many gaps in the legislation and implementation that could be causing an incentive for vessels to dump their waste overboard, in particular the confusion and lack of consistency in waste delivery systems in ports, and the high fees charged.[43]

Existing legislation and voluntary codes are not adequately preventing such sources and improved implementation and enforcement as well as additional measures are therefore required to achieve a downward trend and ultimately eliminate these sources of marine litter.

Fast food items/products - 4 % of beach litter in 2014

- Replacement of plastic/polystyrene containers at fast food outlets/cafes/street vendors/festivals with easily recyclable or reusable items.
- Bans on polystyrene food containers and/or all single use fast food wrappers.
- Requirement for fast food outlets to supply and regularly empty windproof bins.

Polystyrene is a particularly invidious form of pollution in that it very easily breaks into thousands of small pieces adding to the microplastic load. Polystyrene pieces made up 4.6% of litter during Beachwatch 2014 with 114 pieces per kilometre.

Successful bans on polystyrene food containers have been implemented in over 100 towns and cities in the USA including New York, Seattle and San Francisco.[44] Seattle has had a ban on polystyrene foam single-use packaging since January 2009. In 2008, the city recorded 516 tons of expanded polystyrene used for food packaging. By 2012, that had dropped to 174 tons. The reason the figure wasn't zero is because the city cannot regulate

[42] CMS (2014) Report I: Migratory Species, Marine Debris and its Management http://www.cms.int/sites/default/files/document/COP11_Inf_27_Report_I_Marine_Debris_Management_Eonly.pdf
[43] Øhlenschlæger, J.P., Newman, S. and Farmer, A. (2013). Reducing ship generated marine litter - Recommendations to improve the EU Port Reception Facilities Directive. Report produced for Seas At Risk. Institute for European Environmental Policy, London.
[44] 564 Plastic-Foam Container Ban Approved by New York City Council – Bloomberg, accessed 6/1/2014, http://www.bloomberg.com/news/2013-12-19/new-york-city-council-approves-ban-on-plastic-foam-containers.html

packaged foods imported from outside of the city, such as those used for meat trays in supermarkets.[45] The Welsh Government is currently considering introducing this ban.

Balloons and sky lanterns - 0.6% of beach litter in 2014

- A ban on all mass balloon and sky lantern releases and amendment of the Environmental Protection Act so that balloons and sky lantern releases are considered a form of littering.
- Encourage councils to bring in a ban for such releases on their land until the EPA is amended

Balloons and sky lanterns cause harm to wildlife through entanglement in string and ribbon and the ingestion of deflated and fragmented balloons. Livestock are being killed from eating degraded sky lanterns which are accidentally picked up by harvest machinery and put into winter feed. Lanterns also pose a fire risk to crops and thatched roof properties and are causing a number of false alarm call outs on the coast as people mistake them for distress flares.

MCS has for many years highlighted the effects of balloon releases on the environment and wildlife through the 'Up, Up and Away' factsheet, launched in 1998 with the Royal Society for the Protection of Animals (RSPCA), Tidy Britain Group (TBG now known as Keep Britain Tidy) and the National Farmers' Union (NFU); this was subsequently rebranded as the 'Don't Let Go' campaign in 2006. We now have over 30 councils who have brought in a voluntary ban on council owned land.[46]

Are there any measures proposed that you think are not justified or that will not contribute towards the achievement or maintenance of GES or the environmental targets set out in the Marine Strategy Part One?

While in principle we welcome the planned carrier bag charge for England in its current form it will be much less effective than those of Wales and Scotland as it exempts Small & Medium Enterprises (SMEs) and paper bags. This will cause confusion for retailers and consumers alike and goes directly against the request of small businesses that they also be included in the charging scheme as in Wales and Scotland.

The proposed English levy is anticipated to achieve only a 50-60% reduction as opposed to the more than 70% reduction achieved through the comprehensive charging schemes in the devolved administrations. Already we have seen some retailers (Tescos and Lidl) begin to trial paper bags instead.

From a marine point of view many of the shops along a sea front will fall into the SME category and be exempt, therefore the charge may not reduce the quantities of plastic bags on English beaches. The legislation should be amended to bring it in line with those in Wales and Scotland.

As there is no indication as to which measures from the OSPAR RAP the UK intends to implement, it is difficult to judge how effective or ineffective these will be. We need a much stronger response from the UK detailing implementation strategies, partners and timelines.

[45] http://www.theguardian.com/sustainable-business/2015/jan/22/new-york-styrofoam-ban-foam-packaging-food-restaurants
[46] http://www.mcsuk.org/downloads/pollution/beachwatch/MCS_balloons_and_chinese_lanterns_policy.pdf

Do you agree with the justifications provided for the use of exceptions under Article 14?

We understand the reasons for the list of exemptions. However we consider that the costs to industry/government for implementing certain schemes are often overstated, while the benefits are not calculated and as such these costs should not be used as an excuse for inaction. Certain schemes may initially be expensive to set up but the overall benefit through cleaner environments, improved recycling, reduction in the use of non renewable resources, reduction in costs of beach and street cleaning, reduction in damage and lost catches to the fishing and shipping industries and reduction in harm to marine wildlife must be considered.

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

ARE THE PROPOSED MEASURES FOR THIS DESCRIPTOR SUFFICIENT?

The current proposed measures will not be sufficient to meet the requirements of the Directive particularly since no new measures are proposed. In the UK Initial Assessment, it was concluded that there was insufficient evidence to quantitatively assess levels of underwater noise or its impacts. Whilst the targets go some way to trying to address this evidence gap, we believe more needs to be done to ensure that the requirements of the Descriptor are adequately met, namely that noise is at levels that do not adversely affect the marine environment. Furthermore, it is recognised that there are high levels of uncertainty as to the behavioural effects and population level effects of underwater noise on noise sensitive species. The consultation document states that 'the conclusion by experts is that activity levels are not currently anticipated to pose a significant threat to marine noise sensitive species at the population level', but this has not been referenced and is contrary to the following statement that 'because of the high level of uncertainty about the effects of noise it has not been possible to recommend specific targets for either impulsive sounds or ambient sounds which we believe to be equivalent to GES'. We therefore believe that more robust and additional measures need to be implemented to better meet the Descriptor requirements. The high level of uncertainty means that precautionary action is required if GES is to be met by 2020 yet no measures are in place to mitigate impacts to species.

ADDITIONAL EXISTING OR PLANNED MEASURES FOR THIS DESCRIPTOR

Operational noise registry

Maintenance and implementation of a comprehensive and real-time noise registry, to include all sources of impulsive noise (including military activities). License conditions for 'noisy' activities should include monitoring/recording of all 'noise events' (rather than a sample) and mandatory submission of monitoring data to the noise registry in a timely fashion. Incorporation of the registry with other relevant Member States' equivalents, to ensure a comprehensive understanding of noise levels across biological regions rather than within jurisdictional boundaries.

Role of noise register

The noise register should set threshold limits for an allowable amount of impulsive noise, using best available evidence. This could be in the form of a) no further increase in noise levels from current baseline, with an aim to decrease levels, b) a set percentage area or number of days with noise permissible at a level that would cause disturbance or c) a combination of both. Adequate long-term monitoring, already a requirement under the Habitats Directive, would be required to ground-truth policy measures.

IMO Guidelines and noise reduction measures

Promote and encourage early implementation of the IMO guidelines, including to and contribute to the development of noise reduction measures for new ships. Support moves towards voluntary guidance becoming compulsory.

NEW MEASURES NEEDED

See also comments under Cetaceans (Descriptors 1,4)

Exclusion and buffer zones

Establish exclusion zones and buffer zones where unmitigated impulsive noise would not be permitted e.g. cetaceans MPAs, but also recogniszing that the noise exclusion zones could be seasonally dependent on the occurrence of affected species.

Seismic data

Seismic data to be compiled into a shared and real-time register as a condition of licensing,

to reduce the number of surveys needed and avoid duplication. Use the lowest possible source levels and reduce the number of surveys undertaken to the minimum possible by avoiding overlap and duplication in surveys.

Commitment to quieter alternatives
Any operators or developer introducing loud impulsive noise into the marine environment will only be granted permission to do so after demonstrating commitment to investigating alternative options and contributing to the development of noise reduction mitigation technologies. In particular we are concerned that alternatives to pile driving wind turbine masts, such as floating turbines, gravity based and suction bucket turbines are not being developed.

Noise Levy
Establish a 'noise levy' paid into by noise producers to create funds to independently support research into better understanding of the biological impacts of underwater noise on all marine species, including the consequences of disturbance on mortality & fitness. Use this data to refine measures over time, but not as an excuse to delay limits.

Ship Quieting Technology
Set up action to identify the noisiest existing ships & apply appropriate quieting technologies.

Appendix 1 – Coalition members submitting this response:

This response is supported by the following members of **Wildlife and Countryside Link**:

- ClientEarth
- Environmental Investigation Agency
- Friends of the Earth England
- Institute of Fisheries Management
- Marine Conservation Society
- MARINElife
- ORCA
- Royal Society for the Prevention of Cruelty to Animals
- Royal Society for the Protection of Birds
- Wildfowl & Wetlands Trust
- World Animal Protection UK
- The Wildlife Trusts
- Whale and Dolphin Conservation
- WWF-UK

This response is supported by the following members of **Scottish Environment LINK's Marine Task Force**:

- Hebridean Whale and Dolphin Trust
- Marine Conservation Society
- National Trust for Scotland
- Scottish Wildlife Trusts
- Whale and Dolphin Conservation
- WWF
- RSPB Scotland

This response is supported by **Wales Environment Link's Marine Working Group**, which includes the following organisations:

- Marine Conservation Society
- RSPB Cymru
- Wildlife Trusts Wales
- Whale and Dolphin Conservation
- WWF

This response is supported by **Northern Ireland Marine Task Force**, which includes the following organisations:

- Friends of the Earth
- Irish Whale and Dolphin Group
- Keep Northern Ireland Beautiful
- Marine Conservation Society
- National Trust
- Northern Ireland Environment Link
- Royal Society for the Protection of Birds
- Ulster Wildlife
- Wildfowl & Wetlands Trust
- WWF

Wildlife and Countryside Link
89 Albert Embankment, London, SE1 7TP
W: www.wcl.org.uk