

Contribution of the European Union to the 15th round of Informal Consultations of the State Parties to the UN Fish Stocks Agreement (ICSP-15)
Implementation of an Ecosystem Approach to Fisheries Management

1. Background

The EU seeks to incorporate ecosystem considerations in its management of fisheries for sustainable exploitation of fish stocks in a simple and pragmatic way. The main instruments are the reduction and subsequent maintenance of fishing mortality to no more than that needed to take the maximum sustainable yield from fish stocks, to ensure the sustainability of sensitive marine habitats and the sustainability of sensitive, non-target species¹.

2. Legislation

The EU's basic fisheries legislation² on the Common Fisheries Policy (CFP) has the objective of implementing the ecosystem-based approach to fisheries management so as to ensure that negative impacts of fisheries activities on the marine ecosystem are minimised, and shall endeavour to ensure that aquaculture and fisheries activities avoid the degradation of the marine environment. For this purpose, the ecosystem-based approach to fisheries management is defined³ as “an integrated approach to managing fisheries within ecologically meaningful boundaries which seeks to manage the use of natural resources, taking account of fishing and other human activities, while preserving both the biological wealth and the biological processes necessary to safeguard the composition, structure and functioning of the habitats of the ecosystem affected, by taking into account the knowledge and uncertainties regarding biotic, abiotic and human components of ecosystems”.

The CFP also promotes the establishment of protected areas due to their biological sensitivity where fishing activities may be restricted or prohibited in order to contribute to the conservation and increase the productivity of living aquatic resources and marine ecosystems⁴. Operational measures to monitor, reduce and mitigate impacts on sensitive species and sensitive habitats are set out in a

¹ Communication from the Commission to the Council and the European parliament. The role of the CFP in implementing an ecosystem approach to marine management. COM(2008) 187 final.

² Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy (...), OJ L 354, 28.12.2012 p. 22.

³ Article 4.1 (9) of Regulation (EU) No. 130/2013.

⁴ Article 8 of Regulation (EU) No. 130/2013.

specific regulation on technical measures⁵ as well as in other EU regulations transposing rules adopted in RFMOs.

Specific objectives concerning protection of habitats and of species are also set in environmental legislation. The Habitats Directive⁶ sets out requirements to protect habitats that are in danger of disappearance in their natural range, that have a small natural range, or present outstanding examples, of ecological characteristics. Habitats should be stable or increasing in range and area, with necessary structure and functions having assured continuity, and having typical species on favourable conservation status. This latter point means species should be maintaining themselves on a long-term basis, with a natural range that is not being reduced nor likely to be reduced, and existing in a sufficiently large habitat to maintain their populations. Similar proscriptions apply to birds through the Birds Directive⁷.

The Marine Strategy Framework Directive (MSFD)⁸ covers wider aspects of marine environmental management, but includes five provisions of direct relevance to fisheries management:

- the maintenance of biological diversity,
- the mitigation of the introduction of non-indigenous species,
- the exploitation of commercial stocks within safe biological limits,
- the maintenance of all elements of marine food webs at normal abundance and diversity and,
- the maintenance of sea-floor integrity at a level that ensures the structure and function of benthic and other ecosystems are safeguarded.

Other MSFD obligations cover inter alia limiting the introduction of energy including underwater noise to levels that do not adversely affect the marine environment and limitations on hydrographic alterations, eutrophication, marine litter, pollutants in the sea and contaminants in seafood.

⁵ Regulation (EU) No 2019/1241 of the European Parliament and of the Council of 20 June 2019 on the conservation of fishery resources and protection of marine ecosystems through technical measures (...) OJ L198 of 25.7.2019 p.105.

⁶ Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora. OJ L206, 22.7.1992, p.7.

⁷ Directive 2009/147/EC of the European Parliament and of the Council of 30 November 2009 on the conservation of wild birds. OJ L20, 26.1.2010, p.7.

⁸ Directive 2008/56/EC of the European Parliament and of the Council of 17 June 2008 establishing a framework for community action in the field of marine environmental policy (Marine Strategy Framework Directive) OJ L164, 25.6.2008, p.19.

3. EU Ecosystem-based approach to Fisheries Management

3.1 Managing Fisheries and their effects on sensitive habitats and sensitive species

The EU incorporates the ecological objectives of the Habitats and Birds Directives and the MSFD into its Common Fisheries Policy. The implementation of the ecosystem approach was considered on the basis of CBD⁹ and FAO¹⁰ definitions (2000, 2003). In particular, EU treaties assign shared legal competence over environmental management and social and economic issues to both Member States and the European Union.

The primary EU task of the ecosystem approach is therefore seen as keeping anthropogenic impacts, including from fisheries as well as other activities, on ecosystems within bounds in relation to healthy marine ecosystems and ecologically viable fish populations, and ensuring that actions taken in fisheries are consistent with the Habitats and Birds Directives and MSFD.

The main task of fisheries management is seen as achieving the sustainable use of fisheries resources through the reduction and subsequent maintenance of overall fishing pressure to sustainable levels. Since 2013, this is defined as exploiting stocks at the maximum sustainable yield rate. Keeping fishing activity within these levels in combination with more selective and less impacting fishing gears and spatial management of fishing activities, reduces the impact on unwanted sensitive species including seabirds, marine mammals, sea turtles and on marine ecosystem structure and function.

3.2 Fisheries interactions

3.2.1 Mixed fisheries

Many European fisheries are multispecies demersal mixed fisheries, both in the Mediterranean Sea and in the northeast Atlantic. Meeting Fmsy targets in such situations, while remaining consistent with compliance with the obligation to land all fish, has proved challenging. The following broad

⁹ CBD – COP 5, Decision V/6 (<http://www.cbd.int/convention/cop-5-dec.shtml?m=COP-05&id=7148&lg=0>).

¹⁰ FAO 2003. The Ecosystem Approach to Fisheries. FAO Technical Guidelines for Responsible Fisheries. No 4, Suppl. 2. Rome, FAO. 112 pp.

principles have been developed in the context of regional plans for fisheries taking place in the different sea basins.

- F_{msy} has been defined in terms of “ranges”, i.e. those values of fishing mortality that are consistent with not losing more than 5% in yield with respect to the long-term yield that is expected when fishing at the central value.
- To facilitate the transition to more selective fishing techniques (and as a result avoid unwanted catches and hence discards) some tolerances have been built in to the landing obligation, such that quantities of a by-catch species may be counted against the quotas of a target species (up to 9%, and only for species inside safe biological limits).
- An overall “*de minimis*” discarding tolerance of up to 5% may be allowed, including where scientific evidence supports this, in order to cater for cases where unavoidable bycatches are made.
- Specific additional by-catch quotas have been made available, within the overall constraint of the F_{msy} target.
- Specific technical measures have been adopted in order to facilitate compliance with F_{msy} in cases where different changes in fishing mortality are needed for different stocks.
- Furthermore, substantial spatial limitations, with respect to minimum distances from the coast and/or minimum operational depths have been stipulated for several mixed fisheries with mobile gears.

Overall, however, this area remains technically and practically difficult and the work area is under constant development.

3.2.2. *Multispecies Fisheries*

There are as yet few occasions where EU fisheries management has involved active choices to favour the yield from a predator or a prey species according to scientific advice on multispecies interactions. One such example is the provision that fishing mortality may be increased “if, on the basis of scientific advice or evidence it is necessary to avoid serious harm to a stock caused by intra- or inter-species stock dynamics”¹¹. In practice, such provisions have rarely been used.

¹¹ Article 4b of Regulation (EU) 2016/1139 of the European Parliament and of the Council of 6 July 2016 establishing a multiannual plan for the stocks of cod, herring and sprat in the Baltic Sea and the fisheries exploiting those stocks, amending Council Regulation (EC) No 2187/2005 and repealing Council Regulation (EC) No 1098/2007. OJ L191, 15.7.2016, p.1.

In scientific advice by the International Council for the Exploration of the Sea (ICES) periodic reassessments are made of predation mortality between commercial species, and of changes in growth due to possible competition effects. New estimates are introduced into scientific advice in order to re-estimate MSY targets according to progressive ecosystem changes. ICES is currently planning to deliver by 2022 recurrent advice via fisheries overviews and in the short term to have by-catch reported separately (for mammal/birds/turtles and protected fish species). On a wider context, ICES is working towards the development of an ecosystem advice framework. In common with other management agencies, the EU does not presently seek to actively manage the corresponding ecosystem trade-offs. For example, it has not in general been a policy to deliberately overexploit predator species in order to increase yields of a prey species, nor conversely to underexploit prey species in order to increase yields of the corresponding predators.

4. Policy Implementation in EU fisheries Management

4.1 Reducing fishing mortality to F_{msy}

The EU has made important progress toward reducing fishing mortality to the maximum sustainable yield rate (F_{msy}) in the last two decades in the northeast Atlantic, and is beginning to make progress in the Mediterranean Sea also. In the former area, the average (median) rate of fishing declined from 169% of F_{msy} in 2003 to 98% of F_{msy} in 2017, while in the latter area it has varied between 269% and 224% with a decline of 45 percentage points since 2011¹². The reduction in fishing mortality to meet F_{msy} may potentially deliver a concomitant reduction in impacts on marine ecosystems and on sensitive species.

The principal instrument used to reduce fishing mortality in the northeast Atlantic are the fixing of TACs and quotas. In the Mediterranean basin these are not generally applicable due to biological, historical and geo-political reasons related to inter alia the limited continental shelf as well as to the prevalence of mixed fisheries, the mostly undefined boundaries of fragmented small size stocks, the atomization of small landing places and the artisanal nature of small-scale fisheries enterprises. In this basin, effort regimes have traditionally been used, at national and recently sub-basin level for the western Mediterranean demersal fisheries. In both areas, mesh size restrictions are used to reduce the mortalities of juvenile fish and to improve yield.

¹² Scientific, Technical and Economic Committee for Fisheries (STECF) – Monitoring the performance of the Common Fisheries Policy (STECF-Adhoc-19-01). Publications Office of the European Union, Luxembourg, 2019, ISBN 978-92-76-02913-7, doi:10.2760/22641, JRC116446.

In both zones, various restricted areas and minimum depths/distances from the coast rules have been implemented to reduce catches of undersized or non-target species as well as to reduce the impact on coastal sensitive habitats.

The discarding of commercial fish at sea is now subject to a general prohibition in order to reduce fishing mortality and improve the yield of marketable fish.

4.2 Monitoring

Monitoring of cetacean bycatches in certain high-risk fisheries is explicitly required. The Habitats Directive¹³ requires Member States to establish a system to monitor incidental capture and killing of those species, and to undertake research as needed to mitigate the impacts.

In addition, Regulation 2019/1241¹⁴ requires the Member States of the EU to monitor (and to reduce incidental by-catches) of sensitive species.

From 2017 onwards, the Data Collection Framework¹⁵ (DCF) introduced the obligation for Member States to collect data on the impact of Union fisheries on the marine ecosystem in Union waters and outside Union waters. These requirements¹⁶ cover data on incidental by-catch of all birds, mammals and reptiles and fish protected under Union legislation and international agreements, the impact of fisheries on habitats, on marine biological resources and on marine ecosystems beyond what is required in existing legislation (notably on by-catch of cetaceans). These provisions are not yet fully operational. As part of the DCF, research surveys at sea¹⁷ complement the data stemming from commercial fishing activities. The EU has finalised a number of studies to assist Member

¹³ See FN 6 above.

¹⁴ Regulation (EU) 2019/1241 of the European Parliament and of the Council of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, amending Council Regulations (EC) No 1967/2006, (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005; OJ L 198, 25.7.2019, p. 105–201.

¹⁵ Regulation (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008, OJ L 157, 20.6.2017, p. 1–21.

¹⁶ Commission Delegated Decision (EU) 2019/910 of 13 March 2019 establishing the multiannual Union programme for the collection and management of biological, environmental, technical and socioeconomic data in the fisheries and aquaculture sectors.

¹⁷ Commission Implementing Decision (EU) 2019/909 of 18 February 2019 establishing the list of mandatory research surveys and thresholds for the purposes of the multiannual Union programme for the collection and management of data in the fisheries and aquaculture sectors.

States and Regional Coordination Groups for data collection to develop common methodologies and regional sampling plans.

4.3 General restrictions on the use of fishing gear

Regulation 2019/1241¹⁸ prohibits the use of certain fishing methods that are detrimental to the marine environment: use of toxic, stupefying or corrosive substances, electricity (with an exception for one gear type under restrictive conditions), explosives, percussive instruments, devices for harvesting corals, and use of projectiles (except for caged or trapped tuna and in recreational fisheries without aqualung and from dawn until dusk). A general ban on the use of static nets deeper than 800m exists to protect deep-sea ecosystems¹⁹. It is also prohibited to use pelagic drift nets of overall length 2,5Km per vessel, to use drift nets to catch defined species of tuna, swordfishes and marlins, sharks, squid (etc.) or at any time in the Baltic Sea.

4.4 EU Measures to protect sensitive habitats

4.4.1. Measures inside EU waters

The EU has adopted a large number of areas where fishing is prohibited or subject to restrictions for the purpose of protecting marine habitats or sensitive species²⁰. These measures either complement fisheries management measures such as TACs and quotas for the protection of certain commercial fish stocks, or impose restrictions intended to protect sensitive species. Some areas are adopted as internal EU measures and others are adopted following recommendations by regional fisheries management organisations.

¹⁸ See FN 14 above.

¹⁹ Regulation (EU) 2016/2336 of the European Parliament and of the Council of 14 December 2016 establishing specific conditions for fishing for deep-sea stocks in the north-east Atlantic and provisions for fishing in international waters of the north-east Atlantic and repealing Council Regulation (EC) No 2347/2002; OJ L 354, 23.12.2016, P. 1.

²⁰ In particular, annexes II and IV (Part C) of Regulation (EU) 2019/1241 of the European Parliament and of the Council of 20 June 2019 on the conservation of fisheries resources and the protection of marine ecosystems through technical measures, amending Council Regulations (EC) No 1967/2006, (EC) No 1224/2009 and Regulations (EU) No 1380/2013, (EU) 2016/1139, (EU) 2018/973, (EU) 2019/472 and (EU) 2019/1022 of the European Parliament and of the Council, and repealing Council Regulations (EC) No 894/97, (EC) No 850/98, (EC) No 2549/2000, (EC) No 254/2002, (EC) No 812/2004 and (EC) No 2187/2005; OJ L 198, 25.7.2019, p.105.

Reasons for imposing such closures include:

- The protection of deep-sea resources that are highly vulnerable to fishing (e.g. orange roughy)
- The protection of deep-sea corals and other sensitive habitats
- The protection of areas of high marine biodiversity
- The protection of juvenile commercial fish (e.g. plaice)
- The protection of sandeel that provide food for nesting seabirds
- The avoidance of bycatches of mammals and seabirds (driftnet ban)
- Improving species-selectivity of fishing (e.g. placement of 35mm-spacing escapement grid or 120mm square-mesh panel in 80mm trawl gear used to target Nephrops in the North Sea with reduced by-catches of small cod, haddock and whiting)
- Improving conservation of certain commercial species (cod, hake, Nephrops, anchovy, salmon, flounder, turbot, rose shrimp, mixed juveniles in the Adriatic Sea)
- The protection of seagrass beds
- The protection of coastal sharks.

4.4.2 Measures outside EU waters

The EU has participated actively at the UN in the adoption of measures to protect vulnerable marine ecosystems (VMEs). The EU also supports such measures in CCAMLR as well as in the relevant regional fisheries management organisations and arrangements (RFMO/A), particularly NAFO, NEAFC, SEAFO, SIOFA and SPRFMO. These organisations have clearly included the implementation of the ecosystem approach in the context of fisheries management; and, with the exception of NEAFC which is advised by the International Council for the Exploration of the Sea (ICES), have scientific committees that provide advice in relation to these aspects and in which EU scientists participate. In the NAFO area, EU Member States organize each year oceanographic campaigns to retrieve data in order to enhance knowledge of the ecosystems. NAFO's efforts on standards of ecosystem productivity have to be underlined.

There are several examples of studies carried out by the EU Member States in order to progress in the knowledge of VMEs in different parts of the oceans. Some examples can be found in the annex to this submission.

In addition to the EU Regulation concerning deep-sea fisheries in EU waters²¹, a further Regulation has been adopted to protect VMEs in the high seas in areas where there is no RFMO/A with a competence for bottom fishing or where existing RFMO/A have not yet taken any measure to protect VMEs²², in line with the provisions of the UNGA resolutions and the FAO International Guidelines for the Management of Deep-sea Fisheries in the High Seas, and measures specific to deep sea fisheries.

This Regulation is complementary to measures adopted through Regulation (EU) 2016/2336 for EU waters and the international waters of CECAF concerning deep-sea stocks in the North-East Atlantic.

Together, these Regulations introduced a series of measures to improve the overall sustainability of deep-sea fisheries:

- A ban on deep-sea trawling deeper than 800 metres;
- Prior authorisation for fishing certain identified species;
- Limitation of the authorised fishing area to zones where deep-sea fishing had already taken place between 2009 and 2011 (i.e. the footprint area). Exploratory fishing in these areas is subject to an impact assessment on VMEs encounter, an authorisation procedure, 1-year limit and mitigation measures to protect VMEs;
- A list of locations where VMEs are occurring or are likely to occur;
- Spatial closures to bottom trawling below 400 metres in areas where VMEs exist or are likely to exist;
- An obligation to report encounters with VMEs below 400 metres and a move-on rule to at least 5 nautical miles;
- Data collection and reporting and an observer coverage of at least 20% for bottom trawlers and bottom-set gillnetters and 10% for other vessels.

In parallel, the protection of VMEs was also considered when updating the relevant EU fisheries legal framework. Regulation (EU) 2017/2403²³ on the EU external fleet (“SMEFF regulation”) introduced criteria for the granting of fishing authorisations by EU Member States, one of which

²¹ Regulation (EU) 2016/2336 of the European Parliament and of the Council of 14 December 2016 establishing specific conditions for fishing for deep-sea stocks in the north-east Atlantic and provisions for fishing in international waters of the north-east Atlantic and repealing Council Regulation (EC) No 2347/2002; OJ L 354, 23.12.2016, p. 1–19.

²² Council Regulation (EC) No 734/2008 of 15 July 2008 on the protection of vulnerable marine ecosystems in the high seas from the adverse impacts of bottom fishing gears; OJ L 201, 30.7.2008, p. 8–13.

²³ Regulation (EU) 2017/2403 of the European Parliament and of the Council of 12 December 2017 on the sustainable management of external fishing fleets, and repealing Council Regulation (EC) No 1006/2008; OJ L 347, 28.12.2017, p. 81–104.

being that the vessel should comply with RFMO rules and EU law governing fisheries in the high seas.

4.5 Measures to protect sensitive species

The Habitats Directive²⁴ requires Member States to prohibit the deliberate capture, killing or disturbance of listed sensitive species (Annex IV). This list includes Baltic ringed seal, Mediterranean monk seal, five species of sea turtle, numerous species of rare fish including sturgeons, whitefish, and all cetacean species. Similar provisions concerning birds are set out in the Birds Directive²⁵.

Specific provisions are also set out in Regulation 2019/1241²⁶. Articles 10 and 11 of this regulation prohibit the catching, retention on board, transshipment or landing of sensitive fish or shellfish and of marine mammals, reptiles or seabirds set out in named lists (Annexes II and IV to Habitats Directive). A regionalised process has been adopted to identify and implement locally-appropriate technical solutions. In addition, in order to deter harbour porpoises from being caught in static fishing nets in certain high-risk areas Regulation 2019/1241 requires that vessels use acoustic deterrent devices (“pingers”).

To protect seabirds, Member States are required to use bird-scaring lines, to set long-lines at night, and to use weighted lines where reported incidental catches of seabirds constitute a serious threat to conservation.

Furthermore,²⁷ a retention ban and release alive policy applies for shark and ray species which are included in Annex II to the Protocol to the Barcelona Convention concerning specially protected areas and biological diversity in the Mediterranean.

4.6 Complementary measures by Member States

Management of the marine environment within territorial seas is a primary responsibility of Member States. In this zone, numerous marine protected areas have been adopted with various

²⁴ See FN 6 above.

²⁵ See FN 7 above.

²⁶ See FN 14 above.

²⁷ Regulation (EU) No 1343/2011 of the European Parliament and of the Council of 13 December 2011 on certain provisions for fishing in the GFCM (General Fisheries Commission for the Mediterranean) Agreement (...). OJ L 347, 30.12.2011, p. 44, as modified by Regulation (EU) 2015/2102 and Regulation (EU) 2019/982.

levels of intensity of management intervention. Together with areas protected under EU fisheries Regulations, some 10.8% of EU sea area had been designated by 2016.

Networks of MPAs as area based management tools are perceived as a one of the possible tools to safeguard good environmental status of biodiversity in EU marine waters in line with the Natura 2000 network. The coverage by high seas MPA networks promoted by the European Regional Seas Conventions has increased substantially in recent years, making significant progress towards global targets. A broad array of science needs and priorities together with clear attainable and measurable objectives are necessary to establish ecologically coherent MPA networks.

4.7. Financial Support

The EU's European Maritime and Fisheries Fund²⁸ provides co-funding for the reduction of the impact of fisheries on the marine environment and for the protection and restoration of aquatic biodiversity and ecosystems, among many other funding headings. From this fund the total available EU funding for sustainable development of fisheries, aquaculture and fisheries areas, marketing and processing-related measures and to technical assistance to Member States (including the area mentioned above) was € 4380.8 million for the period 2014 to 2020. This co-funding has been used, for example, to support pilot projects to mitigate seabird bycatches in the Baltic Sea, to co-fund collection of data on by-catches for sensitive species and the deployment of acoustic deterrent devices to deter harbour porpoises from certain fisheries using static gear.

5. Invasive Species

EU legislation provides for controlling and monitoring of movement, quarantine, translocation, compliance with health requirements, of aquatic organisms by means of national licensing schemes²⁹. The objective is to minimise the possible impact of alien species on aquatic habitats from aquaculture practices. Moreover, specific EU legislation³⁰ also provides for preventing, early detecting and rapidly eradicating and managing invasive alien species, including in the marine environment.

²⁸ Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund (...) OJ L 149, 20.5.2014 p.1.

²⁹ Council Regulation (EC) No 708/2007 of 11 June 2007 concerning use of alien and locally absent species in aquaculture OJ L 168, 28.6.2007, p. 1.

³⁰ Regulation (EU) 1143/2014 on invasive alien species.

Significant ecosystem changes are being recorded due to the spread of invasive species from the Red Sea into the Mediterranean Sea through the Suez Canal, possibly exacerbated by warming of the Mediterranean Sea as part of global warming.

6. Further development of ecosystem considerations

The EU is currently working on assessment of seabed disturbance, ecosystem structure and function including food webs, and assessment of biological diversity with a view to fixing targets that define good environmental status for these parameters, together with programmes of measures to reach those targets. This work is currently under development at the scientific and policy levels.

Enhancing the implementation of the obligation in the UN Convention on the Law of the Sea to assess the potential effects of activities³¹ through Environmental Impact Assessments (EIA) can also help to enhance the protection of the marine environment and ecosystems including fisheries resources. In this regard, the EU has adopted rules³² with regard to projects that are likely to have significant effects, including on the marine environment.

7. Fisheries in the wider context

In the wider context, it is pertinent to note that fisheries, while a major user of maritime resources and maritime space, is not the only significant user as there other users such as maritime transport, offshore energy or aquaculture. In order to address and to forestall potential conflicts for use of maritime space, the EU has adopted a requirement through a Directive³³ for Member States to establish marine spatial use plans taking into account economic, social and environmental aspects to support sustainable growth in the maritime sector, applying an ecosystem-based approach, and to promote the coexistence of relevant activities and uses. This Directive establishes, as one of its objectives, that maritime spatial planning has to integrate economic, social and environmental aspects to support sustainable development and growth in the maritime sector, applying an ecosystem-based approach, and to promote the coexistence of relevant activities and uses. Such maritime spatial plans should also be developed taking into account stakeholder consultations,

³¹ UNCLOS Art. 206.

³² Directive 2011/92/EU of the European Parliament and of the Council of 13 December 2011 on the assessment of the effects of certain public and private projects on the environment (codification) OJ L 026, 28.1.2012, p.1

³³ Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning OJ L 257, 28.8.2014, p. 135.

transboundary cooperation with other states and be organised on the basis of best available data. Some Member States have already finished their plans and are now implementing their maritime spatial planning.

8. Conclusion and Future Policy Development

An ecosystem-based approach to fisheries management has proven to be a complex topic. Our focus to date has been on reducing fishing mortality to F_{msy} levels as an important contribution to reducing negative effects of fishing on ecosystems, complemented with the prohibition of the most damaging types of fishing gear and practices. Spatially-structured management measures have been used for various purposes: to reduce catches of juveniles, to better manage mixed fisheries, to protect sensitive habitats and to protect sensitive species. Work is presently underway on measuring and setting appropriate threshold values for seabed disturbance, for biodiversity and for structure and functioning of food webs.

The European Union is currently working on a new Biodiversity Strategy for 2030. The aim is *inter alia* to improve implementation of the Habitats, Birds and Marine Strategy Framework Directives in order to halt and to reverse biodiversity loss including at sea in the European Union. It will also foster further work to reduce overexploitation of marine resources, marine pollution (including marine litter and noise), the fight against Invasive alien marine species and the expansion of the MPA network ensuring good ecological representativeness, connectivity and effective management. Moreover, the EU and its Member States also aim at an ambitious post-2020 global biodiversity framework, to be adopted at CBD COP15 in Kunming, October 2020. It should allow achieving the 2050 Vision of living in harmony with nature that was agreed in 2010, and include ambitious, realistic and, where feasible, measurable and time-bound targets, including for marine and coastal biodiversity.

The European Union remain committed to pragmatic, simple solutions to move on from single-species fish stock management according to MSY and towards broader management including the protection of sensitive species and sensitive habitats.

We acknowledge that further advances in the application of the ecosystem approach to fisheries management will require tackling active management of ecological and technical interaction effects. This will need to take account of possible ecological impacts which could disrupt the balance of an

ecosystem as well as take into account wider (political) considerations related to impacts on dependent species (such as predator/prey species) which may be of different importance to different countries.

Annex

Some examples of research projects relating to vulnerable marine ecosystems

- From 2005 to 2008, “PROJECT ECOVUL / ARPA” which studied vulnerable marine ecosystems in relation with fishing gears on the NEAFC Hatton Bank, with the collaboration of EU Member States research vessels.
- Since 2005, in the NAFO area, an international project (Project NERIEDA) has been carried out with Canadian, Russian and EU Member States participation to study the identification and distribution of benthic invertebrates and the effects of fishing activities, mainly, over deep-sea corals, sea pens and sponge fields. As the result of these studies 13 areas were closed in NAFO.
- Between 2007 and 2010, in the South West Atlantic, in international waters off the Patagonian platform, (Division FAO 41), Spain, through the ATLANTIS project, mapped and identified sensitive habitats and possible interactions with fisheries in the defined area between 42 ° S and 48 ° S latitude, and longitudinally between the western boundary 60 ° 55 ' W and the eastern boundary of 57 ° 20 'W.
- In 2009 and 2009, a multidisciplinary campaign was carried out on the seamounts of the Walvis Ridge off the coast of Namibia by the Spanish Institute of Oceanography and the National Marine Information and Research Centre (Namibia).
- During the 2nd semester of 2020, as part of the Horizon 2020 project iAtlantic, a scientific campaign led by an EU Member State, was planned to take in place (although this has since been postponed due to the COVID-19 pandemic), including activities in Cape Verde waters and also in international waters under SEAFO competence (Mirabilis campaign). This campaign is an international multidisciplinary expedition that will study both the water and the seafloor with advanced technology.