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POLGEN 26
POLMAR 5
CLIMA 63
COMAR 5
CONUN 61
ENER 92
ENV 182
MAR 36
MARE 5
PECHE 72
RECH 109
RELEX 227
TRANS 126
SUSTDEV 30

NOTE

From:	General Secretariat of the Council
To:	Delegations
Subject:	2020 UN Ocean Conference - EU and MS input to the concept notes for interactive dialogues

Delegations will find attached the European Union and its Member States' input to the concept notes for interactive dialogues, in view of the preparation of the 2020 UN Ocean Conference.

EU and its Members States' input for Interactive Dialogue 1

The marine environment and its ecosystem are subject to multiple pressures and impacts from human activities, such as overfishing, seabed damage and loss, global warming, pollution from land- and sea- based sources and eutrophication. As a response, the EU adopted in 2008 the Marine Strategy Framework Directive[1] (MSFD) as a holistic policy aiming to protect the marine environment of the seas around Europe while enabling the sustainable use of marine goods and services. The main objective of the Directive is to achieve and/or maintain good environmental status in the marine environment. Criteria and methodological standards for good environment status have been set.[2]

Among its objectives, the Directive operationalizes the UNCLOS[3] obligations to prevent, reduce and control pollution of the marine environment, including to observe and measure the risks or effects of pollution, with respect to marine waters around the EU, in order to achieve their good environmental status. This legislative framework to protect the sea and oceans is comprehensive and aims at preserving biodiversity, phasing out pollution from contaminants, nutrients, marine litter and microplastics, preventing introduction of non-indigenous species, damage from underwater noise (or other inputs of energy) or marine litter, based on an ecosystem-based management approach and by focusing on pressures. In this regard, it requires Member States to take measures to prevent, reduce and control pollution of the seas and oceans from land-based (waste treatment disposal, agriculture, industrial uses, urban uses, etc.) and sea-based sources (e.g. maritime traffic, oil spills) and to ensure seafloor integrity, prevent pollution of the seabed and its subsoil. It is also supported by other EU legal instruments, also relevant to achieve clean seas, including the Nitrates Directive[4], Water Framework Directive[5], Urban Waste Water Treatment Directive[6], which are crucial to meeting the objectives of the MSFD[7] and limiting urban pollution including nitrate and phosphorus in the rivers and at sea.

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1 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 L 164, 25.6.2008, p. 19).

2 Commission Decision (EU) 2017/848 of 17 May 2017 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment, and repealing Decision 2010/477/EU.

3 The United Nations Convention on the Law of the Sea (UNCLOS) sets out sets out the legal framework within which all activities in the oceans and seas must be carried out and includes a number of obligations in relation to the protection and preservation of the marine environment.

4 Council Directive 91/676/EEC concerning the protection of waters against pollution caused by nitrates from agricultural sources.

5 Directive 2000/60/EC of the European Parliament and of the Council establishing a framework for the Community action in the field of water policy.

6 Council Directive 91/271/EEC concerning urban waste-water treatment.

7 See https://ec.europa.eu/environment/water/water-urbanwaste/evaluation/index_en.htm and documents therein.

At regional level, regional seas conventions such as HELCOM, OSPAR, as well as the Barcelona and the Black Sea Conventions provide also a solid framework to reduce pollution from nutrient enrichment, contaminants, marine litter, including microplastics, and anthropogenic underwater noise, among others.

Preserving and restoring marine biodiversity and developing a sustainable blue economy are also at the heart of the European Green Deal. Through its initiatives, the Green Deal will stimulate progress towards reducing pollution and generally having our seas in good status. In particular, the climate neutrality objective will seek to limit the potentially catastrophic effects of climate change on coasts and seas. The zero pollution ambition will be directed towards addressing the visible and invisible marine pollution that harm marine life.

The new Circular Economy Action Plan, adopted on 11 March 2020, will decrease plastic pollution, including from microplastics, in particular in oceans and seas.

Although more than visible on seas and coasts, plastic pollution is not solely a problem of the oceans, but rather, a growing general environmental challenge with some estimates pointing to plastic pollution of soils between 4 and 23 times greater than out at sea[8]. It is well documented that it affects all parts of the marine environment and at levels that can adversely impact marine species, trophic chains and ecosystems and, particularly microplastics, potentially have impacts on human health. Most plastic litter comes from land, but sea-based sources such as shipping, fisheries and aquaculture are important contributors. An effective response should require full implementation of existing frameworks and efficiently addressing remaining governance and policy gaps.

At the EU level in order to prevent and tackle the problem of marine litter ending-up on European coast and beaches, a new Single-Use Plastic Directive[9] (SUP) was adopted last year. While the main objective of the SUP Directive is to reduce the impact of single-use plastic products and (waste) including from fishing gear containing plastic on the environment and on human health, it also seeks to promote the transition to a circular economy with innovative and sustainable business models, products and materials, thus contributing to the efficient functioning of the internal market.

The SUP Directive provides for a comprehensive set of measures, which apply depending on the categorisation of the different single-use plastic products. Where sustainable alternatives are easily available and affordable, single-use plastic products will be banned from being placed on the market. For other products, the focus is on prevention measures, such as consumption reduction, marking of SUP products to inform consumers, awareness raising and improved waste management (*see overview table below*).

[8] The Plastic Atlas 2019, Heinrich Böll Foundation, p.21

[9] Directive (EU) 2019/904 on the reduction of the impact of certain plastic products on the environment

1. Schematic overview of measures:

	Consumption reduction	Market restriction	Product design requirement	Marking requirements	Extended producer responsibility	Separate collection objective	Awareness raising measures
Food containers	X				X		X
EPS food and beverage containers, cups		X					
Oxo-degradable products		X					
Cups for beverages	X			X	X		X
Cotton bud sticks		X					
Cutlery, plates, stirrers, straws		X					
Sticks for balloons		X					
Balloons					X		X
Packets & wrappers					X		X
Beverage containers, their caps & lids - Beverage bottles			X		X		X
			X		X	X	X

Tobacco product filters				X	X		X
Sanitary items:				X	X		X
- Wet wipes - Sanitary towels				X			X
Plastic carrier bags					X		X
Fishing gear					X		X

The EU has also adopted a new Port Reception Facilities Directive[10] (PRF), targeting the issues of marine litter from ships. The PRF Directive takes into consideration MARPOL requirements, and specifically addresses the problem of marine litter from ships and seeks to maximise garbage deliveries to ports. The PRF Directive recognises that although the majority of marine litter originates from land-based activities, the shipping industry, including the fishing and recreational sectors, is also an important contributor, with discharges of waste, including plastic and derelict fishing gear, discarded directly into the sea. To address the problem, the Directive provides for a mix of incentive and enforcement measures to ensure that ships deliver their waste on shore to adequate port reception facilities.

The Impact Assessment foresees that there would be reduction of 56% in items (total amount of littering of the top 10 single use plastic items would be almost 7 billion items in 2030), or -4,850 tons per year as of the date that all measures enter into force (2029)[11].

As regards fishing gear, the introduction of Extended Producer Responsibility (EPR) schemes for fishing gear would result in the reduced environmental impact of 2,600 tonnes per year which corresponds to amounts between 2 and 7 million euros in economic benefit for fishing, port and tourism industries. Total cumulative reduction of abandoned, lost and discarded fishing gear (ALDFG) litter (including impact of Port Reception Facilities Directive) is estimated to 5,500 tonnes per year.

[10] Directive (EU) 2019/883 of the European Parliament and of the Council of 17 April 2019 on port reception facilities for the delivery of waste from ships

[11] https://ec.europa.eu/environment/circular-economy/pdf/single-use_plastics_impact_assessment.pdf

This includes the setting up and operation of a cost recovery system for waste from ships, which requires application of an indirect fee to be paid by all ships irrespective of actual delivery. For garbage waste (MARPOL Annex V), the indirect fee is set at 100% of the costs of managing the waste, giving a right to the ship to be able to deliver all its garbage (including fishing gear and passively fished waste) without any additional direct charges. The fishing and recreational sector, given their contribution to the occurrence of marine litter, have also been included in this system.

Significant progress at international level was registered with regard to environmentally sound management and transboundary movement of plastic waste, through the amendment of annexes to the Basel Convention (BC). Other actions related to plastic waste within Basel Convention add to this, including a Partnership on plastic waste and the development of technical guidelines. United Nations Environmental Assembly established Ad-hoc Open Ended Expert Group on Marine Litter and Microplastics to address this issue[12].

At the regional seas' level, a large number of Regional Seas Conventions across the globe have established comprehensive regional Marine Litter Action Plans and monitoring and assessment activities, as well as frameworks to address all Land-Based Sources of Pollution (like LBS protocols). The Arctic Council is also preparing a new Marine Litter Regional Action Plan. Under the MARPOL Convention, the IMO has adopted an Action plan to enhance existing regulations and introduce new supporting measures to reduce marine plastic litter from ships. The London Convention and Protocol regulate the dumping of wastes at sea. FAO activities supported by Joint Group of Experts on the Scientific Aspects of Marine Pollution (GESAMP) provide guidance on fishing gear.

It is worth noting that rivers are among the main pathways of ocean plastic pollution. They collect litter in the catchment areas and carry it to the seas. Research found that rivers may be responsible for a large part of the pollution in the ocean. Targeted action to reduce litter input to the rivers can therefore be helpful in reducing the pressure on the marine environment in the short term.

[12] Decision UNEP/EA.3/Res.7.

Addressing the problem adequately requires action at a global level along a life-cycle approach, which will only be possible through sustainable production and consumption. This means implementing a circular economy approach that includes sustainable design and production of materials and products and their sustainable use, promoting durability, reuse and recycling of materials, thereby preventing plastic pollution from occurring in the first place. Existing instruments and initiatives, although numerous and important in the contribution they make, however still do not efficiently tackle all aspects, especially the upstream side of the plastic pollution problem, as identified in the 2018 UNEP report[13]. Addressing the gaps, in particular by considering a global framework for plastics, should result in the prevention of waste generation and decrease of leakage of plastics into the environment, in particular the coastal and marine environment.

Prevention is the cornerstone of EU polices; in specific circumstances, clean-up activities may be environmentally sound. The Marine Strategy Framework Directive (MSFD) was the first EU instrument to create legal obligations for Member States to assess and monitor marine litter quantities and impacts, and to take measures to reduce them.

EU and some States, as for example EU Member States, have introduced requirements for the delivery of the waste ashore before a ship leaves a port and have removed economic incentives to avoid doing so. It is, however, too early to judge how far those various developments have succeeded in reducing the problem as the major obstacle to the implementation of MARPOL has been the lack of, or insufficient, reception facilities in many ports worldwide. Compliance with the discharge requirements of MARPOL depends very much on the availability of adequate port reception facilities, especially within special areas established under Annex V. Additionally, regulations introduced under MARPOL aim at air pollution from ships and are designed to limit emissions, in particular sulphur oxide and nitrous oxide emissions, as well as particulates. There is also scope to extend emission control areas, which are areas in which stricter controls are established to reduce emissions. In the effort to prepare proposals for emissions control areas at the sea-basin level, Regional Seas Conventions are important partners and platforms for discussion. In that context, there have been the Emission Control Areas within the EU in effect in the Baltic and the North Sea since 2006 and 2007 respectively. The most recent development in the seas around the EU was adoption of the *Road Map for a Proposal for the Possible Designation of the Mediterranean Sea, as a whole, as an Emission Control Area for Sulphur Oxides Pursuant to MARPOL Annex VI, within the Framework of the Barcelona Convention*[14].

[13] UNEP (2018). Combating Marine Plastic Litter and Microplastics: An Assessment of the effectiveness of relevant international, regional and sub-regional governance strategies and approaches – Summary for Policy Makers.

[14] Decision IG. 24/8 of COP 21 of the Barcelona Convention

In spite of the high public attention and intensive efforts in the last years, many knowledge and implementation gaps persist, including the following ones:

- How can we support national and regional comprehensive monitoring of quantities and impacts of litter entering marine environment, so as to understand better the problem and design efficient measures to tackle it?
- How, with the scarcity of resources and the proliferation of initiatives at all levels, can we develop harmonised monitoring?
- How do we harness the available (e.g. research) funds and public attention to fulfil our policy goals and commitments?
- How can we better coordinate national/regional plans and measures to mitigate marine litter? Do we need additional instruments at regional or global level?
- How can targeted action contribute to the reduction of pollution in the marine environment? Where can we be more effective and which innovations and solutions can help us achieve this goal?
- How can life-cycle approaches contribute to addressing marine pollution?
- Is there a gap at the global level that would need to be addressed to support the delivery of SDG 14.1?
- How can stronger interactions between regional and sectoral organisations contribute to addressing marine pollution from sea-based sources and contribute to strengthening of human health?
- What can be done to strengthen the existing international legal instruments addressing marine litter, in order to reduce marine debris and pollution?
- How can compliance with existing agreements addressing pollution be significantly strengthened?
- What are the key sectors that have potential for making major contributions to controlling marine pollution and how can they best be motivated to action? How can existing and new partnerships across sectors contribute to solutions?

EU and its Member States' input for Interactive Dialogue 2

The importance of having clean, healthy and productive oceans and seas is widely accepted, not only as a goal in itself to protect marine biodiversity, but also to support sustainable development including by helping ensure global resilience to the adverse effects of climate change, both on land and at sea.

To respond to this issue, preserving and restoring marine biodiversity and developing a sustainable blue economy are now at the heart of the European Green Deal. Through its initiatives, the Green Deal aims to stimulate further progress towards halting biodiversity loss and generally having our seas in good status. Its biodiversity strategy aims to ensure that marine biodiversity is effectively protected, preserved and restored, and that coastal ecosystems become more resilient. The two go hand in hand, as having a healthy biodiversity boosts the planet's resilience to the climate challenge.

In the EU, the Marine Strategy Framework Directive (MSFD)[15] enshrines in a legislative framework the ecosystem approach to the management of human activities having an impact on the marine environment, integrating the concepts of environmental protection and sustainable use. In order to achieve its goal, the Directive establishes European marine regions and sub-regions on the basis of geographical and environmental criteria. Cooperation between the Member States of one marine region and with neighbouring countries which share the same marine waters, is already taking place through the Regional Sea Conventions around the EU, with mutually reinforcing activities on EBA to regional sea-basins by launching integrated marine and coastal policies and promoting the use of area-based management tools in collaboration with other relevant regional organisations, like RFMOs and relevant global organizations.

The work on Marine Protected Areas in the EU is supported by the Birds and Habitat (Natura 2000) Directives as well as MSFD, MPAs can be designated and managed in accordance with the Aichi Target 11[2], which contributes to achieving of SDG 14.

[15] 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) [2] The latest (end 2018) data for marine N2000 were 551.899 km², 9.5% of marine areas around the EU. The % of total MPAs was ~13%, ~ 740.000 km²

Approaches to achieving clean and healthy oceans and seas need to follow two broad paths. Firstly there's the need to assess the current state of the oceans at all levels and identify which anthropogenic pressures are adversely affecting their health. Secondly, the most important pressures on the marine environment have to be tackled, as this is the most direct and effective way to reduce the adverse effects of human uses and activities that are affecting the oceans and seas. In developing assessments, it is necessary to ensure the interlinkages and cross-fertilization among assessments, as for example, regional quality status assessments and the Global Ocean Assessment.

Assessing the state of the ocean: having a firm understanding of the state of our oceans and seas, underpinned by systematic ocean observations and regular scientifically valid assessments of status, provides a powerful evidence-base upon which to take the necessary actions to tackle the most widespread and pressing problems caused by human activities. Ocean observations are needed for a comprehensive range of physical, chemical and biological characteristics in order to understand the current state and its variability in space and time. Observation systems exist for many topics in many regions, but often lack coordination between countries, or the necessary international standards that allow the data to be aggregated for regional assessments. Observation networks are lacking in many cases. Due to the complexities of the ocean and its biodiversity, together with the sheer scale of marine waters for which data are needed, it is important to focus monitoring efforts on the anthropogenic pressures most affecting the health of the ocean, and in those areas most affected and on their impacts of different ecosystem components (species, habitats). This risk-based approach can ensure the most effective use of resources and the collection of the data most needed to understand the scale of the pressures that must be addressed.

For the marine environment, the following pressures are widespread and can have significant effects, which vary by region, on different parts of marine ecosystems: overfishing, incidental capture of bycatch and associated seafloor damage; pollution by hazardous substances from both diffuse (e.g. land-based) and acute (e.g. oil spills) sources; nutrient enrichment leading to eutrophication; inputs of litter, especially plastics and micro-plastics; introduction of acute and continuous underwater noise; introduction of non-indigenous species; habitat loss through infrastructure developments, particularly in coastal zones. The ocean observation data need to be analysed through scientifically robust indicators in order to provide a clear means to assess the extent of each pressure and their impacts on different ecosystem components (birds, mammals, turtles, fish, habitats) and to be able to track progress in changes in their status (improving, deteriorating), so as to guide management actions.

Tackling the most important pressures on our oceans: improving the state of our oceans and seas is most effectively achieved by addressing (reducing) the main pressures (as mentioned above) via improved management of the activities causing these pressures. Direct action to reduce impacts or restore species and habitats is often a more costly type of intervention, that should be reserved for the few cases where such action is feasible and urgent (e.g. for highly endangered species and habitats). The main pressures outlined above are generally widespread and chronic, although their importance varies by region depending on the main activities in each region. It follows then that most benefit for ocean health will be derived from tackling these pressures at their source, by improving the management of the associated activities (some pressures are caused by multiple activities). Effective ecosystem-based Integrated Coastal Zone Management and Maritime Spatial Planning can help in addressing cumulative impacts, and use of marine protected areas (MPAs) can contribute as long as they are part of a wider strategy to tackle the most widespread and damaging pressures.

The coherence and effectiveness of marine protected area networks contributes greatly to this endeavour. In order for the marine species and habitats to be protected, they have to be managed at regional scale, according to their lifecycle and distribution. Analysis of ecological coherence should tell where protected areas should be placed. Monitoring activities should keep track of the effects of protection. By being ecologically coherent, the network should have a geographical coverage that is meaningful and should venture beyond territorial waters given the relevance of observing ecological connectivity between ecosystems and habitats. Absence of such perspective greatly reduces the benefits they can generate, which could otherwise have much more significant positive spill -over effects well beyond the designated areas. Effective control and management should maximise the benefits from these areas.

The biodiversity – climate – ocean nexus is a domain where according to IPCC irreversible tipping points risk to be passed within the coming decade. For instance, global warming of 2°C is beyond the viable limit of coral reefs on which half a billion persons directly or indirectly depend for their livelihoods. In 2014 CBD has adopted priority actions for coral reefs (CBD COP XII/23), but the Aichi Target 10 [*By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning]* has nevertheless not been met. Survival of coral reefs also depends on achieving the Paris Agreement without overshooting 2°C.

Having the scientific data available on the impacts of climate change on oceans, the question is how to address the climate change-related pressures in the short term available?

Our priority remains mainstreaming biodiversity concerns among the different activities exerting pressures on the marine ecosystems, such as fisheries, deep-sea mining, maritime transport, and others. All the relevant international organisations at regional level, such as Regional Seas Conventions and Regional Fisheries Management Organisations, and at global level (FAO, IMO, ISA etc.) would need to assist in this effort. Strengthened role of regional actors with mandates in biodiversity and ecosystems, like Regional Seas Conventions and Programmes is needed. There is still work to be done on the EBSA process on the procedures to establish new ones –on the basis of new information coming from surveys- and review of the already described ones. We also need to ensure procedures and coherence in areas interlinking the jurisdictional and international waters in which the work on Implementing Agreement on Biodiversity Beyond National Jurisdiction is of utmost importance. Additional work is needed on the effective and equitable management, representativeness, connectivity and integration into seascape of MPAs and Other Effective Conservation Measures (OECMs).

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 anthropogenic water noise), the fight against invasive alien marine species and the expansion of the MPA network ensuring good ecological representativeness, ecological connectivity and effective management. Moreover, the EU and its MS 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. In view of presenting and adopting such targets, the High Ambition Coalition for Nature proposes the protection of 30% of Oceans by 2030.

Regional Seas Conventions and Action Plans are important players in translating the global efforts on ecosystems and biodiversity into the regional sea-basin context and ensure regionally- coordinated implementation, monitoring and assessments. Their role in implementation of ocean-related Agenda 2030 and SDG 14 was highlighted by United Nations Environment Assembly in Resolution 2/10.

There are questions that are of importance for progress in the field of Thematic Dialogue 2, that might be of interest for discussion in this Thematic dialogue, as follows:

How can good management of the marine environment improve its status and make seas cleaner, healthier and more productive?

What commitments and pledges should Parties make as regards marine and coastal biodiversity?

How can coherence and effectiveness of networks of MPAs be ensured?

How can a greater transparency in implementation, strengthened monitoring and adequate reviews of progress be promoted?

In view of necessary science-policy interface, how can cause-effect analyses be improved and how can the knowledge be effectively and timely passed from MPA managers to decision makers?

How can research innovation contribute to fish stock restoration, reduction of impact of by-catch and seabed disturbance?

How can area-based management tools be used to manage coastal ecosystems and habitats as important nature-based solutions of importance for overall status of the coastal ecosystems and their role in addressing climate change impacts?

How can marine protected areas, in particular, contribute to making the oceans and seas resilient towards the impact of climate change?

How can the knowledge of local communities and indigenous peoples be better integrated in policy development and implementation for the management of the marine environment?

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EU and its Member States' input and for Interactive Dialogue 4

The European Union welcomes the discussion on sustainable fisheries in the context of Dialogue 4.

For the EU this comes in the context of several important policy developments. The Von der Leyen Commission has outlined its ambition to become the first climate-neutral continent by 2050 in the European Green Deal, published end of last year[16]. This overarching ambition is to be operationalised for example for biodiversity and food systems (applicable also to fisheries) through the EU Biodiversity Strategy 2030 and Farm 2 Fork initiatives to be adopted by the European Commission at the end of March. In parallel, the European Commission will also be assessing how our current policy (Common Fisheries Policy, "CFP") has been functioning, with a report to be presented by the end of 2022.

EU legislative framework for the management of fisheries

Fisheries in the European Union are managed on the basis of the objectives and general rules set out in Regulation (EU) No 1380/2013[17] (so-called "Basic Regulation") on the Union's CFP. This Regulation entered into force on 1 January 2014. The main elements of this policy are as follows:

- The objective of the CFP is to ensure that fishing and aquaculture activities are environmentally sustainable in the long-term and are managed in a way that is consistent with the objectives of achieving economic, social and employment benefits, and of contributing to the availability of food supplies.
- This is to be achieved by making sure that exploitation of living marine biological resources restores and maintains populations of harvested species above levels which can produce the maximum sustainable yield (MSY). Keeping fishing activity within these levels in combination with more selective and fishing gears having less adverse impacts and spatial management of fishing activities, reduces the negative impact on sensitive[3] species, including seabirds, marine mammals, sea turtles and on marine ecosystem structure and function.
- According to the CFP this target shall be achieved at the latest by 2020 for all stocks.

16 https://ec.europa.eu/info/sites/info/files/european-green-deal-communication_en.pdf

17 Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the Common Fisheries Policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC [3] "Sensitive species" are defined in the Regulation (EU) 2019/1241 as "a species whose conservation status, including its habitat, distribution, population size or population condition is adversely affected by pressures arising from human activities, including fishing activities. Sensitive species, in particular, include species listed in Annexes II and IV to Directive 92/43/EEC, species covered by Directive 2009/147/EC and species whose protection is necessary to achieve good environmental status under Directive 2008/56/EC".

- In order to achieve these objectives, the CFP applies both the precautionary approach in taking measures designed to protect and conserve living marine biological resources, to provide for their sustainable exploitation as well as, the ecosystem approach to minimise the negative impact of fishing and aquaculture on the marine ecosystem. In this regard, the new Technical Measures Regulation[18] (in force as of 14 August 2019) is important as it is largely aimed at reducing catches of juveniles, improving selectivity, reducing discards and minimising the negative impacts on sensitive species and habitats.
- Finally, the CFP aims, in particular, to progressively eliminate discards of all regulated stocks. The so-called "landing obligation" was introduced in 2015, coming into force progressively on a case-by-case basis for different fisheries. As of 1 January 2019, the landing obligation is fully in force, requiring that all catches of regulated commercial species on-board to be landed and counted against quota. Nevertheless, there are some limited derogations for specific circumstances, for example, where there are high survival rates or for some small quantities, if selectivity can no longer be improved or retaining catches on board results in disproportionate costs.

More detailed rules for the application of the above principles are set in the multiannual plans covering the Baltic Sea[19], the North Sea[20], the Western Waters[21], and the Western Mediterranean Sea[22] which came into force in 2016, 2018 and in 2019 (last two multiannual plans) respectively. They set the following principles for setting fishing opportunities for demersal stocks:

- Where the stocks are target stocks under the multiannual plan, they are managed according to MSY, wherever this level of scientific information is available. Remedial measures must be taken to restore the biomass to safe biological limits if the biomass is below Blim.

18 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

19 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

20 Regulation (EU) 2018/973 of the European Parliament and of the Council of 4 July 2018 establishing a multiannual plan for demersal stocks in the North Sea and the fisheries exploiting those stocks, specifying details of the implementation of the landing obligation in the North Sea and repealing Council Regulations (EC) No 2007 and (EC) No 1342/2008

21 Regulation (EU) 2019/472 of the European Parliament and of the Council of 19 March 2019 establishing a multiannual plan for stocks fished in the Western Waters and adjacent waters, and for fisheries exploiting those stocks, amending Regulations (EU) 2016/1139 and (EU) 2018/973, and repealing Council Regulations (EC) No 811/2004, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007 and (EC) No 1300/2008

22 Regulation (EU) 2019/1022 of the European Parliament and of the Council of 20 June 2019 establishing a multiannual plan for the fisheries exploiting demersal stocks in the western Mediterranean Sea and amending Regulation (EU) No 508/2014

- If the stocks are by-catch stocks, they are managed in line with the best available scientific advice (in some cases – MSY). In cases where this results in a premature closure of the fishery, the fishing opportunities may be set in line with the precautionary approach.
- The Western Mediterranean Sea multiannual plan provides that Fmsy should be achieved in the area by 2025 at the latest. It applies to fisheries exploiting demersal stocks in the western Mediterranean and establishes that Member States will have to reduce fishing effort by up to 40% in the first five years of implementation and put in place closures to protect juveniles and spawning grounds from the beginning. In 2020, a first effort reduction of 10% will have to be implemented.

The management of the CFP is also guided by principles of good governance, which include inter alia, decision-making based on best available scientific advice. For this purpose, the CFP obliges Member States to collect biological, environmental, technical, and socio-economic data necessary for fisheries management, in accordance with specific rules for data collection. To this end, Article 25(2) of the Basic Regulation sets out key principles, such as: accuracy, reliability and timeliness; the use of coordination mechanisms to avoid duplication of data collection; safe storage and protection of collected data and ensuring confidentiality; and availability of relevant data for bodies with a research or management interest. The Data Collection Framework[23] (DCF) establishes the Union framework for the collection, management and use of data in the fisheries sector, which provides the basis for the provision of scientific advice for the CFP. The multiannual Union programme for data collection (EU MAP) establishes the details of data requirements and thresholds as well as a list of mandatory research surveys, including areas beyond national jurisdiction. Data to be collected includes biological data, data on the impact of Union fisheries on marine ecosystems, data on the activity of Union fishing vessels, and socio-economic data both on fisheries and marine aquaculture. Member States plan and carry out their data collection activities under the DCF at the same time respecting other legal data collection or monitoring obligations, such as the collection of data required by Regional Fisheries Management Organisations (RFMOs). The European Union provides considerable financial support to the collection of data and development of scientific advice, through contributions under the fisheries financial support system and through Member States contributions.

23 Regulation (EU) 2017/1004 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.

The Marine Strategy Framework Directive (MSFD)[24] has the aim to address cumulative impacts of pressures on marine environment with a view of achieving clean, healthy and productive seas. It 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.

Financial support for actions under the CFP, is provided through, Regulation (EU) No 508/2014[25] (the EMFF Regulation) and includes supports for measures such as:

- Innovation linked to the conservation of marine biological resources in order to contribute to the gradual elimination of discards and by–catches and to facilitate the transition to exploitation of living marine biological resources at Maximum Sustainable Yield;
- Investments in equipment improving size or species selectivity of fishing gear;
- Investments on board or in equipment that eliminates discards by avoiding and reducing unwanted catches of commercial stocks, or that deals with unwanted catches to be landed in accordance with Article 15 of the CFP;
- Investments in equipment that limits and, where possible, eliminates the physical and biological impacts of fishing on the ecosystem or the seabed;
- The collection, management and use of data for fisheries management and scientific purposes;
- The development and implementation of a Union fisheries control system;
- Contributions to a better management or conservation of marine biological resources;
- Preparation, including studies, drawing-up, monitoring and updating of protection and management plans for fishery-related activities relating to NATURA 2000 sites and spatial protected areas referred to in Directive 2008/56/EC and relating to other special habitats;
- Protection of the marine environment, in particular its biodiversity and marine protected areas such as Natura 2000 sites, in accordance with the obligations established in Directives 92/43/EEC and 2009/147/EC;
- Improvement of the knowledge on the state of the marine environment, with a view to establishing the monitoring programmes and the programmes of measures provided for in Directive 2008/56/EC, in accordance with the obligations established in that Directive.

24 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

25 Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund and repealing Council Regulations (EC) No 2328/2003, (EC) No 861/2006, (EC) No 1198/2006 and (EC) No 791/2007 and Regulation (EU) No 1255/2011 of the European Parliament and of the Council

The Commission's proposal for the 2021-2027 programming period is currently under examination by the co-legislators (the European Parliament and the Council) and includes the same actions under a simplified delivery, with the objectives of achieving sustainable fisheries and protecting marine biodiversity and ecosystems. It proposes to set out a list of operations which would be ineligible for financing, so as to avoid detrimental impacts in terms of fisheries conservation, for example a general prohibition of investments enhancing fishing capacity. Moreover, the proposal aims to establishes strict conditions for investments and compensations for the fishing fleet so as to ensure their consistency with the conservation objectives of the CFP. This is considered key for ensuring that financial support is aligned with the achievement of those objectives and avoiding harmful subsidies, in line with the EU's objectives relating to the negotiations on harmful subsidies at WTO.

Control is an integral part of fisheries resource management and is one of the essential tools towards reaching the goals of the CFP. The improved results in fisheries management, through control, benefits EU fishers as well as the stocks.

The EU has developed a substantial legislative framework, which regulates every stage in the supply chain: from catch to retail, including transport. The system comprises, amongst others, Regulation 1224/200910 on Fisheries Control and its Implementing rules (404/2011), Illegal, Unreported and Unregulated (IUU) Regulation 1005/2008, the European Fisheries Control Agency (EFCA) founding Regulation 768/200512, and the Sustainable Management of external fleet (1006/201713). The system is complemented by other control measures such as the transposition of Regional Fisheries Management Organisations (RFMOs) dispositions, multiannual plans and deep-sea regulations.

While control, its enforcement and sanctioning practices are the competence of the MS, the legislation require MS to record catch data, store it, cross-check it with landing and sales data and exchange it with other MS.

The regular auditing of MS by Commission inspectors is an essential component in ensuring compliance and a level-playing field across the EU. Such audits lead to collaborative approaches, such as action plans, with MS in developing better control systems.

Effectiveness and harmonisation has been further reinforced in practice with the creation of a European Fisheries Control Agency, whose mandate is to organise the operational coordination of fisheries control and inspection activities by MS and to assist them to cooperate so as to comply with the CFP and ensure its effective and uniform application.

All of the above are integral to the achievement of the positive results in relation to fisheries management. Moreover, they have demonstrable benefits for EU's fishing industry. For example, more retailers are moving to a model of full transparency and traceability on the supply chain of their fisheries products and current catch reporting obligations in the EU facilitate fisheries traceability and, when electronically reporting, quick access to markets. In other words the transfer of live information/data of what was caught at sea digitally, before it is landed, enables the market to move faster and more predictably.

A final feature of the EU system of control is that it is an evolving system that is responsive to new challenges or emerging technological developments. The current Control Regulation has been in place since 2009 and is now under revision. Within monitoring and control of fisheries, there is a need for modern technologies such as drones and satellite imaging, which have been progressively applied in the EU, combined with traditional inspections. Satellite imaging has become very cost effective over the years and is a tool currently used in the EU. Drones are more expensive, but are also part of the EU's control tools, in particular to control and monitor fisheries in remote areas.

The current revision of the Control Regulation proposes changes that integrate emerging practices and technologies that help overcome longstanding challenges. There is, for example, a proposal to introduce Remote Electronic Monitoring and in particular CCTV in high risk sectors of the EU fleet, in order to ensure effective control of the Landing Obligation and discussion is taking place on how to introduce digital tools for the control and monitoring of the small scale fleet as well as recreational fisheries. MS of the EU are turning digital and a larger number of MS are choosing to monitor smaller vessels through reporting channels such as mobile applications. As a result, the revision of the Control Regulation proposes to move away from paper-based tools entirely and formally embrace digital reporting and tracking also for the EU's small-scale fleet.

The implementation of EU rules in different contexts can facilitate innovation. For example, implementation of traceability requirements, has stimulated a learning process which has led to the development and testing of a variety of solutions for different purposes, including barcodes, BlockChain and mobile applications. This enables effective comparison between options and the selection a best alternative for the particular fisheries.

Finally, within the regional context, it is important to exchange data and information and to allow the market the flexibility of transport and sales. The current and future Control Regulation requires data to be shared electronically between MS, enhancing its transparency and supporting traceability as well as information for the consumer.

The EU has shown that these collaborative control systems enable more stable markets as well as benefit the management of fisheries. This can be shown in sales as well as in the number of fish species currently fished at MSY, outlined above.

In the European Union, the implementation of the rules of the CFP is producing positive results in our fisheries management. In fact, in many parts of the Union, fisheries are arguably in the best shape they have been in decades. There has been significant progress towards sustainable fishing in the Atlantic marine areas around the EU over the last 10 years, as demonstrated by the number of assessed stocks, used as the basis for the setting of fishing opportunities for the different stocks, that reached healthy levels. This has increased from 5 (out of 35) in 2009 to 62 (out of the 77 set for the 2020 fishing opportunities[26]). It has been estimated that in 2019, 70% of the volume of stocks were fished sustainably, with this forecast to rise more than 90% for 2020. This is good for the fishers, as they have benefited from record high profits of EUR 1.3 billion for two consecutive years (2016 and 2017). More importantly, we are seeing that the exploitation of sustainably managed stocks is improving the economic performance of the EU fleets (such as those targeting haddock, megrim and plaice in the Irish Sea; herring, Northern hake and sole in the Eastern and Western English Channel; anglerfish in the Bay of Biscay). Conditions for EU fishermen are also improving with an increase in wages, which is important to attract the younger generation to this profession. All this proves that sustainability pays.

The CFP also aims at establishing similar sustainability standards for its external fleets' activities. Regulation 2017/2403[27] on the sustainable management of external fishing fleets set benchmarks for EU vessels' activities in different frameworks: in third countries EEZ, either through the EU's Sustainable Partnership agreements, or outside such agreements, as well as on the high seas. For each of these frameworks, the EU aims at sustainability to be at the core of the authorisations granted to Union vessels. Through fisheries partnerships agreements with third countries, the EU encourages and financially supports relevant actions for the improvement of fisheries management in such countries, from scientific advice capacity to control and enforcement means.

The CFP has strengthened the EU's mandate to support and enhance RFMOs through better science, improving their performance and enhancing cooperation amongst RFMOs. Consistent with the Green Deal, the EU's stated objective is to strengthen RFMOs and Regional Fisheries Bodies (RFBs) to enhance fisheries governance and better preserve and restore marine ecosystems and biodiversity, while more effectively contributing to food security, fair, healthy and sustainable food systems, the fight against illegal, unreported and unregulated (IUU) fishing, as well as to sustainable growth and jobs.

26 Council Regulation (EU) 2020/123 of 27 January 2020 fixing for 2020 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters

27 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

The EU continues to acknowledge the importance of a robust response in the fight against IUU fishing, both at EU level as well as more globally through, in particular reinforced control measures and more attentive management of fishery resources. This contributes to an enhanced fisheries governance, and aims to level the playing field for legitimate stakeholders who respect the rules. Cooperation among countries and compliance with international obligations are vital in this perspective. The EU considers multilateral cooperation through international agreements such as the Port States Measures Agreement of the FAO as an important tool for combating IUU fishing and for this purpose also underlines the importance of the call in the UNGA Resolution on Sustainable Fisheries for States to become party to the Cape Town Agreement of 2012. The EU has been a pioneer in discharging its market state responsibilities, but also actively promotes the respect of States' obligations under international law as reflected in UNCLOS, be it as flag, coastal, port or market State.

Challenges

However, globally and at the EU level, we are facing huge challenges. In line with the ecosystem approach, these challenges will need to be factored into fisheries management and policy planning. This creates additional complexity for policy makers, scientists as well as operators.

Climate change, and the consequent biodiversity loss, reduce resilience and mitigation capacity of ecosystems, lead to changes in distribution patterns of fish stocks and loss of biomass mainly to the detriment of developing countries. This puts at stake food security and supply of healthy proteins in the light of increasing population (projected to reach 9.8 billion in 2050) and is also compounded by other stressors particularly unsustainable exploitation or poor management of natural resources as well as illegal fishing.

Pollution (both land and sea based) including, plastics and microplastics but also chemicals, organic pollutants, pharmaceuticals, heavy metals and noise, has significant implications on the health of marine environment and on human health as well as on the safety of seafood. Many of these problems originate from land, like marine litter, pollution from agriculture, our unsustainable food systems with wasteful practises. To address them properly, they need to be tackled at source.

In order to address the issue of by-catch of unwanted species, particularly species quoted in annex IV of the Habitats Directive[28] and the Birds Directive[29], additional efforts are needed to ensure significant decrease in by-catch, including by developing more selective fishing techniques and/or the expansion and enhanced effectiveness of Marine Protected Areas (MPAs). These areas should ensure an optimal connectivity among the areas and should be representative of the marine biodiversity that needs to be protected. Effective management of such areas is key and this entails having rules regarding exploitation taking place within those areas. The establishment of no take zones, based on the best scientific knowledge, could contribute to the effective management of these areas.

Furthermore, there is competition for the use of ocean space. Oceans and seas are increasingly seen as a new economic frontier with more economic activities taking place at sea (tourism, bioeconomy, transport, trade, offshore renewable energy and potentially seabed mining). The EU considers that it is important to avoid the errors made on land with regard to such emerging economic activities.

And finally, the future of fisheries is coming under increasing threat from IUU fishing vessels and fishing vessels flying flags of convenience, which not only infringe law, endanger their crew and compromise the security of their vessel but are also taking toll on shared resources and honest fishermen and coastal communities. These are often closely related to other unlawful activities.

These challenges require that stocks are maintained and restored to levels that can produce MSY and that further biodiversity loss and habitat destruction from anthropogenic activities, including fishing is avoided. This requires the effective application of the ecosystem approach in a perspective of biodiversity conservation and sustainable use and overcoming the silo mentality by adopting a holistic approach. In this respect, the EU considers that greater use should be made of the tools available to us, such as marine spatial planning, integrated coastal zone management and marine protected areas. Good data, quality science and research are required to improve the scientific base on which management and policy decisions are taken.

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28 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

29 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

EU and its Member States' input for Interactive Dialogue 5

THE EU BLUE ECONOMY REPORT: STOCKTAKING OF HUMAN ACTIVITIES FOR ACHIEVING SDG14

Abstract: For the last few years, the EU has been investing resources to support the development of a truly sustainable Blue Economy. The latest EU Blue Economy Report[30] analyses the scope and size of the Blue Economy in the European Union, solidifying a baseline to support policymakers and stakeholders in the quest for a sustainable development of oceans, coastal resources and most notably to help in the development and implementation of polices and initiatives under the European Green Deal. We consider that, the information covered by the report can be a useful input to the discussions under Dialogue 5 relating to "Promoting and strengthening of sustainable ocean-based economies, in particular for small island developing States and least developed countries".

For the purposes of this report, by Blue Economy, we understand all those activities that are marine-based or marine-related. Therefore, the Report examines not only established sectors (i.e. those that traditionally contribute to the Blue Economy) but also emerging (those for which reliable data are still emerging) and innovative sectors, which bring new opportunities for investment and hold huge potential for the future development of coastal communities. Analyses are provided for the EU as a whole and by sector and industry for each Member State.

Introduction

The importance and relevance of the oceans and seas is sometimes underestimated, even disregarded. Besides the traditional exploitation of living resources (fishing, aquaculture and the processing sector), a broader vision of the Blue Economy can offer important sources of economic development for States' economies and coastal communities in particular.

A sustainable Blue Economy allows society to extract value from the oceans and coastal regions, whilst respecting the long-term capacity of the oceans to support such activities through the implementation of sustainable practices. This implies that human activities must be managed in a way that ensures the health of the oceans and where economic productivity is safeguarded, so that the potential they offer can be realised and sustained over time. Since approximately 40% of oceans is seriously affected by human activities, the management of such activities rendering them compliant with principles of sustainable Blue Economy is a matter of great urgency.

[30] All *EU Blue Economy Reports* are available at: https://blueindicators.ec.europa.eu/published-reports_en.

Aim of the Report

The *EU Blue Economy Report* seeks to continuously improve the measurement and monitoring of the socio economic impact of the Blue Economy, without disregarding the environmental aspects. As the European Union embarks in the European Green Deal[31], it becomes more and more important to ensure that all angles are being considered and that it is not at the expense of our environment that economic growth and employment can take place. The *Report* should be seen as a tool to support relevant initiatives and policies under the European Green Deal, which aims at implementing the United Nation's 2030 Agenda by putting "sustainability and the well-being of citizens at the centre of economic policy and the sustainable development at the heart of the EU's policymaking and action[32]".

To achieve the aims embedded in the European Green Deal "it is essential to increase the importance given to protecting and restoring natural ecosystems, to the sustainable use of resources and to improving human health. This is where transformational change is most needed and potentially most beneficial for the EU economy, society and natural environment[33]". Hence the *EU Blue Economy Report* continues its efforts to provide accurate and reliable data and trends for the maritime sectors and activities, as good data is essential in order to develop and implement policies. The *EU Blue Economy Report* also provides a solid ground on which to make policy decisions and supports the already initiated transition into more carbon efficient and less polluting technologies and activities in line with the commitments by the International Maritime Organisation (IMO). An example of the latter is turning the global merchant fleet to zero emission vessels (ZEVs) under the ambitious efforts to reduce GHG emissions from maritime transport at least 50% by 2050, while pursuing efforts towards phasing them out as soon as possible in this century.

The *Report* is accompanied by the Blue Economy Indicators (BEI), an IT tool, which stores and disseminates additional breakdowns of the data, to ensure transparency [34]. The BEI (https://blueindicators.ec.europa.eu/) ensures that the data reported are available to all in a way that is easily accessible, and where data can be use and re-used.

[31] Commission Communication on *"The European Green Deal"* COM(2019) 640 final.
[32] COM(2019) 640 final, p. 3.
[33] COM(2019) 640 final, p. 4.
[34] The Blue Economy Indicators tool can be accessed at: https://blueindicators.ec.europa.eu/.

What does the Blue Economy include?

For the purpose of the *EU Blue Economy Report*, the Blue Economy encompasses all sectoral and cross-sectoral economic activities related to the oceans, seas and coasts. In other words, this report covers all economic activities that are marine-based or marine-related:

- Marine-based, including those undertaken in the ocean, sea and coastal areas, such as capture fisheries and aquaculture, offshore oil and gas, blue energy, desalination, shipping and marine transport and coastal tourism.
- Marine-related activities, which use products and/or produce products and services from ocean or marine-based activities like seafood processing, marine biotechnology, shipbuilding and repair, port activities, equipment.

Nevertheless, the ocean also has an economic value that is complex to quantify, in terms of habitats for marine life, carbon sequestration, coastal protection, waste recycling and storing, and processes that influence climate and biodiversity. To the extent possible, the *Report* covers most of these issues too.

In terms of geographical scope, the *Report* focuses on the EU Member States territories, including outermost regions and landlocked Member States.

The *Report* compiles the data on the economic activities emerging directly from the identified sectors. However, some Blue Economy sectors generate significant indirect economic effects (i.e. up into the supply chain) and induced economic effects (i.e. general consumption and expenditure stemming from the household disposable income generated by the Blue Economy activities). At times and where possible, these effects are incorporated into other Blue Economy sectors or are made reference to in the sector specific chapters.

Content and structure

With the European Green Deal as background, the *Report* starts with a chapter on natural capital and ecosystem services, which seeks to better clarify what is meant by it and what it encompasses. It also highlights the importance of maintaining the ocean system in good health and the significant economic impact that its degradation can have in the future. It comprises an estimation of the monetary value of the economic benefits of ecosystem services, when possible.

To complement the report, a chapter looks at the anthropogenic impacts on the ocean. In particular, the chapter looks at the socio-economic impacts and costs caused by the rising sea level in the EU coastal regions under different IPCC scenarios and the investments needed to be protected from those impacts. This chapter also provides projections and cost-benefit assessment methodology that can assist managers and stakeholders involved in the maritime spatial planning policies.

It also tackles the issue of the greenhouse gas emissions, and their recent trends in some of sectors of the Blue Economy and how the oceans can contribute to carbon sequestration, the so-called *Blue Carbon*. Therefore it provides a solid ground on which to make policy decisions in support of the transition into more carbon efficient and less polluting technologies and activities, without disregarding the importance of creating and maintaining jobs and economic growth. It can be a basis for a more strategic approach to algae cultivation and use as feed or biomass, both onshore (e.g. produced in bioreactors or used as fertilisers) and offshore. The chapter also includes an estimate of the costs generated by marine litter and the effects of temperature rise into the distribution of ecosystems and fish stocks.

Then the report reviews a series of specific activities looking at their main economic indicators as well as their trends, drivers and interactions with each other. On the one hand, the more traditional activities classified as "established sectors", which include:

- Extraction and commercialisation of marine living resources.
- Marine extraction of minerals, oil and gas.
- Ocean energy (fixed offshore wind energy).
- Ports, warehousing and construction of water projects.
- Shipbuilding and repair.
- Maritime transport. Coastal tourism.

On the other hand, the following emerging sectors, which are either new or for which there is limited data:

- Blue energy (floating offshore wind energy and ocean energy).
- Blue bio economy.
- Marine minerals.
- Desalination.
- Maritime Defence.
- Submarine cables.

The report comprises a series of additional topics. A number of case studies explore different sectors or niches sections of the Blue Economy. They range from a case study on Portuguese Satellite Accounts to monitor the Blue Economy, the economic benefits of Multi-purpose platforms, the economic impact of education and skills in the Blue Economy, the development of Maritime Spatial Planning as an important enabler of the blue economy, as well as the impact of the recreational boating industry. The *Report* looks also at the important issue of financing and investment in the different Blue Economy activities and projects. In this context, it provides some examples of project financing by both the European Investments Bank (EIB) and the European Bank for Reconstruction and Development (EBRD) as well as a series of initiatives in the context of implementing "Green Ports" in Europe.

Finally, the *Report* offers an overview of the Blue Economy for each of the 27 EU Member States, and where available, offers a summary of Blue Economy strategies and reports at national or regional level. The national value are used for developing a regional analysis at sea basin (e.g. Mediterranean, Atlantic, North Sea, Baltic Sea, Black Sea). This is complemented with a comparison between EU Blue Economy and the US Blue Economy.

In conclusion, we consider that the Blue Economy Report can be a source of inspiration for other Regions and States. In particular, the report demonstrates the usefulness of monitoring and measuring the Blue Economy. This can be beneficial to those States, such as small Island developing States and coastal developing States, which may depend on maritime activities as a major source of income and employment. The EU itself is comprised of a number of island States or regions that have faced similar issues, and thus the report can provide suitable examples and case studies for their consideration. The report also demonstrates the importance of reliable and accurate data which can provide a solid background for the development of informed policies for the sustainable use of the Oceans and seas for growth and employment purposes, without disregarding related environmental aspects. This report can also be useful for those coastal least developed countries, which may find additional sustainable sources of income and employment from several maritime activities, as well as for land-locked countries having access to large lakes.

For the sustainable economic development of both the traditional and the emerging blue economy sectors, continuous research is essential. Research provides the evidence for any sound decision either economic or political. Hence, significant investments are required on establishing the scientific base to support any activity, knowing the possible environmental not only negative impacts but also benefits. The impact of climate change on the sectors is another upcoming research quest, for preventing any effects in jobs and income by adapting early to those changes. In EU, through the last R&I programme only (H2020), we spent around €260million annually in marine and maritime research. In the upcoming programme, Horizon Europe, this figure will increase as the proposal is the most ambitious so far and the results are expected to fuel robust decisions towards a sustainable evolution of the blue economy.

The following questions may be of interest for discussion in this Dialogue:

- How can the management and development of Blue Economy sectors and policies be better coordinated to ensure sustainability?
- How do we further ensure that future developments in the Blue Economy are in line with the principles of sustainability?
- How do we increase public and private investment in a sustainable and innovative Blue Economy?
- How can we further ensure that existing frameworks in sustainable finance are complemented by innovative Sustainable Blue Economy Finance Initiatives and Principles?

ANNEX

The report for 2020 is currently being finalised. Final figures will be available by the end of April. As a reference, this Annex includes two tables summarising the main figures of the established sectors according to the previous edition of the *EU Blue Economy Report (direct impact only)* and the main highlights of previous report.

Size of the EU Blue Economy (Report 2019)

Table 1 EU Blue Economy established sectors, main indicators, 2017

Indicator	EU Blue Economy 2017
Turnover	€658 billion
Gross value added	€180 billion
Gross profit	€74.3 billion
Employment	4 million people
Net investment in tangible goods	€14.9 billion
Net investment ratio	24%
Average annual salary	€26,400

Notes: Turnover calculated as the sum of the turnover in each sector; it may lead to double counting along the value chain. Nominal values. Direct impact only. Net investment excludes maritime transport and coastal tourism. Net investment ratio is defined as net investment to GVA.

Source: Eurostat (SBS), DCF and own calculations.

Table 2 Overview of the EU Blue Economy by sector

Persons employed *(thousand)*	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Coastal tourism	1,954	1,883	1,850	1,790	1,817	1,741	1,728	1,916	2,175
Marine living resources	591	590	571	577	560	561	560	573	571
Marine non-living	175	177	175	177	169	168	170	162	162

resources									
Port activities	455	451	432	463	463	495	521	574	574
Shipbuilding and repair	345	311	296	293	292	296	302	316	315
Maritime transport	239	231	229	219	219	234	239	232	232
Blue Economy	**3,761**	**3,643**	**3,554**	**3,519**	**3,520**	**3,495**	**3,521**	**3,774**	**4,030**
Total EU employment	*215,597*	*212,661*	*212,612*	*211,935*	*211,410*	*213,486*	*215,818*	*218,972*	*221,993*
Blue economy *(% of EU jobs)*	**1.7%**	**1.7%**	**1.7%**	**1.7%**	**1.7%**	**1.6%**	**1.6%**	**1.7%**	**1.8%**

GVA *(EUR million)*	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
Coastal tourism	51,631	51,812	52,144	50,424	52,416	52,505	54,407	58,359	65,116
Marine living resources	16,631	16,828	17,413	17,629	17,192	18,185	19,218	20,846	20,681
Marine non-living resources	34,719	36,507	37,214	37,302	35,678	32,705	30,901	22,757	22,757
Ports and water projects	28,245	28,290	31,707	29,149	29,697	31,152	34,452	34,440	34,440
Shipbuilding and repair	12,816	13,901	13,640	13,626	13,252	14,464	14,311.1	14,916	14,821
Maritime transport	22,548	25,008	21,238	21,907	23,256	23,423	27,597	21,944	21,944

Blue Economy	166,590	172,345	173,356	170,038	171,491	172,435	180,886	173,261	179,758
EU GVA (EUR billion)	*11,116*	*11,525*	*11,835*	*12,076*	*12,178*	*12,600*	*13,274*	*13,380*	*13,751*
Blue economy *(% of GVA)*	**1.5%**	**1.5%**	**1.5%**	**1.4%**	**1.4%**	**1.4%**	**1.4%**	**1.3%**	**1.3%**

Note: Data for 2017 are provisional or estimates and should be interpreted with caution. Source: Eurostat (SBS), DCF and own calculations.

Highlights of the Blue Economy Report 2019:

- According to the most recent figures (Report 2019), the established sectors of the EU Blue Economy directly employed over 4 million people, generated €658 billion of turnover and €180 billion of gross value added in 2017. The importance of the Blue Economy varies significantly across the EU; a case study shows its importance in West Brittany (France), with a special focus on marine research and education.
- The evolution of the Blue Economy has been significantly influenced by general macroeconomic developments, in particular the global financial and economic crisis of 2008-2009.
- High growth rates can be observed in traditional sectors as well as the emerging ones. For the former, gross value added (at factor cost) (GVA) data shows an acceleration in the growth of all sectors from 2013 onwards except with regard to extraction of non-living resources. Indeed, GVA with regard to coastal tourism, marine living resources and port activities has grown by over 20% over the last decade. On the contrary, GVA in the offshore oil and gas sector has seen a decrease of 34%, influenced by the drop in oil prices and the reduction in the extraction of the most costly (offshore) sites. The marine transport sector has also seen a decline, albeit a softer one (3%). Employment between 2009-2017 has mostly seen growth in both the coastal Tourism (10%) and port activities (25%) sectors. For Shipbuilding and repair as well as for Maritime transport, employment has grown with respect to the minimum observed in 2013-2014, but has not yet recovered to 2009 levels. Anecdotal evidence suggests that Maritime Spatial Planning (MSP) might already be having a positive impact in investments on a number of maritime sectors and MS (e.g. Germany, Netherlands, and Belgium).

- The Blue Economy emerging and innovative sectors include blue energy, i.e. offshore wind energy, ocean energy (wave and tidal), blue bio economy and biotechnology, marine minerals, desalination and maritime defence. These sectors offer significant potential for growth and jobs, especially in renewable energies. Offshore wind for instance has seen an exponential growth, which has led to a similar increase in jobs in EU coastal communities. In 2008, offshore wind was responsible for 20,000 jobs, which has risen to 210,000 in 2018. The sector has not only created employment but has also, much like ocean energy and desalination, attracted investments. Likewise, employment in the Blue bio-economy sectors has reached over 17,000 jobs (including indirect activities). Moreover, turnover stands at €1.5 billion for direct activities (with an additional €240 million in ancillary activities). Another illustrative example, included in a case study within the report, shows that marine research and education has a positive economic impact in the local coastal economies.
- Preserving and increasing the natural capital accumulated in the seas and oceans is critical for them to deliver sustainable ecosystem services and for the EU to achieve the Sustainable Development Goals (SDGs) set by the UN for 2030. The EU Marine Strategy Framework Directive[35] provides a comprehensive, holistic approach to the protection of European Seas, acting as the environmental pillar of the wider EU Maritime Strategy. The deterioration of the seas may have disastrous consequences through not only the impact of climate change and the increasing costs to mitigate its consequences, but already today as a result of nutrients and marine litter on the surface, water column and seabed. In fact, marine litter is already generating costs and lost revenues in sectors like fishing, aquaculture, tourism and government estimated at almost €11 billion a year. The negative economic impact of climate change in the form of coastal flooding in the EU is estimated to reach between €12 billion and €40 billion a year by 2050 and to affect between 500,000 and 740,000 EU citizens, depending on the scenario.
- The Blue Economy is interconnected with many other activities in the economy and its impact goes beyond the sectors mentioned above. A series of case studies in this Report illustrate some of the wider scope of the Blue Economy. The analysis of a major German shipyard shows the actual economic impact of shipbuilding: for each 100 jobs in the shipyard a total of 560 jobs were created when indirect and induced effects were taken into account.
- Through its Copernicus - Marine Environment Monitoring Service[36] the European Union provides a significant amount of data to the wider public. This data helps prevent risky investments and improves business certainty in sectors as diverse as fishing, aquaculture, energy or shipping.
- Although marine protected areas are a policy tool whose purpose is mainly for conservation, another case study shows how they can provide benefits to the Blue Economy through a number of different mechanisms.

[35] 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)

[36] http://marine.copernicus.eu/

- In order to develop many activities in the Blue Economy, significant upfront investments may be required. Another case study shows how the European Investment Bank (EIB) is supporting a number of established and emerging sectors in the Blue Economy by providing funds for activities such as fishing, aquaculture, shipping, biotechnology, coastal tourism or blue energy. Overall, the EIB has provided financing for over €20 billion in the last ten years. Projects to be funded are assessed against their potential multiplicative effect and their sustainability (e.g. reduction in the environmental impact).