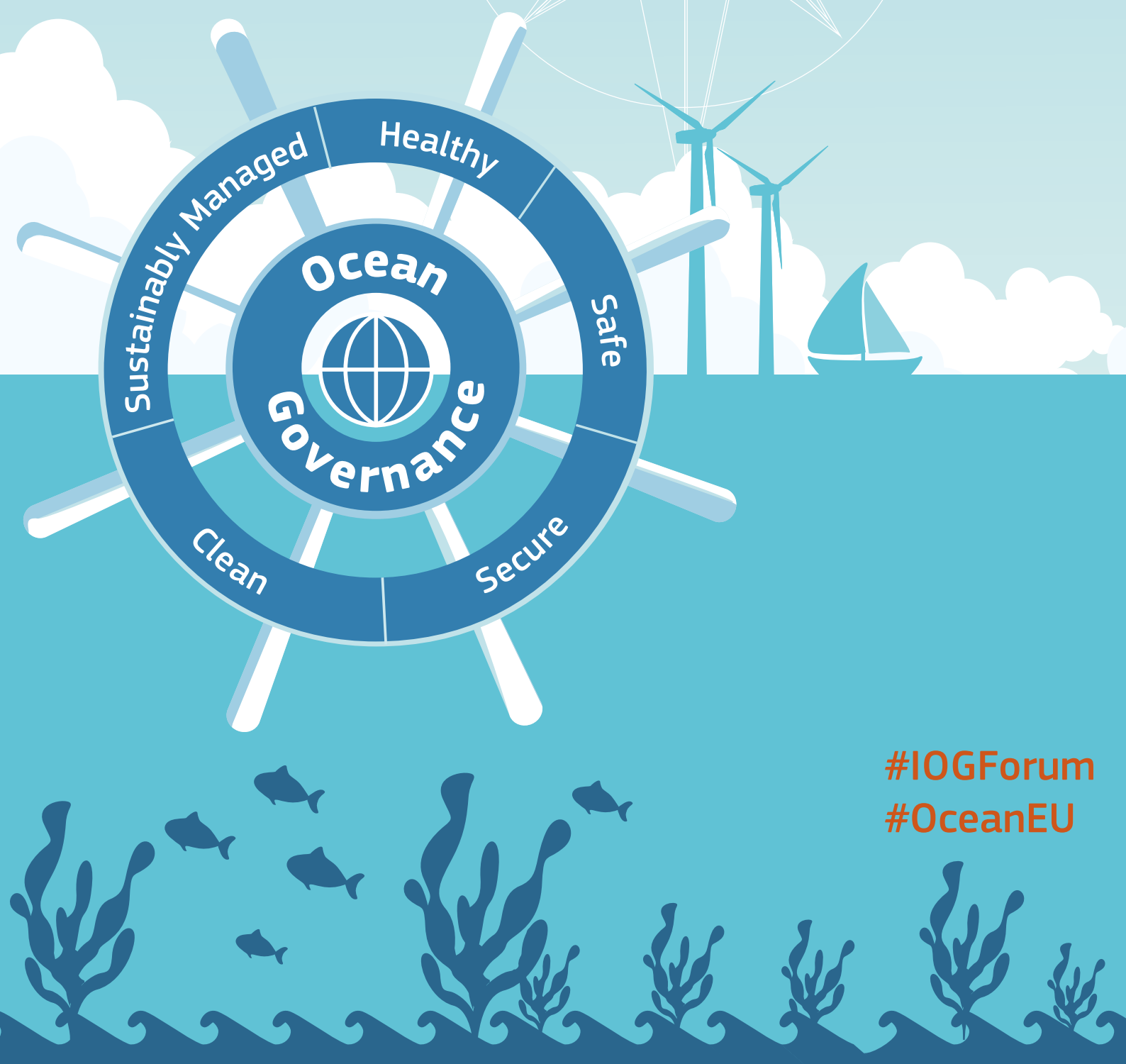




EU INTERNATIONAL OCEAN GOVERNANCE FORUM 2020

SETTING THE COURSE FOR A SUSTAINABLE BLUE PLANET



#IOGForum
#OceanEU



Note to the reader

The European Commission (EC) in association with the European External Action Service has launched the EU International Ocean Governance Forum (IOG Forum) as a platform for ocean actors and stakeholders within and beyond Europe to share understanding, experiences and good practices on ocean governance. The IOG Forum will support the follow-up and further development of the EU policy on International ocean governance: an agenda for the future of our oceans that is an integral part of the European Green Deal and the EU's response to the UN 2030 Agenda, in particular the Sustainable Development Goal (SDG) 14, "Life Below Water".

Thanks to the engagement of international experts and relevant stakeholders, the IOG Forum has identified key challenges in international ocean governance as well as opportunities to take action and strengthen the EU role in the transition towards a sustainable blue planet. In response to restricted travel due to the COVID-19 pandemic, the first IOG Forum event was organised online between April and July 2020 and included a series of webinars and dedicated online workshops, which were complemented by a online stakeholder consultation (15th July to 15th October 2020). The high numbers of participants from around the world clearly demonstrated the importance of ocean governance as a critical global challenge that requires more than ever a coordinated response and a shared global vision for a sustainable future.

This paper presents ideas and suggestions to **set the course for future action on international ocean governance**, building on the contributions from participants through the initial phase of the IOG Forum. With the ambition to **support a sustainable transition** in the field of international ocean governance following a series of key principles that can guide individual and collective action, suggestions are structured around **preconditions** for supporting transition and **priority thematic areas**, each supported by a provisional list of **actions** with potential to advance the IOG Agenda. The paper stresses the need to strengthen synergies with global and European policy initiatives as well as interlinkages across these policy initiatives to support the achievement of the SDGs.

This paper serves as a background document to the 2nd IOG Forum event entitled **EU International Ocean Governance Forum 2020: Setting the Course for a Sustainable Blue Planet**, to be held online from 14th to 16th December 2020. This event will build on current suggestions for action to develop concrete recommendations for the EU to consider in its post-2020 IOG Agenda.

The 2nd IOG Forum event will have two main components:

- The **high-level event** will take place on 14th December 2020. This event provides the opportunity to hear from global leaders and top experts about critical points of required action and key overarching messages for the future of ocean governance. Essential to this discussion will be the link between ocean, biodiversity, and climate – and how to create an ambitious interlinked approach at all levels of governance to urgently overcome common and pressing global challenges.

Guiding the debates of the 2nd IOG Forum high-level event

The post-2020 EU IOG Agenda to support transformational change will require collective mobilisation of all stakeholders (including land-based) to implement actions and decisions at different scales. Actions presented in this document will be further discussed and adapted during the 2nd IOG Forum Event to account for the experience and expertise of all attendees. Key questions to be addressed during the high-level event include:

- Is the **ambition** and focus on **transition** adequate and sufficient?
- Which **mechanisms should be established or reinforced** to deliver action at all scales?
- How to ensure **coherence between conservation and sustainable use** actions?
- Are there **additional areas** essential to international ocean governance where the EU could play a leading role?
- How can the post-2020 IOG Agenda build **synergies with international initiatives** relevant to international ocean governance?

- **Follow-up workshops** will take place on **15th and 16th December 2020**. The workshops offer a platform to translate initial recommendations that have emerged from the stakeholder engagement process for international ocean governance into concrete, practical and implementable action. This means identifying: How can this be done? Where is this action needed? When is this required? And who must take this action? Particular focus will be on identifying the role of the EU in enabling and contributing to these actions.

We look forward to welcoming you at the forthcoming 2nd IOG Forum event **EU International Ocean Governance Forum 2020: Setting the Course for a Sustainable Blue Planet** from 14th to 16th December 2020. We hope that this paper will inspire new ideas and motivation for your active participation.





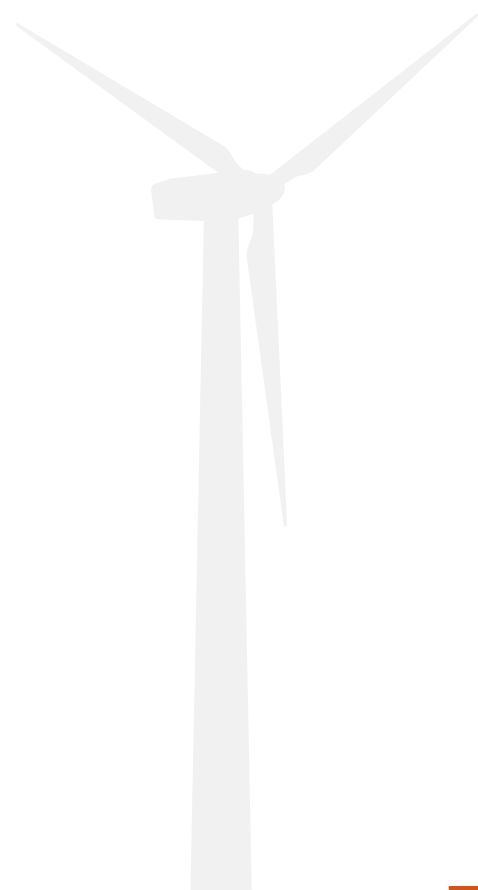
Table of Contents

<i>Note to the reader</i>	1
<i>Glossary</i>	3
PART I –REVISITING THE INTERNATIONAL OCEAN GOVERNANCE AGENDA	4
<i>Background</i>	4
<i>Towards a reinforced strategic orientation for International Ocean Governance</i>	4
<i>How to support effective International Ocean Governance?</i>	5
PART II – PRE-CONDITIONS FOR EFFECTIVE TRANSITION	7
<i>Cooperation across sectors and boundaries</i>	8
<i>Resilient governance and sustainable recovery strategies</i>	9
<i>Compliance to regulations and meeting commitments</i>	10
<i>Financing to drive transition</i>	11
<i>People and capacity building</i>	12
<i>Knowledge-policy interfaces – component: Knowledge-policy interfaces</i>	13
<i>Knowledge-policy interfaces – component: Co-designed transdisciplinary research</i>	14
<i>Knowledge-policy interfaces – component: Sustained ocean observations and integrated data</i>	15
PART III – PRIORITY THEMATIC AREAS	16
<i>Ocean solutions to climate change</i>	17
<i>Zero pollution to marine ecosystems</i>	18
<i>Conservation and sustainable use of marine biodiversity</i>	19
<i>A sustainable blue economy</i>	20
<i>Sustainable seafood</i>	21



Glossary

ABNJ	Areas Beyond National Jurisdiction
BANOS CSA	Baltic and North Sea Coordination and Support Action
BBNJ	Biodiversity Beyond National Jurisdiction
CBD	Convention on Biological Diversity
CCTV	Closed-Circuit Television
CITES	Convention on International Trade in Endangered Species
CMS	Convention on the Conservation of Migratory Species of Wild Animals
COVID	Coronavirus Disease
COP	Conference of the Parties
EBM	Ecosystem-Based Management
EC	European Commission
EMODNet	European Marine Observation and Data Network
EU	European Union
FAIR	Findability, Accessibility, Interoperability and Reusability
FAO	Food and Agriculture Organisation
GCF	Green Climate Fund
GHG	Green House Gas
GOOS	Global Ocean Observing System
ICZM	Integrated Coastal Zone Management
IMO	International Maritime Organisation
INTERPOL	International Criminal Police Organization
ICES	International Council for the Exploration of the Sea
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IOG	International Ocean Governance
IUU	Illegal, Unreported and Unregulated (fishing)
MEA	Multilateral Environmental Agreement
MPA	Marine Protected Area
MSP	Maritime Spatial Planning
NDC	Nationally Determined Contributions
NGO	Non-Governmental Organisation
OECD	Organisation for Economic Co-operation and Development
REA	Regional Environmental Assessment
RFMO	Regional Fisheries Management Organisation
RSC	Regional Sea Convention
SBSTA	Subsidiary Body of Scientific and Technological Advice
SDG	Sustainable Development Goal
SEA/SIA	Strategic Environmental Assessment/Strategic Impact Assessment
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WMO	World Meteorological Organisation





PART I –REVISITING THE INTERNATIONAL OCEAN GOVERNANCE AGENDA

Background

The ocean is the largest ecosystem on Earth and maintaining its status, health, productivity and resilience is in the common interest of humanity. A clean, healthy, and productive ocean is pivotal for sustainable development, crucially needed to sustain the earth systems and “to leave no one behind”. The ocean is home to millions of species and a critical climate regulator. The ocean sustains human life and wellbeing, enables global food security, and provides opportunities for smart growth and development through a sustainable blue economy. It is a living four-dimensional entity that is connected globally through migratory marine species and currents that transport heat, nutrients and marine organisms.

Immediate decisions and actions will be decisive to address the current deep ocean crisis and rebuild marine life. Strengthening **International Ocean Governance** will be an **effective lever for achieving a clean, healthy and productive ocean, halting the loss of and restoring biodiversity, fighting climate change, and fulfilling related international commitments**. In a year that was struck by the global COVID-19 pandemic, it has become clearer than ever that a revamp of international ocean governance is needed to strengthen the resilience of ocean systems and dependent societies and economies.

However, no single nation or stakeholder group can achieve this alone. The interconnectedness of the ocean and its essential role in supporting humanity require effective international cooperation and make international ocean governance a top political priority.

In 2016, the European Commission and the High Representative of the Union for Foreign Affairs and Security Policy adopted the Joint Communication on ***International Ocean Governance: an agenda for the future of our oceans***, also known as the IOG Agenda. The IOG Agenda set priorities for improving the international framework governing the use of the ocean, reducing pressures and facilitating a sustainable blue economy and strengthening international ocean research and data to ensure that the ocean is safe, secure, clean and sustainably managed. It builds on a coherent cross-sectoral and rules-based approach.

Four years after its adoption, much progress has been achieved in addressing the priorities set by the IOG Agenda. However, the context has been evolving:

- **Increasing attention is given to the critical role of the ocean for climate change, biodiversity and sustainable development.** The IOG Agenda needs to consider recent developments such as the increasing recognition of the **ocean’s role in combatting climate change**. This is reflected in the attention given to the ocean at the Madrid 25th Conference of the Parties (BlueCOP25) and in key European policy priorities including, inter alia: the **European Green Deal**, an ambitious plan for sustainability and climate action which sets the path for Europe to become the first climate-neutral continent by 2050 and aims to transform the EU into a fairer, cleaner and greener society with a clear zero-pollution ambition; the adoption of the **EU Biodiversity Strategy for 2030** that aims to put Europe’s biodiversity on the path to recovery by 2030; and efforts required to accelerate the implementation of the **UN 2030 Agenda for Sustainable Development** despite the challenges linked to the current crisis.
- The **outbreak of the COVID-19 pandemic** has shed light on the need to change the way humans interact with nature in general, and with the ocean, in particular. This crisis has confirmed the importance of **making resilience and fairness** a central component of all policy agendas including the IOG Agenda.

Towards a reinforced strategic orientation for International Ocean Governance

Fostering ocean sustainability is one of the most important tasks and greatest opportunities of this time. The ocean was once considered to be inexhaustible but with biodiversity declining, fish stocks being depleted and climate change leading to unprecedented changes, it has become very clear that for the benefit of all, humankind cannot afford to continue on current “business-as-usual” pathways. **The stakes for the EU and its Member States as well as the rest of the international community in the ocean are high.** Thus, political and economic weight are required for reshaping the post-2020 international ocean governance agenda. Sustainable and efficient governance, policy and blue economy approaches are needed that champion multilateralism and a rules-based global order, building on the UN Convention on the Law of the Sea and guided by a series of key principles (see Box 1) that can help secure both human wellbeing and clean, healthy and productive ocean and seas.

Box 1 – Key principles for guiding international ocean governance

Contributions in the IOG Forum online workshops and stakeholder consultation stressed the importance of key principles to guide the IOG Agenda so it responds to current and future ocean challenges while accounting for wider societal demands. These include inter alia:

- 1) Strengthening the **multilateral governance** system and international cooperation mechanisms on oceans protection and blue economy, with the UN Convention on the Law of the Sea (UNCLOS) at its core;
- 2) Applying an **ecosystem-based approach** that accounts for the functioning and dynamics of marine ecosystems, giving priority to the prevention of activities with harmful ecological and societal impacts and to the protection and restoration of marine ecosystems;
- 3) Supporting **inclusive** governance with engaging and transparent processes with all involved – including land-based stakeholders and activities;
- 4) Responding to **uncertainty** by coupling the application of the **Precautionary Principle** with the development of new (scientific) knowledge;
- 5) Ensuring **fairness** and **equitability**, being an instrument of **poverty reduction** and a source of **decent jobs** giving due consideration to local and indigenous communities and to future generations;
- 6) **Adaptive**, accounting for rapid changes at all scales (from global to local).

1 IPBES 2019) IPBES. 2019. Summary for Policymakers of the Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services

2 IPCC. 2019. IPCC Special Report on the Ocean and Cryosphere in a Changing Climate



The EU has been reinforcing its responsibility and global leadership by reviewing its approach to **International Ocean Governance** as a tool to lead the transformative changes needed on our blue planet. Today, the EU is showing strong and effective leadership with the high ambition of the European Green Deal and related policies and instruments such as the EU Biodiversity Strategy. In relation to the ocean, seas and marine resources, this translates into commitments to: implement and strengthen the effectiveness of international rules, institutions and arrangements; overcome current sectoral divides in ocean governance; and, prioritize policy coherence by aligning existing legal and institutional frameworks for the ocean, climate, biodiversity....

By adopting innovative and adaptive strategies, using knowledge to support decision-making and developing early-warning systems that can pick up new and emerging issues at relevant level, from the local to the national, regional and global, the EU will support a truly transformative approach for the next decade of action and delivery on oceans.

Building on the EU experience in the implementation of the IOG Agenda, and inputs from key stakeholders and experts in the IOG Forum and through the online stakeholder consultation, **the following strategic directions offer inspiration** for the post-2020 EU IOG Agenda:

1. Capitalizing on the **EU's comparative strengths**: The post-2020 EU IOG Agenda will build on the strengths and leading role of the European Union and its Members States in international ocean governance and key policy processes. Priority areas and concrete actions will reflect key levers where the EU's exemplary leadership can make a difference such as: environmental policy, regional ocean governance, partnership agreements, development cooperation, marine science and ocean services, trade arrangements, innovative funding/financing and support to knowledge and innovation.

2. The EU's IOG Agenda can put **transformation** towards healthy, productive and safe oceans and their sustainable use **as a central objective delivering a global shared public good**. The challenge will be to seize all opportunities that can induce change towards ocean sustainability, addressing simultaneously marine biodiversity loss, climate change and the development of a sustainable blue economy. To that end, new **collaborative and cross-sectoral approaches** will be necessary to address these closely interrelated sustainability challenges.

3. Future ocean governance will be **knowledge-based**, driven by inclusive interfaces between science, society and policy-making. Achieving the needed transformations will require major knowledge gaps to be filled. Strong science, observation and data handling capacity but also the integration of knowledge from relevant stakeholder groups, is seen as a prerequisite for this. In addition to the generation of new knowledge about the marine environment, it will be necessary to underpin and support policies with effective ways to translate knowledge to action, including through better and fit-for-purpose assessments, public ocean services³ and integrated knowledge platforms.

4. The outbreak of the **COVID-19 pandemic** has hit at a time when the need for a shift in the way we treat the ocean has never been higher. The pandemic could contribute to accelerating ecological transition. And future international ocean governance can play an important role in supporting global response strategies delivering an **ecological transition that improves societal and environmental resilience** while delivering economic benefits and strengthening preparedness capacity to response to future possible crises.

How to support effective International Ocean Governance?

The overall frame for action

The post-2020 EU IOG Agenda must support clear and practical actions that will set the course for the future of ocean governance and make the transition to a sustainable blue planet a reality.

Priorities for future action have emerged from the IOG Forum online workshops and online stakeholder consultation (see Figure 1 below). In line with the key principles described above and the key levers that can best strengthen international ocean governance, they align with the potential role of the EU to capitalise on its comparative strengths within international ocean governance. Although presented as separate priorities, they are complementary building blocks of a global package with close synergies among each other to address the complexity of the challenge at hand.

- The first (horizontal) set of priorities focuses on **pre-conditions for effective transition** in terms of: organisation and **governance**; governance that supports **resilience**; the application of set **rules**; **financing**; **capacity**; and ocean **knowledge systems**.
- The second (vertical) set of priorities relates to **thematic areas** addressing the **interactions between human activities and the ocean**, including: **climate change** and **pollution**; the **conservation**, restoration and sustainable use of marine ecosystems; and the development of sustainable blue economy sectors including fisheries and seafood.

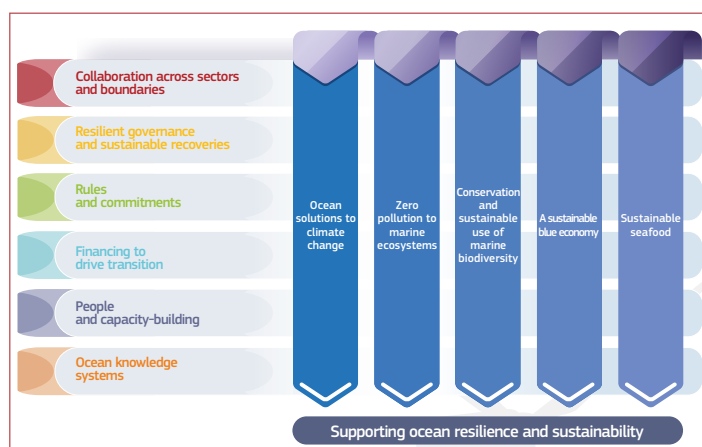


Figure 1. Suggested priorities for the post-2020 EU IOG Agenda

Establishing the preconditions for effective transition and implementing thematic priority areas will require synergies and cooperation with key initiatives addressing the ocean and sustainability internationally, including: the 2030 Agenda for Sustainable Development and initiatives taken to support the achievement of SDGs; UN global agendas on the ocean, biodiversity, pollution and climate change; the UN Decades on Ecosystem Restoration (2021-2030) and of Ocean Science for Sustainable Development (2021-2030), IPBES, IPCC and World Ocean Assessments, Global Ocean Science reports, UN Decade of Ocean Science, Quality Status Reports at the regional level, OECD's Sustainable Ocean for All, and others.

³ EU initiatives such as Copernicus services and Destination Earth Digital Twin Ocean

Suggested priorities in a nutshell

Six **pre-conditions for effective transition** need specific attention in the post-2020 EU IOG Agenda, as summarised in the following table. More detailed descriptions of the rationale, objectives and practical actions proposed to set up each pre-condition are presented in Part II of this document.

Table 1. Pre-conditions for effective transition

Pre-conditions for effective transition	Objectives
Cooperation across sectors and boundaries	To foster cross-sectoral and multi-stakeholder cooperation across boundaries, as well as strengthen regional ocean governance for the sustainable sharing, management and protection of marine ecosystems and resources.
Resilient governance and sustainable recovery strategies	To strengthen learning systems and capacity and integrated governance to support adaptive management for resilient ocean governance and sustainable post-shock recoveries
Compliance to regulations and meeting commitments	To support global compliance of international rules and standards and boost accountability and transparency towards conservation and sustainable use objectives, as well as other ocean-activity related standards.
Financing to drive transition	To support coherent financing for transition to enable the protection of marine ecosystems and sustainable blue economy projects making sure that no one is left behind in the process
People and capacity building	To strengthen knowledge and awareness of the roles played by functioning marine ecosystems, impacts of human activities on them and their cumulative impacts as well as the living and working conditions of people involved in economic activities around the ocean. Increase awareness about the investments, practices and solutions available to actors in different sectors (including land-based) for the restoration and conservation of the health of marine and coastal ecosystems and allow for a sustainable use.
Ocean knowledge systems	Specific objectives of the three building blocks that address ocean knowledge systems include: <ul style="list-style-type: none"> ► To support the development of integrated and accessible ocean knowledge systems with effective knowledge-policy interfaces in support of effective international ocean governance ► To co-design transdisciplinary research to support international ocean governance by addressing complex societal challenges holistically ► To support capacity and financing for sustained ocean observations, ocean services and enhance sharing and integration of ocean data

Complementary to setting the right pre-conditions for effective transition are five **thematic priority areas** that address the **direct and indirect interactions between human activities and ocean ecosystems**, as summarised in the following table. More detailed description of the rationale, objectives and practical actions addressing each thematic priority area are presented in Part III of this document.

Table 2. Thematic priority areas addressing the direct and indirect interactions between human activities and ocean ecosystems

Thematic priority area	Objectives
Ocean solutions to climate change	To scale-up the implementation of nature-based ocean solutions to climate change and to foster synergies across legal and institutional frameworks dealing with climate change, ocean and biodiversity
Zero pollution to marine ecosystems	To prevent and minimize pollution using life-cycle approaches and support innovative product design and new business models under a diversity of socio-economic contexts
Conservation and sustainable use of marine biodiversity	To empower institutions to design and implement measures to conserve and use marine biodiversity sustainably at the scale of sea-basins
A sustainable blue economy	To support the development of sustainable blue economy projects and initiatives that promote or do not harm marine ecosystem functioning and biodiversity protection
Sustainable sea food	To ensure sustainable seafood, recognising the role of fishing/aquaculture in the development of many communities, addressing overfishing, destructive fishing practices and (IUU) fishing, as well as addressing labour exploitation in the maritime, fishing and seafood processing industries



PART II – PRE-CONDITIONS FOR EFFECTIVE TRANSITION

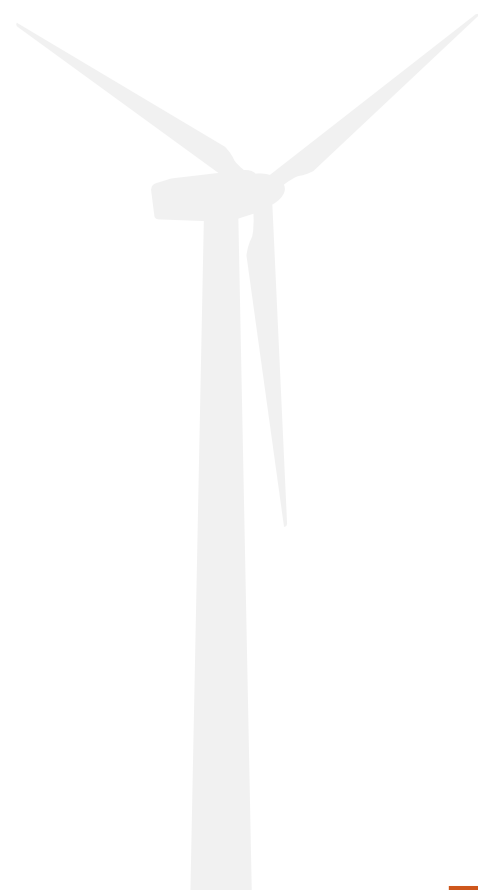
Part II of the discussion paper presents the **pre-conditions for effective transition** that need specific attention in the post-2020 EU IOG Agenda. These include:

- ▶ **Cooperation** across sectors and boundaries;
- ▶ **Resilient governance** and sustainable recovery strategies;
- ▶ **Compliance** to regulations and meeting commitments;
- ▶ **Financing** to drive transition;
- ▶ **People** and capacity building;
- ▶ Ocean knowledge systems, further sub-divided into: (1) Knowledge-policy interfaces; (2) Co-designed transdisciplinary research; and, (3) Sustained ocean observations, ocean services and integrated data.

A **common format** has been developed for presenting for each pre-condition: the rationale and justification for setting the pre-condition rightly; the objective(s) that can be proposed for the post-2020 EU IOG Agenda; and, practical actions that could be carried out to reach this (these) objectives.

There is still **work ahead** for translating what has emerged from the IOG Forum process so far into **concrete and tangible action proposals**. This will be the priority focus of the workshops organised on the 15th and 16th December 2020 as part of the 2nd IOG Forum. Key questions that will be addressed in these workshops include:

- ▶ **How** can proposed actions be made more **operational and concrete**?
- ▶ **Who** should contribute to the implementation of actions and how?
- ▶ **What role** could the **EU** play in implementing the proposed actions?
- ▶ **When** should the actions be implemented?
- ▶ **How to act** to ensure a successful and coherent implementation of proposed actions?
- ▶ **Should additional actions** be proposed for setting pre-conditions correctly?





COOPERATION ACROSS SECTORS AND BOUNDARIES

Rationale

Increased cross-sectoral and multi-stakeholder cooperation is needed to safeguard the environmental health, status and resilience of marine ecosystems and achieve related international goals, for example as agreed under the 2030 Agenda for Sustainable Development or the Convention on Biological Diversity. In light of the interconnected nature of the ocean it is essential to move towards more coherent governance approaches and commonly agreed objectives, bringing together and bridging initiatives across sectoral organisations (horizontal cooperation) and between governance levels (i.e. from the local to the national, regional and global). Current ocean governance is fragmented with most organisations focusing on single sectors or dimensions (e.g. fisheries or shipping) and often does not sufficiently account for the many sectors and cumulative challenges of marine regions. But there are a number of key opportunities in current ocean governance processes to address related short comings, e.g. within the context of the new international legal instruments for the conservation of biological diversity beyond national jurisdiction (BBNJ). A particular lever for improved cooperation could be regional ocean governance taking into account the ecological but also economic, political and societal characteristics of marine regions. By enabling cooperation and coordination at sea-basin scale, regional organisations, mechanisms and instruments play a crucial role in delivering ocean sustainability, often taking action “closer, further and faster” than institutions at the global or national level.

Objectives

The objective is to foster cross-sectoral and multi-stakeholder cooperation, as well as to strengthen ocean governance at all levels, including regionally for the conservation and sustainable use of oceans and seas.

Potential actions

- ▶ Develop (and initiate) **arrangements/mechanisms to enhance coordination and collaboration** (between relevant organisations and actors), and facilitate (policy) coherence, including for example, in the context of the future BBNJ instrument or the International Maritime Organization (IMO) and work towards a mechanism for:
 - Co-creating **shared objectives** for protecting, maintaining and restoring ocean health including its productivity, resilience and diversity and safeguarding connectivity and decent living and working conditions of the people involved, as well as related **ambitious common policy targets** (e.g. for pollution or ecosystem restoration);
 - **Facilitating the co-development or establishment of complementary measures** (e.g. collaborating to create shared managed/no use zones by multiple sectors, or jointly addressing the environmental and labour dimensions of ship recycling) to reflect decisions taken by other competent organisations;
 - **Fostering coherent implementation across sectors and boundaries**, e.g. by facilitating the conduct of (voluntary) reviews of State and/or organisational action against global targets and objectives; and,
 - **Strengthening the capacity** and the mandate of existing **regional organisations** in the development and facilitation of cross-sectoral **governance** and other integrative processes at the regional level. When no regional organisation exists already, or when identified as needed/essential, to support the emergence of new regional organisations with inter-sectoral and multi-actor mandates/remit.
- ▶ Foster **ocean governance approaches** that **address interlinked sustainability challenges, notably cumulative impacts of human activities and related goals for conservation and sustainable use of oceans and seas** (e.g. Sustainable Development Goals - SDGs), such as:
 - **Creating support frameworks to promote multi-sector strategies and financing** for the conservation and sustainable use of marine ecosystems and resources at relevant scales e.g. regional programmes to facilitate the effective and cross-sectoral implementation of global goals to be agreed under the post 2020 global biodiversity framework;
 - **Support the implementation / or development of dedicated regionally-coordinated tools** to accelerate the implementation of SDG 14 and ocean-related targets (e.g. to prioritize future action and enable scalable solutions at the sea-basis level), including the coordination between departments of financing institutions to systematically connect (multi-sector/sector) financing to international ocean governance objectives and priorities.
- ▶ Strengthening **collaboration and synergies between scales** – in particular between regional organisations (such as Regional Fisheries Management Organisations (RFMOs) and Regional Sea Conventions (RSCs)) and Multilateral Environmental Agreements' (MEA) instruments and policies:
 - Illustrations of activities related to e.g. the sustainable management of fisheries, according to clarified competences and powers of MEAs, Food & Agriculture Organisation (FAO) and RFMOs, include: the establishment of joint working groups; sharing of data, sharing of assessments and jointly conducting assessments; installing joint decision bodies; setting mechanisms to institutionalize collaboration and sharing of examples (such as the North East Atlantic Fisheries Commission collective arrangement) according to clarified competences and powers of MEAs, FAO and RFMOs).
 - Establish a **common knowledge and evidence base** (e.g. combining data and knowledge from multiple actors) to underpin actions towards shared objectives and integrated assessments **through institutional capacity building** (e.g. training events), **financing mechanisms** (e.g. cross-sectoral research projects) and **joint information platforms** (e.g. data repositories).
 - Contribute to the development of a **community of practice** among regional organisations (RFMOs, RSCs, sector-specific regional sea initiatives) and across **different sea regions**, supporting: (a) the exchange of practice between regions, as well as the benchmarking of management practice and performance in relation to key topics such as the application of ecosystem-based approaches, multi-sectoral and multi-stakeholder mobilisation, practical steps taken to internalise SDG objectives into management; (b) peer-to-peer exchanges on good practices, methods and tools; (c) and the organisation of events to bring together diverse views, expertise and experiences from regional organisations and stakeholders.

RESILIENT GOVERNANCE AND SUSTAINABLE RECOVERY STRATEGIES**Rationale**

Unexpected shocks, such as the COVID-19 pandemic, can lead to unforeseen impacts for ocean governance and ocean dependent sectors and livelihoods. It is imperative to learn from the current pandemic. It is also imperative to prepare the ocean governance system for the impacts and risks linked to climate change. Ocean governance (both legal and institutional frameworks) needs to be future proofed in terms of capacity to adapt to unforeseen changes and crises. This requires early warning systems and integrated approaches to learn lessons, better prepare for and respond to short-term impacts (e.g. for institutions and dependent actors) and overcome medium- to long-term challenges. Adequate capacity is needed to improve the adaptive capacity of the current governance approaches to support resilience. Building on ongoing efforts, it will also be essential to (better) understand the interlinkages between ocean, biodiversity, climate, and human health and well-being, including through targeted assessments of resilience.

Objectives

The main objective is to support institutions to overcome and be prepared for global shocks through the development and implementation of robust and risk responsive management approaches, thereby supporting the resilience of ocean (governance) systems.

Potential actions

- ▶ Support ocean governance institutions in their response to the COVID-19 pandemic and other future unexpected global shocks through a global ocean relief programme (e.g. for capacity building, short-term funding support).
- ▶ Make **resilience a greater priority in ocean governance** and related policy frameworks or concepts (e.g. Ecosystem-Based Management (EBM), Marine Protected Areas (MPAs) or Maritime Spatial Planning (MSP)) and foster integrated policies to address ocean, climate, biodiversity, and human health and well-being challenges as one, through:
 - Facilitating institutional and cross-sectoral learning processes to implement these policies;
 - Assessing (e.g. through research programmes) the resilience of global ocean governance frameworks to unexpected shocks such as the COVID-19 pandemic and related consequences; and,
 - Developing strategic approaches to cope with these consequences, including coordinated funding schemes and clear priorities for development policy.
- ▶ **Link post-pandemic recovery to the SDGs** and promote SDG 14 implementation (and linked targets) as a “blue” pathway to address the consequences of the COVID-19 pandemic and “develop better”, e.g. by:
 - Supporting marine regions hit by the pandemic in addressing challenges and developing sustainable responses;
 - Highlighting the supportive function of the ocean for human health and its contribution to “One Health” and “Planetary Health” approaches; and,
 - Developing strategies to guide recovery and make sure processes support ocean sustainability, while remaining mindful of the risks that economic challenges can be used as arguments to continue/speed-up over-exploitation.

COMPLIANCE TO REGULATIONS AND MEETING COMMITMENTS**Rationale**

The 2030 Agenda and the Sustainable Development Goals (SDG) represent a new complementary mode of governance, one ultimately defined not through legally binding international agreements, but through goals and targets. With regard to the marine goal, SDG 14, success will depend on a number of institutional factors, including how States act on their commitments to the 2030 Agenda and how they translate global ambitions into concrete national and regional action. At the same time, monitoring the compliance with legal provisions and ocean regulations remains a key challenge. Monitoring, control and surveillance of marine activities is patchy (i.e. in some regions and for some human uses) but key to the effectiveness of management measures.

Objectives

The main objective is to support global compliance of internationally agreed rules and implementation of voluntary commitments towards conservation and sustainable use objectives as well as other related international standards including through improved monitoring, control and surveillance and review of actions.

Potential actions

- ▶ Support a pledge and reviews systems that provides a **transparent basis** for tracking efforts of States and stakeholders to **achieve SDG 14 and ocean related targets** through Voluntary Commitments submitted to key ocean governance processes, including the UN Ocean Conference, the Our Ocean Conference, and the UNEA; the UN Decade of Ocean Science for Sustainable Development;
- ▶ Create a **global repository of non-compliance and regulatory infringements/offences**;
- ▶ Increase and improve **monitoring, control and surveillance** through sea-basin level and cross-sectoral strategies, coordinated policies and programmes to take collective action, the employment of innovative technologies (such as drones and autonomous underwater vehicles, space-based services) and (enhanced financial support to) investments in patrol boats and related support infrastructure;
- ▶ **Improve marine monitoring** via e.g. Closed-circuit television (CCTV) on vessels to collect impact data, help enforce rules like tracking all vessels;
- ▶ **Encourage information exchange between inspectorates** and support combined inspection visits or surveillance operations (e.g. between fisheries and labour inspectorates or between fisheries control and oil pollution surveillance);
- ▶ Advance **capacity** (e.g. funding training programmes or offering the transfer of technology) for the design and implementation of monitoring, control and surveillance strategies as well as the application of innovative technologies and the review of information and data; and,
- ▶ Initiate **regional and global cooperative networks** (e.g. for information exchange and joint learning) between investigators and prosecutors and with other competent organisations such as INTERPOL to effectively enforce internationally agreed rules and standards for marine conservation and pollution prevention as well as marine crime including labour abuses in a transboundary context.

FINANCING TO DRIVE TRANSITION**Rationale**

To date, there are initiatives that ensure a sound allocation of financial resources in support of sustainable blue economy projects. However, harmful subsidies supporting unsustainable practices and investments still exist for some sectors and regions, partially offsetting the benefits achieved in sustainable projects. Furthermore, financing remains very fragmented, often donor- and sector-specific, and without shared (regional) priorities accounting for ecosystem-based approaches. And there is still progress that can be achieved in ensuring the application of sound ex-ante assessments (including Strategic Environmental Assessment and accounting for social and economic impacts) to support the selection of the best sustainable blue economy projects and investments accounting for marine ecosystems and the services they deliver. In the majority of situations, the allocation of financing/subsidies to land-based sectors rarely accounts for impacts on ocean systems including in their financing conditionalities. As a result of the fragmentation, investments in nature-based solutions (that by nature are multifunctional contributing to different policies and societal objectives, including addressing climate change) are rarely favoured.

Objectives

The main objective is to support the coherent financing of the protection of marine ecosystems and sustainable blue economy projects, internalising in particular (a) the protection of marine ecosystems and biodiversity in financing conditionalities and (b) the protection of the ocean in financing instruments targeting climate change.

Potential actions

- ▶ Support the establishment of **sharing mechanisms and platforms** that can strengthen the **coordination of donor financing** at different scales (e.g. national or regional scale) in coherence with priorities set by strategies that aim at enhancing the sustainable management of ocean ecosystems accounting for ecosystem-based approaches ;
- ▶ Support the development of **new financing instruments** such as debt swaps or payment for ecosystem services that can support improvements in ocean ecosystems accounting for ecosystem-based approaches. This includes: supporting **research** on innovative financing instruments (including in terms of potential social, economic and environmental impacts and pre-conditions for effective implementation), including implementing pilot projects for testing the most promising instruments under real life conditions; **raising awareness** on their potential – and how they can complement other instruments; developing **capacity** on their application; sharing experiences and knowledge on their application (Action types: Instruments; Knowledge; capacity-building);
- ▶ Support the financing of **nature-based solutions** – ensuring such solutions are systematically considered as alternative options when relevant, that ex-ante assessments do account for the multi-functional character of these solutions and for their contributions to different policies and societal objectives, and that mechanisms are set for facilitating financial support from multiple funding sources – including by setting new and dedicated financial instruments;
- ▶ **Mainstream conservation and sustainable use in existing financing instruments** of all sectors, including land-based sectors and climate change. In the context of the ocean and climate nexus, seize opportunities offered by existing financial instruments (e.g. linked to “Blue Natural Capital”) to support Sustainable Blue projects including nature-based;
- ▶ **Consider options for a common financial ocean mechanism** to steer action towards common goals, highlighting the value of investments and create financial incentives (e.g. linked to “Blue Natural Capital” or as a novel global ocean facility / “Ocean Bank” possibly linked to the Convention on Biological Diversity (CBD) similar to the UNFCCC Green Climate Fund (GCF)).



PEOPLE AND CAPACITY BUILDING

Rationale

The limited understanding of the functioning of the ocean, of the complex human-ocean interconnections (including via climate change) and on how to implement in practice the ecosystem-based approach is recognised as constraint to conservation and sustainable use and sustainable ocean management. With the direct and indirect impacts many production and consumption activities have on the status of the oceans and seas and their health, strengthening capacity to support socially inclusive transition cannot be limited to stakeholders from maritime and marine sectors. When Integrated Coastal Zone Management policies in particular are absent, the potential impacts on the ocean and seas of land-based investments are rarely given due consideration in setting priorities for such investment, partly because such potential impacts are unknown by those taking decisions. Capacity is particularly crucial in countries with severe budgetary constraints (that affect public policy in general, and education/training/capacity building in particular) and where the sustainable management of ocean ecosystems and resources has not yet become a priority for public and private stakeholders.

Objectives

The main objective is to strengthen people's understanding of the roles, functioning and dynamics of marine ecosystems, as well as their capacity to adopt investments decisions and practices that enhance the health of marine ecosystems and the ecosystem services they deliver. As transition requires simultaneous changes at all scales and for all stakeholders of marine/maritime value chains, strengthening capacity is relevant to all actors from knowledge providers to knowledge end-users, from maritime to land-based sectors affecting the health of the ocean, from public and private decision makers at different scales, from consumers and citizens. It is important that this transition happens in a fair way, leaving no one behind.

Potential actions

- ▶ Strengthen capacity (e.g. funding training programmes technical assistance in designing the monitoring mechanisms or offering the transfer of technology) for the **design and implementation of monitoring, control and surveillance strategies** as well as for the application of innovative technologies for the collection, structuring and review of information and data;
- ▶ Support dedicated and regionally-coordinated **accelerator tools and training programmes** that can support the practical implementation of ecosystem-based approaches along with the integration of SDG 14 and ocean-related targets into the management activities of regional organisations;
- ▶ Strengthen capacity in **the integration of climate change and global changes** into strategic and operational management. This may need to be accompanied by structural changes in organizations (e.g. in RSCs and RFMOs) to react and respond to impacts from climate change and the related consequences on people. Management organizations are aware that they need to factor in climate change into their day-to-day operations, but have no overarching strategies to take action;
- ▶ Strengthen **capacity** in countries who lack the means **to fight IUU fishing** (especially in how to report and regulate IUU);
- ▶ Support partner countries in developing their **regulatory, monitoring and enforcement frameworks** to fight unfair and exploitative practices in the maritime, fishing and seafood processing industries holistically, including as regards environmental, health and safety and labour rights considerations;
- ▶ Support an international forum that help **identifying priority needs, skills and activities for capacity building** in each developing country and region through a two-way, balanced, and equal process based on mutual learning;
- ▶ **Strengthen capacity for science, ocean services and knowledge development**, building on existing EU partnerships set for different oceans and regional seas (e.g. the All-Atlantic Ocean Research Alliance, the BlueMed Initiative, the Baltic and North Sea Coordination and Support Action, regional cooperation in the Black Sea...):
 - **Co-designing research programmes with developing countries** to identify capacity needs and to ensure science is inclusive of local needs, provides solutions adapted to practical issues faced by developing countries, and can be used in local policy-making. Research programmes should build on existing local knowledge and expertise, and clearly benefit local communities;
 - Strengthening **capacity for science, ocean services and knowledge development** to respond to ocean-climate management mandates. Capacity and knowledge are needed to deal with high risks due to the impact of climate change on ecosystems which support coastal livelihoods at the national, regional, as well as global level.
- ▶ **Support the coherent development of ocean literacy for all** through:
 - Sharing knowledge on ocean ecosystems and the ecosystem-based approach with a wide range of stakeholders via targeted communication, capacity building and training to accompany changes in understanding, perception, attitude and, ultimately, practice and decisions;
 - Demonstrating the benefits of ocean science to the public as well as the implications of policy decisions, in connection to the UN Decade of Ocean Science for Sustainable Development;
 - Supporting dedicated ocean literacy resources to foster communication between ocean, climate and biodiversity research and policy communities, including targeting policy-makers to become more ocean science-literate;
 - Developing tool-kits and training for scientists on science communication and policy-engagement, including understanding policy-needs, delivering results in a policy-relevant format, and communicating science and its uncertainties to policy-makers and the public.



KNOWLEDGE-POLICY INTERFACES – COMPONENT: KNOWLEDGE-POLICY INTERFACES

Rationale

The sustainable management of marine resources under a changing climate must be based on sound knowledge, science and data, and strong international cooperation is also needed to achieve this objective. Improved ocean knowledge-policy interfaces are needed to adopt an ecosystem-based management approach to marine resources, to adopt ocean solutions to climate change, and to enhance synergies between sectoral policies. Currently, many decisions that are made do not make full use of available knowledge. This is partly due to a lack integration of all knowledge sources, including traditional and indigenous knowledge, and natural and social scientific knowledge, which is needed to create buy-in from knowledge end-users. The importance of knowledge being able to reach a wider diversity of stakeholders and decision makers is becoming increasingly apparent. Advancing ocean literacy initiatives is key to engaging the public in ocean knowledge systems and increasing support for policy that supports ocean health. Developing open and free public services for ocean forecasting and ocean climate projections is key to long-term policy implementation and enforcement based on sustained, operational and trustworthy capacities.

Objectives

The main objective is to share and build on best practices to strengthen the knowledge-policy interfaces of ocean knowledge systems. Public ocean forecasting and climate services need to be strengthened and shared at international level, open and free. Social science research is needed to improve the functioning of ocean knowledge systems, to explore and support new interfaces to support a new BBNJ treaty, and to integrate all knowledge systems including natural and social sciences, humanities and local knowledge to achieve the UN Sustainable Development Goals (SDGs).

Potential actions

- ▶ **Develop a system to share and build on existing best practice theories and models on the functioning of knowledge-policy interfaces.** This should link to the IODE of the IOC's Ocean Best Practices System. Best practices can include how to co-produce knowledge e.g. involving all stakeholders in the co-design of research and public ocean services; mechanisms to collect societal and policy needs from different States and how to communicate these to policy makers internationally; how to engage with knowledge brokers; how to foster cooperation across sectors; and how to mobilize stakeholders.
- ▶ **Sustain trustworthy global ocean services;** public services to operate freely and openly ocean forecasting and ocean climate services at global, regional to national scale. This should encompass all dimensions of the ocean from ocean state to iced areas, to marine biology and ecosystems monitoring to link with social science, local specifics, and monitor ocean health in a context of climate change, support the implementation of environmental policies, their enforcement, the development of sustainable blue economy, development of early warning systems and support to safety at sea;
- ▶ **Engage knowledge brokers** to federate knowledge across ocean communities (e.g. research, industry, policy, NGOs) and translate between different stakeholders. Brokers can also provide mechanisms to respond to ad-hoc policy needs and support the participation of scientists in international policy forums;
- ▶ **Develop a social science project within the framework of the UN Decade of Ocean Science** to examine the functioning of current ocean knowledge systems that support international ocean governance. This project should develop improved knowledge on the barriers to the uptake of objective evidence, and knowledge of the trade-offs between ecological and economic outcomes within the IOG context. It should also make recommendations to optimize the flow of knowledge and its uptake in policy-making;
- ▶ **Integrate ocean knowledge-policy interfaces** by building on or feeding into efforts of the IOC Ocean InfoHub Project to synthesise existing ocean data, information and knowledge resources;
- ▶ Provide financial and policy support for **increasing cooperation between the IPCC reports, IPBES report and World Ocean Assessments;**
- ▶ **Increase single-window sources of knowledge for specific ocean regions** (such as the International Council for the Exploration of the Sea (ICES)) that account for local needs;
- ▶ **Initiate a global thematic review for the ocean** to inform the implementation of SDG 14 and interlinked ocean-related goals across the 2030 Agenda. Such a review would provide the basis for future proposals and actions as well as insights into synergies and trade-offs between different sectoral interventions. It should be developed in conjunction / close coordination with the World Ocean Assessment;
- ▶ **Support a global clearing house mechanism as part of the BBNJ legally binding instrument** to act as a centralized platform to access data and information. This should be linked to existing European and international data, information and knowledge platforms (e.g. Copernicus, EMODnet, Digital Twin Ocean...) to ensure interoperability and cooperation.



KNOWLEDGE-POLICY INTERFACES – COMPONENT: CO-DESIGNED TRANSDISCIPLINARY RESEARCH

Rationale

Strong international ocean governance depends on a solid knowledge-base which can be used to guide decision-making. The UN Decade of Ocean Science for Sustainable Development will mobilize stakeholders towards transdisciplinary ocean science, co-designed from the start with all relevant stakeholders, which is essential to support policy-making and to deliver on the UN 2030 Agenda for Sustainable Development. Transdisciplinary science transcends knowledge from different academic disciplines, public and private stakeholders and citizens to create a new holistic approach to addressing complex societal challenges. Transdisciplinary sustainability science is needed to address the many knowledge gaps that still exist on how the ocean functions especially its ecosystems, how the ocean benefits people, and the cumulative impact of human activities and environmental changes on the ocean. Understanding the interplay between multiple stressors affecting the ocean including climate change, pollution, greenhouse gases, overfishing, and human use of marine resources is a priority, as is understanding of how these stressors lead to crossing ecological tipping points, and how management actions can avoid crossing these tipping points. To develop ecosystem-based management frameworks, more understanding of ocean connectivity and the four-dimensional ocean is needed including the links between the physical, chemical, biological, and geological ocean and humanity, as well as how they change over time. Other research priorities include understanding extreme events such as storm surges, marine heat waves, tsunamis, and harmful algal and jellyfish blooms, as well as the dynamics of the land-ocean continuum and the deep sea. Science focusing on ecosystem-based frameworks should incorporate the social-ecological dimension of the ocean, including the thorough assessment of elaborate policy scenarios, to better understand trade-offs and allow for both precautionary and adaptive management. These ocean research priorities must be addressed through international collaboration building on the EU's international partnerships such as the All-Atlantic Ocean Research Alliance, the BlueMed partnership, the Baltic and North Sea Coordination and Support Action (BANOS CSA), and the Black Sea cooperation.

Objectives

The main objective is to support transdisciplinary research to respond to users and implementers needs and experience that includes sustainability science and planetary health and support a systemic change in the academic system. Horizon Europe, including the Mission Ocean, Seas and Waters, as well as the European partnership for a climate neutral, sustainable and productive Blue Economy will play a central role, and are critical for achieving the goals of the European Green Deal. The EU engages in international cooperation on ocean research and innovation through the All Atlantic Ocean Research Alliance, the EU Arctic Policy and the EU-China partnership, among others. In order to develop the knowledge-base needed for effective international ocean governance, existing EU research alliances need to be further mobilized and new alliances created to strengthen international cooperation.

Potential actions

- ▶ **Develop new impact-oriented, and therefore co-designed and transdisciplinary research programmes.** Co-design should involve all relevant stakeholders (i.e. natural and social scientists, policy-makers, industry, employers' and workers' organisations, NGOs, the public) to ensure that the science and data they produce will provide solutions to the governance and sustainability challenges that are of highest priority for society and at appropriate scales. Effort should be made to successfully identify all relevant stakeholders that could be engaged in co-design, and incentives should be provided for them to get involved. The European Commission could also provide mandates and incentives for transdisciplinary research and for scientists to engage in policy dialogues as a step towards increasing recognition within academic communities. New research programmes should build on the outcomes of international assessments including the Global Ocean Science Reports, the IPCC Special report on Ocean and Cryosphere, IPBES assessments, the United Nations Environment Programme (UNEP) GEO reports, and the World Ocean Assessments I and II and the OECD Sustainable Oceans for All or the GEF Large Marine Ecosystem and Open Ocean management assessment. New research programmes should also be co-designed with developing countries to identify capacity needs and to ensure the science is inclusive of local needs, provides solutions adapted to users' needs and experience to practical issues faced by developing countries, and can be used in local policy-making. Research programmes should build on existing local knowledge and expertise, and clearly benefit local communities;
- ▶ **Developing dedicated national, regional, and international transdisciplinary research networks or fora,** for example building on the European Commission's 'Science with and for Society' programme. A specific, co-designed international forum for ocean research in developing countries could be initiated that would aim to help identify priority needs, skills and activities for capacity building through a two-way, balanced, and equal process based on mutual learning. Priorities should be balanced between local and global needs and include support for both natural and social sciences, support for all components of the knowledge value chain (production, brokerage, up-take), and developing mechanisms to access and apply for research funding;
- ▶ **Allocate resources to develop and maintain regional training centres and resources in developing countries,** as well as remote (virtual) training, and support for training local trainers to create a multiplier effect;
- ▶ **Coordinate funding for research and capacity building** at global Ocean, regional sea, and national scales;
- ▶ **Develop a new, co-designed research alliance to support international ocean governance.** This could build on existing science-policy initiatives such as the Deep Ocean Stewardship Initiative (DOSI), and build on and facilitate cooperation between existing alliances such as the All Atlantic Ocean Research Alliance, the EU-China partnership, and regional level European partnerships such as BlackSea Connect, BlueMed, Banos CSA, etc. This could be initiated via the European Partnership for a climate neutral, sustainable and productive Blue Economy under Horizon Europe;
- ▶ **Mobilize new and existing research alliances to support transdisciplinary research that underpins international ocean governance.** These should include multilateral agreements for research cooperation with regions that are currently underrepresented such as Africa (potentially via the new EU-Africa Partnership), the Caribbean, South-East Asia, the Indian Ocean, Southern Ocean, and Pacific Ocean. All ocean sciences (natural and social) and all knowledge sources, including local and indigenous knowledge, should be included as part of research alliances. Engaging with research networks could help to realize this goal e.g. the Marine Social Science Network. Knowledge gained should be brought back to local communities and integrated with local and indigenous knowledge. Research alliances should include training in transdisciplinary science and on policy engagement for early career researchers to foster a culture of transdisciplinary and multi-stakeholder collaboration.



KNOWLEDGE-POLICY INTERFACES – COMPONENT: SUSTAINED OCEAN OBSERVATIONS AND INTEGRATED DATA

Rationale

Ocean observations are the backbone for creating knowledge to understand the ocean, make predictions about its future, plan for climate adaptation and mitigation, and to adopt an ecosystem-based approach to ocean management. Global ocean observations currently predominately include physical and biogeochemical parameters. Some biological and human observations are included in coastal areas, but are generally not coordinated at national, sea basin or global scales. While ocean observations from space are dealt thanks to Copernicus in EU and major international long-standing cooperation, a key challenge is the lack of long-term financial sustainability for in-situ observations that are mostly funded on an ad-hoc basis as part of short-term contracts and projects, as well as a lack of capacity for observations in the Global South. With the growth in autonomous observing systems and the need for more complex, transdisciplinary analyses to understand and predict the state of the ocean, there is a need for regional and global integration of large amounts of ocean data. This data needs to be openly available and integrated into data products and services that assist in decision making and provide solutions to the UN 2030 Agenda and the European Green Deal.

Objectives

The main objective is to develop a globally coordinated ocean observation system that is fit-for-purpose, is sustainable, includes all aspects of the ocean, and is integrated into decision making. There is a need to optimize the spatial and temporal resolution of ocean observations across the global ocean so that they can provide the data and knowledge needed support the UN Ocean Decade of Sustainable Development and to measure progress on the Sustainable Development Goals. This will require new infrastructure, investments, and coordination among stakeholders, which are priorities that GOOS is working on globally, as well as EuroGOOS, EOOS, and EU4OCEANOBS within Europe. Developing coordination at national level is also a priority of the European Commission's recent initiative on ocean observation. European marine data management infrastructures including EMODnet, Copernicus, SeaDataNet etc. provide services for data collection, aggregation, validation, storage and distribution. FAIR data and open data sharing need to become the norm across the scientific community and industry needs to be better engaged to share data. An interoperable data framework that federates global sources of ocean data is a priority under the UN Decade of Ocean Science for Sustainable Development and European initiatives such as AtlantOS, BlueCloud, Copernicus services, the Digital Twin Ocean, and the EU Digital Strategy are already working towards this goal.

Potential actions

- ▶ **Improve coordination and co-design among stakeholders** including industry, diverse academic disciplines, and end-user communities to ensure alignment of observations with societal needs. Brokers should be involved in the co-design process in a coordinating role, and best practices should be shared by integrating existing initiatives and infrastructures into the IOC's Ocean Best Practices System to support the global ocean observing community. The EU and its member states can contribute to the co-designed framework for new sets of ocean indicators that respond to policy-needs that is being developed within the framework of the United Nations (UN) Decade of Ocean Science for Sustainable Development;
- ▶ **Increase new infrastructure** for sustained biological, biogeochemical, and socio-economic in-situ observations so they are on-par with physical parameter observations. New infrastructure should build on existing observational infrastructure, and a common understanding is needed on what is currently being measured and by whom to avoid overlap and to ensure infrastructure and data sharing. New infrastructure should be prioritized in ocean basins with gaps in observations (e.g. the Global South);
- ▶ **Scaling-up community-supported observations** that have co-benefits for the data collectors e.g. fishermen can contribute to data collection and will benefit in return by using the resulting data products to support their activities. These types of observations may be particularly beneficial in developing countries;
- ▶ **Improve financing for sustained observations** by: setting mechanisms to identify ocean observations that respond to priority needs; considering revenue models for the sustainable observations and flow of data through public infrastructure; funding long-term sustained ocean observations through taxes and including them as a part of capacity-building activities by States; identifying finance pathways for observation infrastructure and investments via the UN Ocean Decade; strengthening the European Commission financial support for observation capacity and infrastructure development in poorer countries where data gaps exist; and, allocating more financial resources to support observations in Areas Beyond National Jurisdiction (ABNJ);
- ▶ **Align and federate European (e.g. EMODnet, SeaDataNet, Copernicus marine service, BlueCloud, Digital Twin Ocean and Destination Earth Initiative) and international (AtlantOS, IODE, Ocean Data Foundation) ocean data infrastructure and initiatives** to ensure data interoperability. These infrastructures should be able to host or be interoperable with socio-economic, land, and human health data;
- ▶ **Promote global open and FAIR data** by developing international FAIR and open data policies and norms that are inclusive of all types of data (e.g. observational data, modelled data), all disciplines and sectors and include well-defined metadata standards and data tagging. Communication campaigns can be developed on the FAIR principles and on open data sharing platforms for the European and Global scientific communities e.g. by highlighting the benefits and returns of open data via European use-cases (e.g. EMODnet, SeaDataNet, Copernicus marine service, BlueCloud). Adopting FAIR and open data policies should be a precondition for research funding;
- ▶ **Provide incentives and/or mandates for industry to share their ocean data** by e.g. by making data sharing a precondition for government subsidies. A nuanced approach is needed to be sure that solutions are available that will work for different industries. Incentives are also needed for researchers to develop relationships with industry to encourage them to engage and to share their confidential data;
- ▶ **Develop memoranda of understandings** to improve data sharing between organizations, projects, and industry to overcome difficulties surrounding data ownership when data collectors and users are not the same. It is important that industry data can be shared anonymously, while allowing them to simultaneously retain control over their data;
- ▶ **Support the scientific community in engaging with industry**
- ▶ **Support big data technologies** by advancing artificial intelligence to handle increasing volumes of data and developing cloud and HPC computing interfaces that are widely accessible internationally to nations who lack capacity. Improving internet connections in developing countries is a precondition for cloud computing. Other priorities include supporting collaborations between mathematicians, computer scientists, and natural and social scientists, and providing training on artificial intelligence and big data technologies for a wide variety of stakeholders.



PART III – PRIORITY THEMATIC AREAS

Part III of the discussion paper presents the **priority thematic areas** that address the **direct and indirect interactions between human activities and the ocean**. These include:

- ▶ Ocean solutions to **climate change**;
- ▶ **Zero pollution** to marine ecosystems;
- ▶ Conservation and sustainable use of **marine biodiversity**;
- ▶ A sustainable **blue economy**;
- ▶ Sustainable **seafood**.

A **common format**, similar to the format developed for pre-conditions for effective transition (see Part II), is followed for presenting for each thematic area: its rational and justification; the objective(s) that can be proposed for the post-2020 EU IOG Agenda; and, practical actions that could be carried out to reach this (these) objectives.

There is still **work ahead** for translating what has emerged from the IOG Forum process so far into **concrete and tangible action proposals**. This will be the priority focus of the workshops organised on the 15th and 16th December 2020 as part of the 2nd IOG Forum. Key questions that will be addressed in these workshops include:

- ▶ **How** can proposed actions be made more **operational and concrete**?
- ▶ **Who** should contribute to the implementation of actions and how?
- ▶ **What role** could the **EU** play in implementing the proposed actions?
- ▶ **When** should the actions be implemented?
- ▶ **How to act** to ensure a successful and coherent implementation of proposed actions?
- ▶ **Should additional actions** be proposed for achieving set objectives?





OCEAN SOLUTIONS TO CLIMATE CHANGE

Rationale

The ocean and climate are inextricably linked. The ocean plays a major role in regulating global climate, including as a major carbon sink of excessive CO₂ anthropogenic emissions and the impacts of climate change have widespread effects on marine biodiversity, the functioning of the ocean, and the subsequent provision of key ecosystem services. Ocean-based solutions to climate change include 'nature-based solutions' to conserve and restore marine ecosystems that store 'blue carbon', and marine renewable energy, among others. Nature-based solutions offer synergistic solutions for ocean health, biodiversity, climate mitigation and adaptation and a huge range of co-benefits, particularly to coastal communities in the form of coastal protection, decent work and tourism. There are however certain governance challenges to overcome to take full advantage of the opportunities that the ocean offers in the fight against climate change. These include the need for governance approaches that work across sectors and boundaries (e.g. Exclusive Economic Zones (EEZ) versus Areas Beyond National Jurisdiction (ABNJ)). As much as the decline of ocean health, loss of biodiversity and climate change should be treated as one crisis, also the key competent bodies, including the United Nations Framework Convention on Climate Change (UNFCCC), the new legal instrument on marine biodiversity beyond national jurisdiction (BBNJ) under negotiation, and the Convention on Biological Diversity (CBD), together with RSCs also need to develop coherent collaborative approaches.

Objectives

The main objective is to scale up the implementation of nature-based ocean solutions to climate change, ensuring in particular that marine ecosystems under threat do not cross cascading tipping points that would lead to their abrupt degradation. Nature-based solutions focusing on marine conservation and restoration should be implemented within nationally determined contributions by States under the Paris Agreement, which are under review at COP26. There is also need to foster synergies across legal and institutional frameworks dealing with climate change, ocean and biodiversity, for example, by developing opportunities to address climate change mitigation and adaptation in ABNJ or new forms of collective commitments for shared marine space and ecosystems.

Potential actions

- **Address climate change in ABNJ across legal and institutional frameworks e.g. UNFCCC, BBNJ, CBD and relevant RSCs by:**
 - Developing new forms of collective commitments for Areas Beyond National Jurisdiction (ABNJ) e.g. "Internationally Determined Contributions" ("IDCs") by groups of States through relevant, competent international organisations;
 - Advocating for climate change to be included more explicitly in the new BBNJ instrument e.g. within articles on area-based management tools (ABMT) and environmental impact assessments in order to determine how to address climate change mitigation and adaptation within the governance of ABNJ;
 - Ensuring that the IPCC and IPBES reports are used to provide input to inform BBNJ related processes, e.g. MPA identification and design under future BBNJ Treaty; and,
 - Support the work of RSCs on ABMTs and EIAs.
- **Include ocean-based solutions more widely in nationally determined contributions (NDCs) by:**
 - Using the EU Green Deal and the Biodiversity Strategy for 2030 as an opportunity for Europe to be a leader in harnessing the potential of nature-based solutions in global climate action (e.g. using the IUCN 2019 report on 'Nature-based solutions in nationally determined contributions' as a reference);
 - Increasing NDC ambition through improved understanding of the contribution of existing NDCs to conservation and the post 2020 Biodiversity Framework, including an accepted model of carbon balance based on ecosystem type and management approaches;
 - Raising awareness of the importance and role of blue carbon balance by developing tailored messaging for specific stakeholder groups and engaging actively for the continuation of the ocean and climate dialogue in the context of the UNFCCC and CBD COPs (e.g. with regard to the quantifiable and tradeable nature of blue carbon balance and linkages to other tools for ocean management);
 - Developing a common financial mechanism to steer action that highlights the value of investments and creates financial incentives e.g. linked to "Blue Natural Capital" and marine biodiversity as part of the Convention on Biological Diversity (CBD); and,
 - Including Subsidiary Body of Scientific and Technological Advice (SBSTA) discussions on the oceans as part of COP26 to improve communication channels between nations and experts to identify priorities.
- **Include ocean indicators to monitor progress under the Paris Agreement by:**
 - Advocating for the UNFCCC adoption of the World Meteorological Organisation (WMO) Global Climate Indicators in the Global Stocktake;
 - **Ensuring ambitious and timely greenhouse gas emission reduction targets and measures for maritime transportation** within the framework of the International Maritime Organization and through EU-wide action, e.g. through National Action Plans for reducing GHG emissions from international shipping and appropriate Port State control measures.



ZERO POLLUTION TO MARINE ECOSYSTEMS

Rationale

The oceans are threatened by a wide range of anthropogenic pressures including: the discharge of pollutants and litter from land sources (excessive nutrients from sewage outfalls and agricultural runoff, litter, persistent organic pollutants, pharmaceuticals and other pollutants...) and sea sources (dumping of wastes and other matter, oil spills...); atmospheric pollution (e.g. sulphurs, CO₂...); ; additional pressures from sea-based sources such as invasive aquatic species (e.g. from ballast waters), noise (e.g. from deep sea exploration), hydro-morphological degradation, etc. Despite international efforts to protect the marine environment from such threats (for e.g., under UNCLOS, the Basel and the Stockholm Conventions, regulating hazardous chemicals and wastes, or the International Maritime Organization's regulations) and efforts from a diversity of actors at all levels (including Regional Sea Conventions when established), many pressures are not reduced to levels that ensure healthy marine ecosystem. In some cases, the simultaneous existence of different pressures can yield to cumulative impacts that can be more significant than what would happen with each pressure taken separately. More efforts are required to address pollution that originates from a wide range of sectors, strengthening or establishing regional sea-basin coordination for addressing pollution from source to sea including land-based sources of pollution (such as agricultural run-off, discharge of nutrients, antibiotics and pesticides, and untreated sewage as urban and industrial waste water including plastics and microplastics) that account for approximately 80% of marine pollution globally. Finally, as the status of fish stocks significantly influences the overall status of the marine environment, cooperation of RSCs and RFMOs with the aim of quality status assessments and improvements at the sea-basin level are increasingly important.

Objectives

The main objective is to minimize marine pollution seat source, accounting for multiple sources of pollution. It concerns plastic (macro and micro) pollution, including plastic additives from both marine and land-based sectors and plastics in both terrestrial and marine ecosystems, as well as other land and sea-based sources of pollution such as shipping waste, water chemical contamination, etc. It builds on efforts to support observations and knowledge (fluxes, stocks, impacts...), innovation in product design and the development of alternatives as well as new business models that account for repair/reuse/resource use under a diversity of socio-economic contexts.

Potential actions

- ▶ Develop a **global agreement(s)** on marine pollution at the international scale considering Areas Beyond National Jurisdiction and accounting for land-sea interactions and pollution sources:
 - Complementing existing initiatives (Basel/IMO/etc.) with clear and measurable targets and timelines (complementing/ avoiding overlaps with existing ones);
 - Dealing with liability issues, not limited to ocean and accounting for land-sea interactions;
 - Supporting e.g. binding standards for the disposal of non-avoidable non-recyclable plastics.
- ▶ Support **coordinated monitoring** at the regional sea-basin scale, with regional organisations as lead partners, following an "agreed methodology" (simple and cheap) for monitoring different components of ocean ecosystems health:
 - Develop specific programmes and initiatives for the monitoring of marine pollution including plastics;
 - Support the implementation, or the design of new, coherent monitoring schemes at the scale of regional sea-basins, using common protocols for assessing the contributions of different sources of pollution and their resulting impacts on the health of marine ecosystems and on related ecosystem services delivered in close cooperation with relevant Regional Seas Conventions and Action Plans.
- ▶ **Increase « targeted » observation and knowledge** on different types and sources of pollution, with:
 - Adequate funding for monitoring, observation and research;
 - Supporting the involvement of citizens in the observation and reporting of the level and sources of pollutions (e.g. plastics on the beach, in tributary rivers etc.), via e.g. citizens' science initiatives and projects;
 - Supporting research in monitoring micro-plastics and assessing their ecological, economic and social (long-term) impacts.
- ▶ Share **good practice** in instruments and solutions that can help reduce polluting discharges to ecosystems, e.g. examples of integrated policies and agreements throughout value chains, taxes/economic instruments targeting sources of pollution (e.g. plastic use, shipping emissions and waste, use of contaminants) and incentives "not to pollute":
 - Support the development of sound assessments of costs and benefits of such practices building on indigenous and local knowledge and assessing social impacts, demonstrating their added value under specific conditions.
- ▶ Support **innovation**:
 - In the design of plastic products making e.g. recycled plastics "interesting", involving industry in their co-design to strengthen the re-orientation of the industry's business models to expand production of re-usable plastics and recycling used plastics;
- ▶ With the development and testing of **new business models** that look into life-cycle approaches and account for repair/reuse/resource use, making sure business models cover the spectrum from small scale to large;
- ▶ Supporting the development of "**real alternatives**" to plastics and use of polluting products, i.e. alternatives that are cost efficient, functional, and environmentally friendly, supporting R&D and developing collaboration with innovative industry actors.
- ▶ **Raise awareness** for all, targeting all actors of the "pollution chain" from land to sea on the impact of their actions/investments on the functioning of marine ecosystems, and on possible solutions for reducing impacts.



CONSERVATION AND SUSTAINABLE USE OF MARINE BIODIVERSITY

Rationale

Progress in marine biodiversity conservation and sustainable use requires an international ocean governance framework that supports coordinated action (e.g. under current global negotiations for the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (UNGA 72/249) and the post-2020 Global biodiversity Framework to be adopted in 2021, towards ambitious global goals (e.g. as under the proposed MPA target of at least 30% by 2030). Global and regional institutions empowered through the commitment of States and supported by effective and science-based working groups are needed to agree on measures and take action towards these goals. Coordinating measures and other governance mechanisms will require a broad strategic plan and objectives for entire sea basins, implemented through effective cross-sectoral governance arrangements. At the same time, it will also be important to ensure coordination between spatial and non-spatial measures in entire ocean-basins (i.e. there is a need to build capacity, share information and build bridges between those responsible for measures and with other marine sectoral global and regional organisations (fisheries, maritime transport, etc.))

Objectives

The main objective is to empower institutions in designing and implementing complementary and consistent measures that contribute to the conservation and sustainable use of marine biodiversity and to the achievement of global goals.

Potential actions

- ▶ Support the development of multi-stakeholder **strategic approaches/visions/management plans for entire sea-basins** through competent regional organisations and their parties back-up;
- ▶ Lead global efforts with competent organisations on the expansion of ecologically **coherent and well-managed networks of marine protected areas (MPAs)** in line with the targets to be contained in the post-2020 Global Biodiversity Framework, including a sufficiently large proportion of areas that are under strict protection, highly or fully protected;
- ▶ Build global capacity and underpin scientific assessments for identifying **valuable ecological areas for conservation** (e.g. support science funding in the global south) including within and beyond national jurisdiction, reflecting on conservation outcomes in relation to needs of (local/coastal) communities (in their diversity), whose livelihoods are linked to the set conservation objectives;
- ▶ In support of the UN Decade on Ecosystem Restoration, launch a **global initiative with the aim to prevent, halt and reverse the degradation of marine ecosystems** through capacity building and funding programmes for targeted restoration programmes, and advocating for a “zero degradation” mainstreaming approach in sectoral management organisation;
- ▶ Facilitate collective arrangements and Memoranda of Understanding between and among competent management organisations (e.g. conservation, fisheries, shipping, deep sea mining, etc.) and States to coordinate and create **complementary spatial and non-spatial management plans and measures** for entire sea basins to enhance and restore marine biodiversity as well as ecological connectivity, within and between identified valuable ecological areas, including migratory and other ecosystem connectivity pathways and create conditions for sustainable use;
- ▶ Support the application of **integrated planning tools such as Integrated Coastal Zone Management (ICZM) and Marine Spatial Planning (MSP)**, Strategic Environment and Impact Assessments (SEA/SIA) and Regional Environmental Assessments (REAs) which facilitate inclusive and equitable decision making through supporting national, regional and global initiatives;
- ▶ Support the creation **a global clearing house mechanism/data repository** to collate information on State and sector activities, including planned activities;
- ▶ Create a regular review mechanism/process of management and conservation measures at appropriate scales through competent organisations to **assess progress** towards global goals such as the SDGs and post-2020 Global Biodiversity Framework and allow for feedback loops and adaptation of management.
- ▶ Foster the effective implementation of the International Ballast Water Management Convention e.g. by supporting the development of regional strategies **to reduce the risk of of transfer of harmful aquatic organisms and pathogens** and developing early warning systems to reduce the risk of transfer of harmful species;
- ▶ Promote the integration of **natural capital** and financial and non-financial **ecosystem services valuation in decision making**, e.g. in the context of the development of a regulatory regime for deep-seabed mining under the International Seabed Authority.



A SUSTAINABLE BLUE ECONOMY

Rationale

Despite initiatives supporting blue economy projects with zero or limited impacts on marine ecosystems, and the uptake of improved management practices in some sectors, pressures on marine ecosystems by blue economy sectors remain significant. In some cases, this results from so-called harmful subsidies that support unsustainable practices and investments, partially offsetting the ecological and societal benefits gained by sustainable projects. At the same time, the significant differences in the environmental and social standards applied to blue economy sectors between countries and regions limit the potential for these standards to drive sectors' practice globally in coherence with sustainability. As blue economy sectors are expected to significantly grow in the future (as a result of more drastic application of environmental norms inland, new opportunities offered by the ocean space, etc.), ensuring the sustainability of the blue economy sectors is an essential pre-requisite to the long-term protection of marine ecosystems, to the sustainable delivery of the ecosystem services the ocean provides (e.g. food, health, climate regulation...) and to seizing development opportunities offered by the ocean without (significant) additional costs that would result from their degradation. Experience shows that progress can still be achieved with the sound application of *ex-ante* assessments of projects and investments (including Strategic Environmental Assessment) accounting for impacts on marine ecosystem, on the services these ecosystem services deliver and on social/societal impacts. At the same time, with many blue economy value chains being global, blue economy sectors (e.g. fisheries, shipping...) are confronted with fierce competition. This makes the application of sustainable practices (related to decarbonisation, zero pollution, circularity and biodiversity protection) that is enforced by a few countries only very challenging in light of competitiveness issues.

Objectives

The main objective is to support the development of Blue economy projects and initiatives that support or respect the functioning of marine ecosystems and the protection of marine biodiversity, seizing in particular opportunities offered by existing instruments and partnerships such as the Horizon Europe partnership *A climate neutral, sustainable and productive Blue Economy*.

Potential activities

Potential actions include:

- ▶ Support the **sound application of Strategic Environmental Assessments** (in line with the UNEP environmental assessment principles and guidelines) & ex-ante assessments of blue economy projects and investments by:
 - Strengthening **capacity** among relevant (private and public) stakeholders that are requesting, carrying out, using and scrutinizing ex-ante assessments;
 - Developing and giving public access to **best available knowledge** on ecological, social and economic implications of proposed projects and investments, enhancing in particular the understanding of trade-offs (including full-cost accounting and inter-generational implications) of blue economy projects and strategies;
 - Supporting the **sharing of experiences and practice** (benchmarking) on the application of ex-ante assessments, and in particular on methods and tools applied for assessing (long-term) impacts on the health of marine ecosystems, on ecosystem services delivered, on social groups benefiting from these ecosystems/services and on the resilience of territories connected to these ecosystems;
 - Enhancing **transparency in the use of ex-ante assessments** for supporting decisions (including in terms of financing by public and international bodies), in particular experiences where assessments have helped refining projects to significantly reduce negative potential impacts; and,
 - Support the development of **blue economy strategies at the scale of sea-basins and/or large marine ecosystems** that build on: (a) the establishment of open stakeholder processes (accounting for governance and processes that are already set); and, (b) the use of best knowledge for assessing ecological, social and economic impacts & trade-offs of different (alternative) scenarios, building on natural capital accounting/values of ecosystem services/resilience frameworks. These can then help identifying "best sites for blue economy development" and guide private and public investments & financing in regional seas.
- ▶ Promote the worldwide application of **common environmental and social standards** for blue economy sectors to deliver sustainability:
 - **Sharing experiences** in the setting up, implementation, monitoring and enforcement of standards for different blue economy sectors that can drive decarbonisation, zero pollution, circularity and biodiversity protection, the implementation of International Labour Organisation (ILO) conventions, etc.;
 - Promoting the establishment of common standards in various **international fora** regulating activities at sea (e.g. RFMO, IMO, etc); and,
 - Supporting countries with limited capacity and resources in the adoption and practical implementation of such standards.
- ▶ Support States and competent international organisations in **evaluating and reducing CO2 emission of maritime activities** (e.g. from fishing, shipping, offshore energy, cables, bioprospecting, research), in particular for:
 - Activities that are experiencing significant development in different regional sea-basins/world wide; and,
 - New activities (such as deep-sea mining) that are emerging and not yet representing a threat to marine ecosystems.
- ▶ Mobilise the **private sector for contributing to the restoration and protection of marine ecosystems**
 - **Develop innovative private partnerships** that can support the restoration of marine ecosystems via the co-building of projects that internalise marine ecosystem protections and account for the ocean-climate nexus;
 - Support the development of nature-based solutions that deliver services that have value for blue economy sectors;
 - Strengthen the consideration given to ocean ecosystems in the Corporate Social and Environmental Responsibility of companies (support pilot test cases, contribute to benchmarking, sharing of "good practice"...);
 - Make best use of liability and compensation schemes (e.g. as set under the London Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter), and of revenues from (economic/financial) instruments complying with the polluter-pays principle, for supporting the restoration of (priority) marine ecosystems; and,
 - Support companies in **aligning their strategies with the SDGs** and in measuring and managing their effective contributions to the achievement of SDGs.
- ▶ Support sustainable blue economy projects that benefit **local communities and fragile social groups**, supporting decent living and working conditions;
- ▶ Support the development of a **set of conditions** around science & knowledge gaps, governance, social license & promoting a circular economy that can be used as guidance for evaluating the rational and relevance of blue economy projects (including emerging sectors like deep-sea mining) in light of its contribution to marine ecosystem health and to societal objectives.



SUSTAINABLE SEAFOOD

Rationale

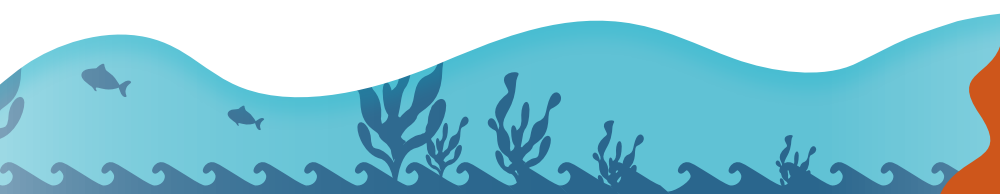
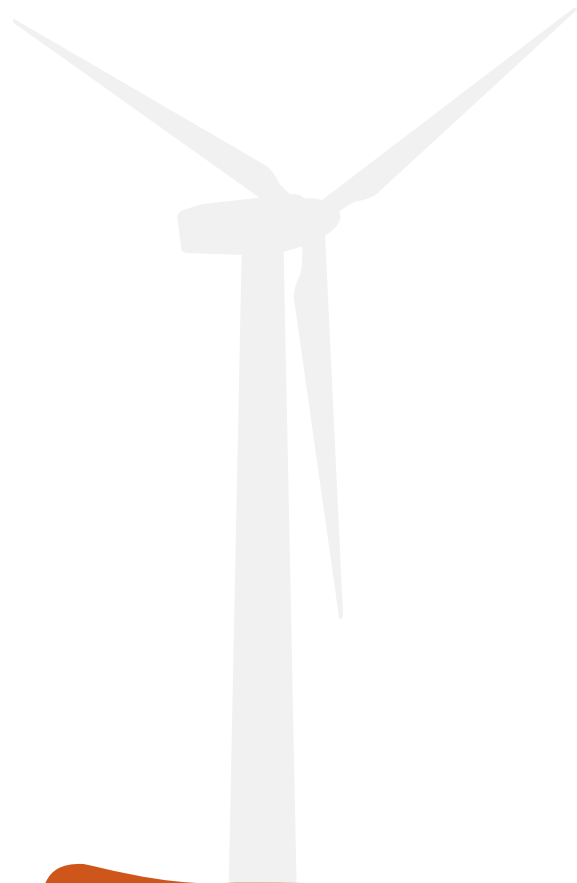
Marine ecosystems are under many pressures directly and indirectly affecting fish populations and their development. Overfishing, destructive fishing practices, inadequate fisheries management rules and illegal unreported and unregulated fishing are among the factors explaining why around 30% of fish stocks are fished at a biologically unsustainable level. The current high level of overexploited and depleted fish stocks has impacts beyond targeted fish species on the wider ocean ecosystem, leading to an altered ecosystem and food chain functioning, impacting *inter alia* local coastal populations dependant on these ecosystems. Regional Fisheries Management Organisations (RFMOs) have delivered improvements for some marine ecosystems and species. However, they have not been established everywhere and do not cover all fish stock or commercial species.

Objectives

The objective is to ensure the balance between fishing/aquaculture activities, as a source of subsistence for many communities and of development for major economic actors worldwide, with the protection of biodiversity and fish/seafood stocks and habitats. It addresses issues such as overfishing, illegal, unreported and unregulated (IUU) fishing as well as related exploitative practices such as labour exploitation and identifies ways to secure links between biodiversity conservation and fishing practices.

Potential actions

- ▶ **Strengthen RFMOs in the effective and sustainable management of fisheries** achieving biologically sustainable levels of exploitation of fish resources, by e.g.:
 - **Supporting changes in management and decision-making processes** to enhance transparency and strengthen knowledge-based decision-making;
 - Support RFMOs in **integrating ecosystem-based approaches** into the management of fisheries – widening their mandate to cover non-mandatory fish and habitats (e.g. including non-mandatory species into monitoring and assessments of the state of fish resources) , supporting collaboration/combined (management) activities/dedicated governance for strengthening synergies between RFMOs and RSC (when these exist)
 - Develop open and shared **methodologies for predictive fish stock assessment** in a context of human pressures and climate change based on science and modelling, across regions and sea basins (to assess moving fish stocks, impact of over-fishing, impact of ocean environment changes on reproduction and possible depletion, benefits from policies implementation);
 - Developing closer cooperation between the UNFCCC, relevant Multilateral Environmental Agreements (Convention on International Trade in Endangered Species (CITES), Convention on the Conservation of Migratory Species of Wild Animals (CMS), etc.) and regional organizations (RFMOs and RSCs) to address changes in the marine environment due to climate change such as **moving fish stocks**. To ensure that this knowledge is shared with all parties and integrated into fisheries management rules;
 - **Improving Collaboration, synergies and responsibilities between (fisheries and environment/nature protection) and labour ministries** at national levels (with e.g. total allowable catches being discussed and defined accounting for environmental/scientific knowledge on the impacts of fisheries provided by environment ministry/bodies, with the allocation of quota, gears, etc. being the competence of fisheries ministry).
 - Strengthen the integration of the social and ecological dimensions of fisheries in the **Common Fisheries Policy**, via support to, and sharing of, dedicated research and studies (at the regional sea level or at scale of ecosystems relevant to most threatened fish populations), the establishment of mechanisms for bringing up local knowledge, etc
 - Training RFMOs personnel to **perform ocean conservation** work when needed and when contributing to restoring fish stocks and threatened/destroyed habitats.
- ▶ **Support the implementation of existing instruments** that can drive sustainable practice and management, including:
 - Supporting individual countries/groups of countries sharing regional seas in preventing and prosecuting **illegal, unreported and unregulated (IUU) fishing**:
 - capacity building, deployment of innovative technologies, collective initiatives for preventing, monitoring and prosecuting...
 - Pursuing more forcefully WTO negotiations to **end harmful subsidies with regards to IUU fishing** (in line with SDG 14.6), and fully realigning the European Maritime and Fisheries Fund in order to avoid harmful subsidies as well;
 - **Enhancing the implementation of the Port state measures agreement (PSMA)**, through training in relation to inspectors and operators; monitoring; control and surveillance systems; setting specific conditionalities in funding by including the clause of sustainable fisheries in agreements and partnerships with the EU;
 - Supporting effective application of **harmonized technical guidelines and/or regulations** regarding what information to collect during the inspection process, in order to prosecute when IUU fishing is detected;
 - Supporting partnerships and agreements associating different (flag, riparian) states for the effective and swift prosecution for a violation committed in international waters;
 - Developing tailored solutions to address IUU fishing accounting for different fisheries also taking into account the labour rights situation (e.g. small scale and community fisheries versus industrial and long-distance fisheries, domestic or high seas fishing) – support the sharing of practice on prevention and prosecution among (national, regional) bodies in charge of IUU;
 - Implementing and enforcing regulations for reducing and halting unsustainable practices (such as bottom trawling electric shock fishing). Pursue the improvement of gear selectivity for minimising by-catch and discard rates of targeted and non-targeted species; and,
 - Supporting a **comprehensive and balanced analysis of the CO₂/Carbon implications of fisheries** capturing their positive (as a low-carbon source of food) as well as **negative** (as potential contributor to the destruction of marine ecosystems that store CO₂ via harmful fishing practices) contributions to carbon balances.
- ▶ Develop incentives that support behaviours and practices which contribute to the protection of biodiversity while ensuring safe and fair work standards in the sector:
 - e.g. subsidies that might compensate for a short-term loss of revenue;
 - Novel instruments and contractual arrangements such as “payments for ecosystem services” delivered;
 - Value chain agreements that promote sustainable practice.
- ▶ Support the **development of low-trophic level aquaculture** that can contribute to the diversification of seafood and the production of protein, while reducing Green House Gas (GHG) emissions and other environmental pressures.



#EUOcean #IOGforum



EU-Ocean-Governance-Forum@ec.europa.eu



<https://webgate.ec.europa.eu/maritimeforum/en/frontpage/1469>