



EU International Ocean Governance Forum



THEMATIC WORKING GROUP 3

STRENGTHENING INTERNATIONAL OCEAN RESEARCH, DATA AND KNOWLEDGE

This thematic working group 3 (TWG3) will focus on how the EU can provide leadership to further advance the role of science and knowledge in international ocean governance, particularly within the framework of the upcoming UN Decade of Ocean Science for Sustainable Development (2021–2030). Improving ocean knowledge through research, innovation and observations/data is crucial for supporting sustainable decisions and actions in tackling threats to ocean health and their cumulative impacts. The management and use of marine resources under a changing climate must be based on sound scientific knowledge and data to facilitate the development of a sustainable blue economy. Strong international cooperation is needed to fully benefit from the opportunities provided by an ocean knowledge base that is reliable, accessible, and transparent. The TWG will cover topics such as supporting ocean research, strengthening ocean observation systems—connected to ongoing earth systems—strengthening, gathering, management and access to data frameworks and sharing (FAIR principles), research alliances, and the ocean science-policy interface to support the sustainable realization of the blue economy potential. Strengthening international ocean research, data and knowledge will support and has links with topics covered in the other TWGs of the International Ocean Governance Forum. The topics below have been identified as important for strengthening the international ocean knowledge system and supporting the implementation of the UN 2030 Agenda and its 17 Sustainable Development Goals (SDGs) as well as the European Commission's Green Deal:

► Improved Ocean Science-Policy Interface →

A strategic and comprehensive approach to translate and embed marine scientific knowledge and data into policy measures is essential for the achievement of the SDGs, the prevention of the transgressions of Planetary Boundaries, the European Commission's Green Deal and many other policy measures. Key issues to be addressed include 1) how to make knowledge more purposeful to decision making; 2) how to strengthen citizen engagement and ocean literacy among decision makers and feed it into narratives that resonate with decision makers. The uptake of the ocean-climate nexus in the Paris agreement implementation process and the UNFCCC negotiations and the recommendations of the IPCC and IPBES reports as well as developments and needs for incorporat-

ing ocean observations and science into the UN World Ocean Assessment process can also be discussed as well as the work in the G7 Future of Seas and Oceans initiative. The TWG will also discuss the need for increased and improved ocean science-policy cooperation with scientific bodies for capacity building and potentially implementing new global agreements (e.g. the potential role of regional and global institutions such as IOC-UNESCO in the implementation of a new legal agreement on biological diversity beyond national jurisdiction).

► **Supporting Ocean Research** → Ocean research and technological developments are one of the keys for successful ocean governance. The upcoming UN Decade of Ocean Science for Sustainable Development (2021–2030) provides a huge opportunity for the marine scientific community to come together to create synergies, partnerships and interfaces to contribute to strengthening international ocean research and data for decision making. A shift in the way marine science is carried out and taken up by decision and policy makers will be imperative and should involve co-creation and transdisciplinary approaches leading to the provision of more solid knowledge to support decision making and to measure progress towards the implementation of the SDGs, including SDG14 'Life Below Water' and others linked to the health of the ocean. Healthy Oceans, Seas and Inland Waters have been prioritized by the EU as one of five 'mission areas for the upcoming Horizon Europe (the EU's Research Framework Programme starting in 2021). It will be important to ensure funding for ocean research is also directed towards improving knowledge to support ocean governance. The TWG will discuss the role of the EU in the framework of the Ocean Decade, prevention of the transgression of Planetary Boundaries and Climate change to provide leadership in the role of science and its uptake in international ocean governance.

► Strengthening Ocean Observations →

The UN 2030 Agenda, the adaptation and mitigation of climate change impact, the prevention of the transgression of Planetary Boundaries and the achievement of the SDGs will require a strategic approach to ocean observing. This must be supported by appropriate infrastructure and investments and a coordinated effort by the ocean observation communities to provide knowledge and capacity to measure

progress. Ocean observations currently predominantly include physical, biogeochemical and biological observations. The inclusion of human activities should be discussed. A globally coordinated ocean observing system that is sustainable, effectively linked to policy demands and better integrated is pivotal to assessing ocean trends, to make predictions, and to create knowledge to inform decision makers. The Global Ocean Observing System (GOOS) is continually advancing but challenges remain in standardized measurements, scientific and technical innovations, FAIR (findable, accessible, interoperable, and reusable) data access and management, financial commitments, capacity development, and technology transfer. The Frameworks of GEO/GEOSS/Blue Planet and the G7 Future of the Seas and Oceans initiative provide platforms for multi-lateral cooperation on observations and data. The EU has supported the advancement for ocean observations in globally relevant European ocean observation coordination efforts including the AtlantOS and EuroSea projects, the AtlantOS programme and the OceanObs19 conference, among others, and by supporting the further development of the planned European Ocean Observing System (EOOS) initiative and of Euro-GEOSS. Projects like SeaData-net and the Blue Cloud initiative bring new ways for data management. The possible improvements of ocean observations and data handling in Europe, and the continued support of GOOS globally and by the EU can/will be discussed by the TWG.

► Improving Research Alliances →

The 2013 Galway statement (Atlantic Ocean Research Alliance, AORA), the 2017 Belém statement and other cooperation agreements have led to the All Atlantic Ocean Research Alliance, which strengthens marine research cooperation between the EU and the USA, Canada, Brazil, South Africa, Argentina and Cabo Verde. Other partnerships including between the EU-China partnership, BlackSea Connect, BlueMed and Banos are also relevant and enable international collaboration on research priority setting and advancing research and scientific knowledge. Mobilizing existing alliances, creating new ones, and ensuring their focus includes social science and economics is needed to support the societal outcomes of the Ocean Decade and the implementation of the SDGs.



► **Supporting Data Frameworks** → Ocean data collection, use, access, sharing and compatibility of data platforms need to be improved to enable knowledge deployment to sustainably manage ocean resources on an international level in order to work towards the UN 2030 Agenda. This is one of the priorities of the Ocean Decade and is highlighted in the Galway and Belém statements. The contribution of the European Open Science Cloud (EOSC) and the Pilot Blue Cloud to a proposed global ocean data portal as well as the ground work for the Digital Ocean can be discussed as well as existing e-infrastructures such as the European Marine Observation and Data Network (EMOD-net) and data service providers including Copernicus Marine Environmental Monitoring System (CMEMS). Innovative Big Data initiatives such as Global Fishing Watch are already transforming the transparency and accessibility of data on IUU fishing. A number of global monitoring or observation programmes such as ARGOS effectively and the IODE of IOC share data globally. Steps to increase and support the development

of such programs on a global level can be discussed by the TWG.

How will TWG3 operate?

Members of the TWG are selected on the basis of their expertise and are invited to participate in their personal capacity (i.e. not as representative of institutions or stakeholder groups, Chatham-house rules will apply during the discussions). TWG3 members will be invited to participate in 1–2 working group meetings per year, including the first IOG Forum in Brussels, 22–24 April 2020. Additional exchanges that might be required will be organized through web conference meetings to reduce the burden of travel.

TWG3 will produce a report on possible options for strengthening the international ocean governance framework that will be presented and discussed at a forthcoming IOG Forum. This report will identify key challenges to be addressed, identify possible solutions as well as conditions for their effective implementation, and put forward options for the EU how to best support

global efforts and improve the coordination of ocean observations (including coastal observations and monitoring) and ocean data handling in the EU. The recommendations will inform the further development of the EU's IOG Agenda. TWG3 members will provide their expertise and contribute to written outputs of the TWG, including through short written contributions, comments and reviews, linking to and ensuring consistency with TWG 1 and 2. The final responsibility for drafting the reports and discussion papers lies with the TWG3 Secretariat.

Whilst TWG3 will focus on the issues outlined above and/or other issues to be agreed by the TWG, it will also address transversal issues in close cooperation with the other TWGs, in particular dealing with the implementation of the 2030 Agenda, including partnerships and (cross-sectoral) cooperation; capacity building, drivers to accelerate action; innovative financing; and building an effective knowledge base to support decision ■



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