

Technical Expert Group (TEG) on Data for MSP workshop:

From conceptual development to application

3 June 2026

Brussels / Hybrid

1. Executive Summary

The **TEG on Data for Maritime Spatial Planning (MSP) Workshop: From Conceptual Development to Application** showcased how six years of work by the Technical Expert Group (TEG) has evolved from the development of data standards and conceptual frameworks into **practical tools that support Maritime Spatial Planning (MSP), monitoring, evaluation and decision-making** across Europe. The workshop highlighted the growing importance of **harmonised marine data, interoperability, data governance and evidence-based planning** in supporting the implementation of the MSP Directive and future policy developments.

A key message throughout the workshop was that **data quality matters as much as data availability**. Presentations demonstrated how differences in data coverage, completeness and accuracy can significantly influence planning outcomes. The **MSP Input Data Module**, developed through the ReMAP project, was presented as a practical tool for assessing the relevance, transparency, quality and spatial-temporal coverage of datasets used in MSP processes. Participants stressed the need to better understand **uncertainty and robustness** in planning and modelling, particularly when supporting future-oriented decisions.

The workshop also presented the **MSP Data Framework 2.0**, an evolution of the original framework developed by the TEG. The new version introduces a more structured approach to organising MSP information through clusters, classification systems, elements and dataset types. An interactive online explorer was demonstrated, providing a collaborative platform for visualising and managing MSP-related data. This development represents an important step towards **greater consistency, interoperability and reuse of MSP information across Europe**.

Several presentations highlighted emerging tools and initiatives supporting **data-driven and climate-smart MSP**. UNESCO-IOC introduced new MSPglobal toolboxes and training resources, while Copernicus Marine showcased how ocean observations, climate indicators and Digital Twin of the Ocean technologies can support planning and decision-making. Work on improving the visualisation of harmonised European MSP datasets was also presented, further strengthening accessibility and usability of MSP information.

The socio-economic session demonstrated the increasing integration of **economic, social and governance considerations** into MSP. Presentations explored the impacts of offshore wind development on fisheries, economic assessment methodologies, poverty and gender considerations, and approaches for monitoring ocean economies. These contributions highlighted the need for MSP to address not only environmental objectives but also broader societal and economic outcomes.

Overall, the workshop highlighted that the TEG has successfully moved from conceptual development towards the delivery of **operational tools and practical applications**. Participants agreed that future efforts should focus on improving data quality and interoperability, strengthening socio-economic and governance dimensions, and fostering collaboration between planners, scientists, policymakers and data providers. **Reliable, harmonised and accessible marine data remain fundamental for adaptive, evidence-based and sustainable maritime spatial planning.**

2. Workshop Summary

1. Welcome and Opening Remarks

The workshop was opened by **Anja Detant (CINEA)**, who welcomed participants attending both in person and online. She reflected on the evolution of the Technical Expert Group (TEG) on Data for Maritime Spatial Planning over the past six years, noting how it has become an **established and recognised forum for the exchange of expertise on MSP data**. She highlighted the group's contribution to addressing key challenges related to **marine data collection, assessment, standards, harmonisation, interoperability, and governance**. She emphasised that these challenges remain highly relevant in light of the findings of the European Commission's second implementation report on the MSP Directive, which identified persistent issues related to **data fragmentation and the lack of harmonised information across Member States**.

She also outlined the wider policy context in which the TEG operates. She referred to the increasing political attention being given to **marine data and ocean observation**, including developments related to the newly announced **Ocean Eye initiative and the forthcoming Ocean Act**. She stressed that **better integration of environmental monitoring and marine data into maritime spatial planning will be essential** to support climate adaptation, biodiversity restoration, regional cooperation and adaptive planning. In this context, she confirmed the continued support of **CINEA and DG MARE** for the work of the TEG and encouraged participants to continue collaborating with organisations such as UNESCO-IOC, EMODnet and regional sea basin initiatives.

2. TEG Achievements and Developments (2020–2026)

José Luis Santiago provided an overview of the achievements of the Technical Expert Group since its establishment in 2020. He explained that the initial objective of the group was to support the implementation of Maritime Spatial Planning in Europe through **improved data management solutions**. Over time, the work evolved from the development of harmonised standards and concepts towards the creation of **practical tools and applications capable of supporting planning, monitoring and evaluation activities**.

Particular attention was given to the development of a **harmonised MSP data model** based on earlier initiatives from the Baltic Sea and Macaronesia regions. Through collaboration with **EMODnet and adherence to INSPIRE principles**, these efforts resulted in a **common framework that now allows MSP data from different European sea basins to be accessed and analysed in a consistent manner**. José highlighted that this work laid the foundation for many of the more advanced tools developed later under the ReMAP project and other initiatives.

The presentation also reviewed developments achieved during the second and third cycles of the TEG. These included the **MSP Data Framework, metadata standards, socio-economic guidance, and work on synergies between the MSP Directive and the Marine Strategy Framework Directive**. José further outlined the activities of several active subgroups addressing **Digital Twin of the Ocean, MSP data spaces, controlled vocabularies, socio-economic assessment, and MSP-MSFD integration**. He concluded by emphasising the **growing international recognition of the TEG** and its extensive collaborations with UNESCO-IOC, EMODnet, Copernicus Marine Service, the Greater North Sea Basin Initiative and other European and international partners.

3. MSP Input Data Module

Andrej Abramic presented the **MSP Input Data Module** developed under the ReMAP project as a practical implementation of the MSP Data Framework. The module was designed to support **systematic assessment of the datasets used during maritime spatial planning processes**. It evaluates data according to four main criteria:

- **Relevance and application**
- **Transparency and FAIR principles**
- **Spatial and temporal coverage**
- **Data quality and consistency**

The objective is to provide planners with a **clearer understanding of the strengths and weaknesses of the information used in planning processes**.

The presentation demonstrated how the module uses the seven MSP Data Framework clusters to assess datasets through a structured matrix approach. Andrej explained that the tool can **identify data gaps, reveal datasets that are available but not currently used, and support the design of future monitoring programmes and surveys**. He illustrated the approach using comparative case studies from the Canary Islands and Madeira, showing how differences in data coverage and quality can lead to **different planning outcomes and varying levels of confidence in suitability assessments**.

A substantial discussion followed the presentation. Participants debated whether **greater quantities of data necessarily result in more robust planning outcomes** and highlighted the importance of considering **uncertainty and robustness rather than simply measuring data availability**. Questions were raised regarding the role of stakeholders in conducting assessments, the integration of future scenarios and modelling exercises, and the extent to which the tool could support adaptive planning. The discussion concluded that **understanding the quality and limitations of input data is essential for improving the reliability of modelling outputs and planning decisions**.

4. MSP Data Framework 2.0

Sara Sottoriva and Luca Fucci introduced the **MSP Data Framework 2.0**, which builds upon the original framework developed by the TEG. The revised framework seeks to provide a **more structured and operational approach to organising MSP-relevant information**. It introduces **clearer definitions of clusters, classification systems, elements and dataset types**, creating a hierarchical structure that can accommodate both spatial and non-spatial information. The framework currently consists of **eight clusters, including a new ecosystem services cluster** that remains under development and review.

The presenters explained how the framework integrates existing classification systems, including those derived from the Marine Strategy Framework Directive, INSPIRE and other recognised standards, while also introducing custom classifications where necessary. The new structure **improves consistency in the organisation of data and facilitates interoperability between different MSP initiatives**. Particular emphasis was placed on the concept of dataset types, which provide a flexible way of describing how information is represented and can be linked across multiple clusters.

Luca Fucci then demonstrated the **MSP Data Framework Explorer**, an online interactive platform developed to visualise and manage the framework. The tool allows users to navigate the hierarchy, search for concepts, explore relationships, and export information for further analysis. The platform also includes editing functionalities that allow authorised users to collaboratively refine and expand the framework. The presenters concluded that the framework is intended to remain **flexible, modular and adaptable while preserving a common European structure**.

5. MSPglobal Tools and Capacity Building

Annette Scheffer presented recent developments under UNESCO-IOC's MSPglobal initiative. The presentation focused on the development of **practical toolboxes and training materials designed to strengthen data-driven MSP worldwide**. Particular attention was given to the new toolbox addressing the use of **Cumulative Impact Assessment (CIA)** in MSP and the accompanying training resources being developed in collaboration with the OceanTeacher Global Academy.

The presentation highlighted the importance of **combining technical guidance with capacity-building activities**. The MSPglobal resources aim to support practitioners in understanding data requirements, methodological approaches and analytical frameworks while also providing practical examples and step-by-step guidance. Participants welcomed the **integration of TEG outputs and ReMAP tools into international capacity-building efforts**.

6. Copernicus Marine Data for Climate-Smart MSP

Françoise Meyer presented the role of **Copernicus Marine Service products in supporting climate-smart maritime spatial planning**. She demonstrated how **long-term historical datasets and Ocean Monitoring Indicators** can help planners understand environmental trends and anticipate future changes. These datasets provide valuable information for assessing **climate impacts, ecosystem changes and the long-term sustainability of marine activities**.

The presentation also showcased tools that facilitate access to Copernicus data through GIS platforms such as QGIS. Examples were provided illustrating how these datasets can be integrated into planning processes and used to support **evidence-based decision-making**. Finally, Françoise introduced the opportunities offered by the **European Digital Twin of the Ocean (EDITO) platform**, highlighting its potential as a collaborative environment where stakeholders can access, visualise and analyse marine data in support of MSP initiatives.

7. EU MSP Data Layer – SLD Development

José Luis Santiago and Hugo Regalado Fraile presented ongoing work aimed at improving the visualisation of harmonised European MSP data through the use of **Styled Layer Descriptors (SLDs)**. The work builds upon earlier harmonisation efforts and seeks to improve the **consistency and readability of MSP data across different platforms and applications**.

The presenters stressed that **effective visualisation is critical for communicating planning information to both technical experts and decision-makers** and that **standardised approaches can enhance interoperability and user understanding**.

8. Socio-Economic Session

This session focused on the **socio-economic dimensions of MSP**.

- Andrea Rivas Navarro highlighted the importance of **integrating socio-economic considerations into planning processes from an early stage**, particularly regarding offshore wind and fisheries.
- Monica Gambino demonstrated how **multi-regional input-output frameworks can support policy evaluation**, showing that **regional economic structures strongly influence planning outcomes**.
- Wilhelm Gårdmark presented a framework for integrating **poverty and gender considerations into MSP**, emphasising that MSP should contribute to **broader social objectives alongside environmental and economic goals**.
- Niall Flynn outlined Ireland's work on measuring and monitoring the ocean economy and stressed the value of **more spatially detailed socio-economic information for governance and future maritime plans**.

9. Conclusions

The workshop demonstrated the significant progress made by the TEG in translating conceptual developments into **practical tools and operational applications**. Across all presentations, a common theme emerged: the need for **harmonised, accessible and robust data to support evidence-based maritime spatial planning**.

Participants agreed that **improving data quality, interoperability and transparency remain fundamental** to addressing increasingly complex planning challenges.

The discussions also highlighted the growing importance of **integrating socio-economic information, governance considerations and uncertainty assessments into MSP processes**. The tools and methodologies presented during the workshop illustrated how planning can move beyond data collection towards **systematic evaluation, monitoring and adaptive management**.

Participants recognised the value of **continued collaboration between planners, scientists, policymakers and data providers** to further strengthen the European MSP knowledge base.

The workshop concluded with thanks to all speakers and participants. The TEG reaffirmed its commitment to supporting the development of **innovative data-driven approaches that can enhance maritime spatial planning across Europe and contribute to future policy developments under the Ocean Act and related initiatives**.