

Institute: IHCantabria

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FPCUP Action 2021-2-47: Report on the third cycle of interaction with national users.

Country: Spain

Event Date: 15th October 2024

Format: Online round table session within the Copernicus AAMM Event

Institutions Involved: IHCantabria, Puertos del Estado, MAPA (Secretaría General de Pesca), Instituto Español de Oceanografía (IEO), Instituto Nacional de Técnica Aeroespacial (INTA), Mercator Ocean International (Copernicus Marine Service - CMEMS)

Participants: 206 online attendees; 6 institutional representatives

INTRODUCTION

As part of the 2021-2-47 action on “Coastal coordination of user needs and methodologies,” the third cycle of interaction with national stakeholders in Spain was conducted through a targeted round-table discussion during the Copernicus AAMM event held on 15 October 2024 (cf., <https://copernicusaamm.ihcantabria.com/las-jornadas/>). This session built upon the previous interaction cycles, aiming to further explore user needs in relation to marine information services and to assess the relevance and uptake of Copernicus Marine Service (CMEMS) products.

The round-table session, entitled “Copernicus Marine Services: Needs and Opportunities,” brought together key institutions from the fisheries, aquaculture, marine conservation, infrastructure, and research sectors. The discussion was moderated by IHCantabria, with participation from 206 online attendees. It gathered national stakeholders from key marine-related institutions:

- Puertos del Estado (Begoña Pérez)
- Ministerio de Agricultura, Pesca y Alimentación – MAPA: Fisheries, Aquaculture and Marine Reserves (Juan Carlos Jorquera and Raquel López)
- Instituto Español de Oceanografía (IEO) (José Manuel González)
- INTA (Eduardo de Miguel)
- Mercator Ocean International / CMEMS (Valentina Giunta)

The goal was to identify the main data and service needs across sectors such as fisheries, aquaculture, conservation, ports and marine infrastructure, especially in relation to pollution control, climate change impacts, habitat monitoring and site selection. The round-table aimed to explore how the Copernicus Marine Service (CMEMS) could support those needs.

METHODOLOGY

The discussion was structured around four thematic blocks, derived from a previous stakeholder survey conducted in Spain:

1. Water Quality
2. Habitat characterisation
3. Climate Change Impacts
4. Optimal Site Selection

Each representative was asked targeted questions about the type of variables, data resolution, and temporal needs relevant to their sector. The CMEMS representative then responded to the needs expressed, highlighting current offerings and potential developments.

In addition, the session included a live Q&A segment with online participants, where cross-cutting issues such as data accessibility and training needs were raised.

SUMMARY OF KEY TOPICS DISCUSSED

Water Quality

Participants highlighted the importance of high-resolution data to assess pollution, eutrophication, and the presence of harmful algal blooms. Key variables discussed included temperature, salinity, dissolved oxygen, and chlorophyll. Stakeholders expressed concerns about gaps in nearshore monitoring and stressed the relevance of Copernicus products for early detection and preventive management.

Habitat characterisation

IEO and MAPA representatives underlined gaps in current information on species distribution and habitat mapping. Improved environmental descriptors and finer spatial resolution were identified as critical for effective fisheries management. While CMEMS data was considered relevant, its adaptation to local scales and calibration were recommended.

Climate Change Impacts

Speakers from Puertos del Estado and IEO addressed the need for climate projection data to assess the vulnerability of ports, fisheries, and ecosystems. Variables such as sea level rise, extreme events, and temperature trends were deemed essential. The integration of CMEMS data into infrastructure design and adaptive management strategies was highlighted as a major opportunity.

Optimal Site Selection

MAPA representatives detailed data needs for selecting suitable locations for aquaculture installations and marine protected areas. Key requirements included bathymetry, climatic variables, historical time series, and forecast scenarios. Participants emphasized the need for both short-term operational data and long-term projections.

THEMATIC AREA	INSTITUTIONAL CONTRIBUTION	USER NEEDS IDENTIFIED
Water Quality	Puertos del Estado, MAPA (Aquaculture)	Need for real-time and high-resolution data on pollutants, algal blooms, fish diseases, and eutrophication.
Habitat characterisation	IEO, MAPA (Marine Reserves)	Gaps in species distribution, habitat mapping, and availability of detailed environmental descriptors.
3. Climate Change Impacts	Puertos del Estado, IEO	Importance of short-, medium- and long-term projections for port infrastructure and fishery resource planning.
4. Optimal Site Selection	MAPA (Aquaculture & Marine Reserves)	Need for bathymetric data, climate variables, historical trends, and suitability indicators.

CMEMS CONTRIBUTIONS

Mercator Ocean International, representing CMEMS, responded directly to the issues raised, presenting the current portfolio of products and their applicability to each thematic area. Examples included:

- Real-time and historical datasets for water quality monitoring;
- Forecasting models relevant to aquaculture and fisheries;
- Marine heatwave and sea level trend indicators.

Stakeholders appreciated the growing accessibility of Copernicus services and noted the need to enhance local usability, particularly through downscaling and user training. The potential of Digital Twin Ocean (DTO) initiatives was also briefly acknowledged as a future step to enhance integration of Copernicus data with stakeholder needs.

ONLINE PARTICIPANT FEEDBACK AND CROSS-CUTTING THEMES

During the public Q&A, participants raised additional points:

- Data accessibility and platform usability;
- Temporal and spatial resolution requirements;
- The importance of capacity building to ensure effective uptake of Copernicus data.

The session demonstrated the added value of structured user engagement and the relevance of the Copernicus Marine Service to support evidence-based decision-making in coastal and marine planning.

CONCLUSION

This third cycle confirmed the relevance of Copernicus Marine Services for national stakeholders in Spain and helped refine the understanding of priority data needs for coastal and marine planning. The round-table format proved effective in fostering direct exchange, and the diversity of actors ensured a comprehensive view of sectoral requirements. Continued engagement and feedback loops will be essential to improve the usability and impact of Copernicus services. The feedback will also support the future development of tailored products, improved resolution, and the effective implementation of tools like the DTO within Spain's marine governance frameworks.

ACKNOELWDGMENT

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