

Copernicus Marine – Coastal Extension

February 2nd 2023 – EMODnet – CMEMS bilateral meeting



PROGRAMME OF
THE EUROPEAN UNION



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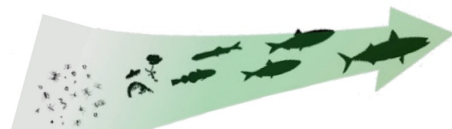
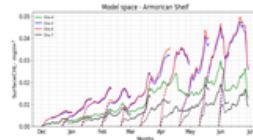
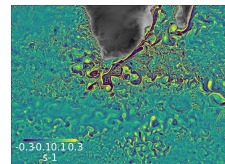
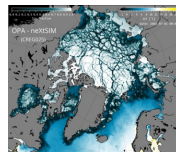


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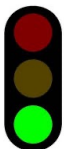
To better answer user needs, keep the service at the state-of-the-art and to meet the new ocean monitoring & forecasting challenges required by European policies and users

- Higher resolution and ensemble forecasts (enhanced continuity)
- Arctic (enhanced continuity)
- Coastal (new service)
- Marine biology (new service)



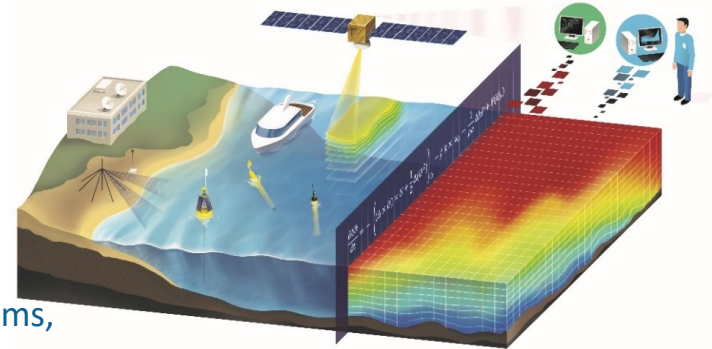
These evolutions will be developed through precursor projects (H2020, Horizon Europe) and depending on priority and budget constraints.

EC Green light for the Coastal Extension of Copernicus Marine in Dec 2022



Coastal extension: Improved coastal zone (marine) monitoring and forecasting is one of the top priorities for Copernicus Marine in Copernicus 2 (2021-2028)

- On-going new activities to strengthen the links with Member States coastal marine systems (incl. National Marine User Forum)
- **Short-term:** New/improved coastal satellite products, improved algorithms, more processes in models, higher resolution, enhanced data assimilation, Copernicus Thematic Hub on coastal zones
- **Short-term:** More in-situ coastal observations. Improved access to existing coastal data. In-situ TAC in interaction with EMODnet and JERICO
- **Mid-term:** **Interfaces with coastal monitoring and forecasting systems** operated by Member States. Improved river discharge forcing. New pan-EU satellite-derived and in-situ observations → Horizon Europe projects
- **Long-term:** Development of climate projection / downscaling → Horizon Europe projects



Evolution through past, on-going, future H2020/HORIZON projects + Tier-2 R&D projects



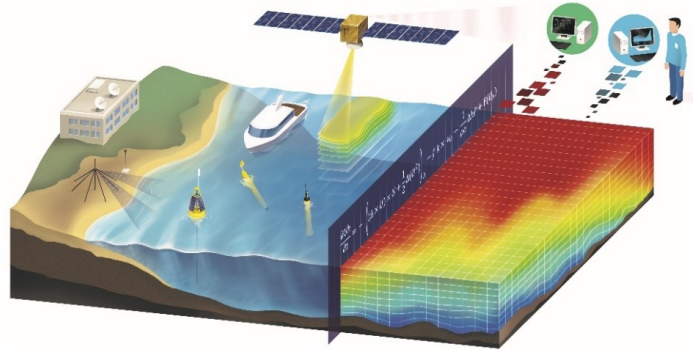
Preparing a new service line on satellite derived bathymetry:

- Bilateral meetings with EMODnet secretariat and EMODnet-Bathymetry leaders in 2022 → Synergies
- Call for tender to be issued in Q1/Q2 2023: Provision of ocean global bathymetry derived from S2 observations
- Need to align with EMODnet-Bathymetry for standards, metadata, in situ data for calibration/validation



MOi started **new activities to strengthen the links with Member States coastal marine systems:**

- **Cross-cutting Working Group** with Copernicus Marine Monitoring and Forecasting Centers (MFCs) dealing with the interfaces with coastal systems (since 01/2022)
- The setting up of a **National Marine Forum** (October)
- A **User Engagement Call For Tender** on coastal interfaces (12/2022)



Cross-cutting group on interfaces with the coastal ocean

Copernicus Marine 2 / Coastal / On-going activities

- New cross-cutting theme identified for 2022-2024 contract
- Needed to prepare the long-term evolution of Copernicus Marine
- Associated with reduced efforts (meetings, dedicated staff) compared to already existing ones
- Coordination of developments / activities (e.g. detiding of model outputs for MFCs)
- 2 main topics:
 - Interfaces with coastal systems (questionnaire)
 - Hydrology - ocean: river discharges (short R&D studies for MFCs, interface with CEMS for EFAS, GLOFAS)

Copernicus Marine 2 / Coastal / On-going activities

Re-enforced governance. 1st meeting - October 17, 2022

Objectives of the Marine Forum:

- ⇒ Foster deeper interactions with Member States (MS) representatives and national entities in the marine domain.
- ⇒ Specific and direct discussions between MS and Mercator Ocean International for the Marine Service
- ⇒ Contribute to a better integration of the Copernicus Marine Service with MS expectations and assets.
- ⇒ Of particular importance to co-design and implement actions with MS in the coastal marine areas.

Functioning: 1 to 2 meetings/year, Member States (Copernicus User Forum) to nominate one person, non-binding discussions

Copernicus Marine 2 / Coastal / On-going activities

USER ENGAGEMENT (22050-COP-INNO USER) call for tender is published!

User Engagement Call For Tender on coastal interfaces

EU COASTAL MONITORING
PILOT DEMONSTRATIONS



The tenderers MUST in particular fulfil the following:

- The proposed service must use **Copernicus Marine products** and must include a **marine coastal model** having **higher resolution** than the Copernicus Marine product available in that area
- A **seamless marine monitoring service**, downscaling from open ocean to coastal areas, must be developed. The open ocean component is the one provided by the Copernicus Marine Service.
- The proposed service needs to deliver at **least two downstream Copernicus Marine Use cases**/applications that support EU Policy and Environmental Directives.

Deadline for receipt of tenders: 03/03/2023, Paris time: 12:00

Evaluation of applications (technical + committee of choice) : March-April 2023

Start of contracts: May 2023

Copernicus Marine Evolution call for coastal zones (*HORIZON-CL4-2023-SPACE-01-34*)

Call open: Dec 2022. Submission: 28 March 2023. Budget: 5 M€

Topics:

- Co-production of coastal ocean forecasts with member states (advanced and seamless monitoring and forecasting)
- New pan-EU satellite products for coastal zones
- Improved land-hydrology (rivers) -> ocean forcings (physics, biogeochemistry)
- Demonstrations for different coastal applications and models developed at national to local level
- Use digital innovation and facilities (clouds, AI, Copernicus DIAS if appropriate)

Copernicus Thematic Hub for Coastal Zones: Why?



A user-driven
platform

- **Build** a unique portal gathering all coastal information from all Copernicus services
- **Improve** the understanding of the Copernicus benefits for coastal zones
- **Improve** synergies between Copernicus services to provide interlinked and coherent information
- **Understand** better what are the Use Cases and fill the gaps
- **Provide** relevant coastal information for governance/policies/industry in a context of Maritime Spatial Planning

Copernicus Thematic Hub for Coastal Zones:

- ❖ CTH led by MOi
- ❖ Contribution from KCEO to define core user needs
- ❖ Contributions of all Copernicus Services and corresponding Entrusted Entities
- ❖ The CTH-COASTAL web platform will be based on WEKEO platform
- ❖ First step : A proof-of-concept web portal launched in June 2023

