Copernicus Marine Status

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Mercator Ocean International

Copernicus Marine / EMODnet coordination meeting – October 20, 2023

PROGRAMME OF THE EUROPEAN UNION
implemented by

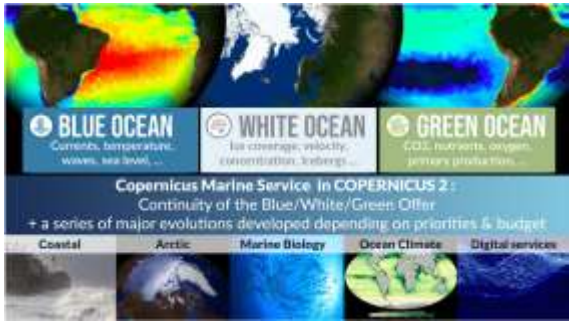
Copernicus Marine (2021 – 2028)

An ambition plan aligned with the EU Green Deal and Digital Strategies

Remain a marine reference worldwide. Foster User Uptake.

Staged implementation driven by user and policy needs, observation, science & technology advances :

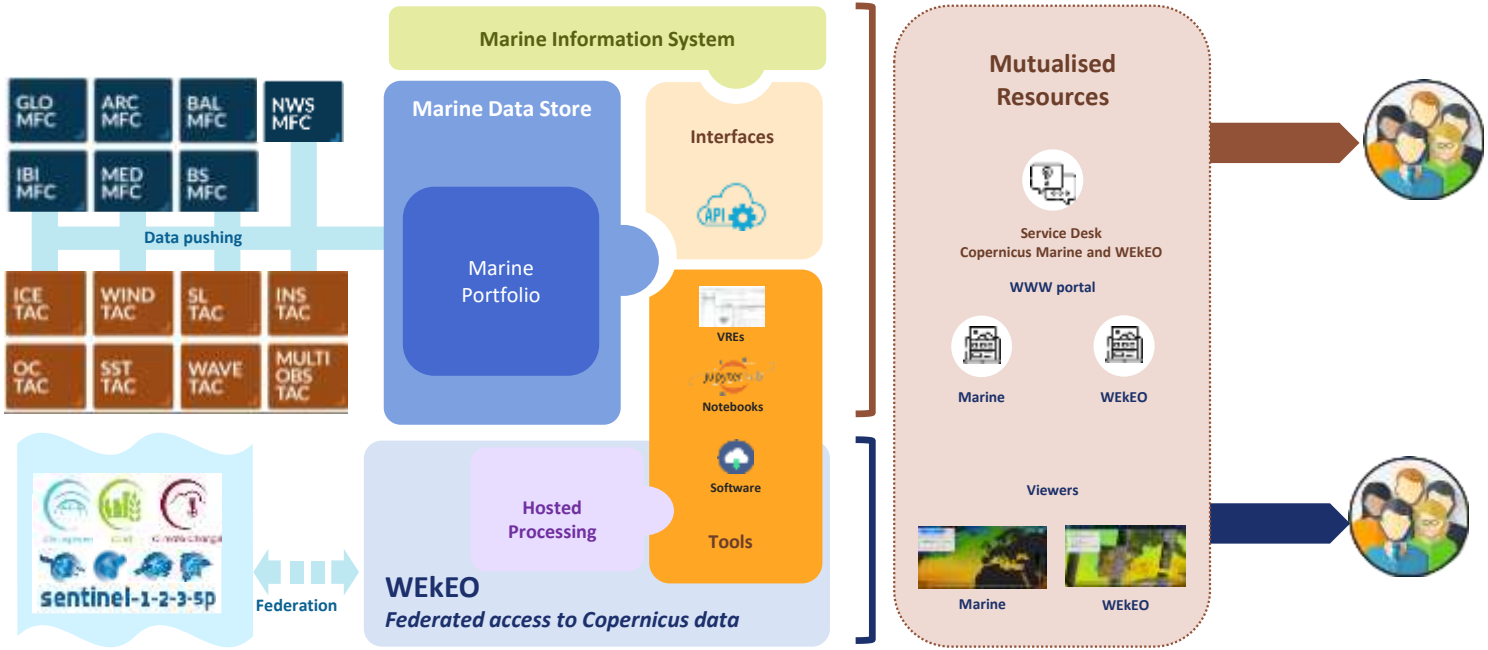
- **Continuity of service** with incremental evolution.
- Embrace the **new capabilities of digital services** in synergy with **Digital Twin Ocean** and Destination Earth initiatives.
- Prepare the implementation of the next generation of ocean and sea ice monitoring and forecasting systems and new service lines for **Coastal (with Member States) and Biology**.



International cooperation & impact

Copernicus Marine System of Systems

A pan-European network of Production Centres feeding a Marine Data Store. An integrated Copernicus Marine and WEkEO platform and service. Synergies with EU DTO developments



A User and Policy driven service

User Engagement, User Monitoring, User Needs, User Support

- 60,000 subscribers
- Web site: 700,000 single visitors/year

Translate User feedbacks into achievable service evolution objectives taking into account **scientific&technological advances** (observations, modelling, assimilation, AI, cloud and computing capabilities).

Copernicus Marine 2 Status (1/2)

- ❑ Political and technical Kick-off of operations
  - Kick-off event, start of new contracts for 3-year operations.
- ❑ General Assembly – June 2023.

- ❑ Re-enforced gouvernance: Marine User Forum.
- ❑ Advisory bodies both for science (STAC) and user (CUAG) renewed.

- ❑ Planning and delivering
  - Four releases of Copernicus Marine portfolio: Nov. 2021, July 2022, Nov. 2022 and March 2023. New one in Nov 2023. Many improvements in observation and model products.
  - Development of a completely overhauled Marine Data Store (MDS) system carried out in synergy with the European DTO. The new MDS will be put in operation from Fall 2023.
  - Enhancements to the Copernicus Marine MyOcean Viewer and Catalogue.
  - Update of the Copernicus Marine Service product quality dashboard.

Copernicus Marine 2 Status (2/2)

- Ocean State Reports 6 & 7. OSR 7 just published / New Journal
- Ocean ECVs processing for C3S/ECMWF
- Handling Brexit issues - UK back in Copernicus
- Decision to entrust MOi for **Coastal and Arctic Thematic Hubs** and development of first prototypes. Synergies with the other Copernicus services.

- First user engagement call. Start in July 2023. **15 projects selected for national collaboration projects for marine coastal monitoring services**.
- Selection and kick-off (June 2022) of **14 service evolution R&D projects.** 2nd call in December 2023.
- H2020 and Horizon Europe (Copernicus evolution): ECFAS (with Emergency Service). NECCTON - Marine Biology and ACCIBERG - Arctic. **FOCCUS - Coastal Marine.**

- Provide inputs to Copernicus Strategic Research and Innovation Agenda (SRIA) (KCEO – JRC & DG DEFIS) for Horizon Europe 2025-2028 work programmes.

A re-enforced gouvernance

Member State marine representatives nominated by the Copernicus User Forum.

Two meetings held : October 17, 2022, May 2023. Next meeting: November 17, 2023

Objectives:

⇒ Foster deeper interactions with Member and Contributing States (MS) in the marine domain.

⇒ Contribute to a better integration of the Copernicus Marine Service with MS expectations and assets.

⇒ Co-design and implement actions with MS in the coastal marine areas.

Towards a new offer for coastal marine

Copernicus Marine

Improved coastal zone monitoring:

- **New or improved satellite products** (e.g. time evolving bathymetry, ocean colour, waves, winds, sea level,…).
- **Improved in-situ** data sets (JERICO, EMODnet).
- Towards standardized (freshwater, nutrients, particulate and dissolved matter) **modelled river discharges.**
- Cooperation with EMODnet, Emergency and Land Services

Systems operated by MS

Co-design/co-production with Member States :

- **Coupling** between **Copernicus Marine** and a series of **coastal models** operated by Member States.
- **Integration** in Marine portfolio of **coastal model derived information.**

Public & private actors for various sectors, implementation of policies…

PROGRAMME OF THE EUROPEAN UNION

Implementation of a new coastal service line with M/S

- **Strengthen the links with Member States coastal marine systems**
  - User Engagement 2023 Call, national collaboration programme
  - Interactions with National Marine User Forum
- Improved coastal satellite products, more in-situ observations (TACs)
- New **coastal satellite products (satellite derived bathymetry, winds)** (starting).
- **R&D to improve interfaces/coupling with M/S coastal monitoring and forecasting systems**. Improved river discharge forcing → Horizon Europe project FOCCUS + Service Evolution Tier2 R&D projects.

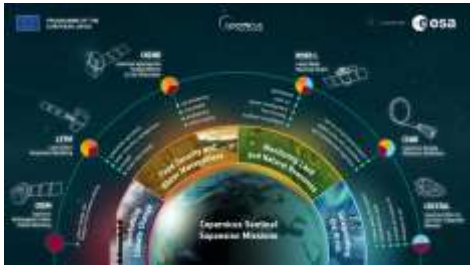
Working with the upstream space and in-situ components

Requirements both for in-situ and satellite observations (present and future Sentinels) are defined and regularly revised (MOi and TACs/MFCs).

Based on impact assessment (OSEs/OSSEs) and expert analyses. Users needs => Integrated System requirements => observation requirements

Wrt in-situ : joint work between MOi/Copernicus Marine and EuroGOOS (incl. ROOSes and Task Teams) and in relation with EEA. **Workshop organized in September 2023** to update requirements**. EOOS framework**.

Major gaps for the in-situ observing system (sustainability, biogeochemistry, Arctic, coastal)



Copernicus Thematic Hubs

The Copernicus Arctic and Coastal Hubs will be launched during EU Space Week (Nov 2023, Sevilla)

While the Copernicus Arctic Hub is almost ready, the new Copernicus Coastal Hub website has been introduced during the Copernicus Marine General Assembly in June 2023.

Hubs provides open and free access to a selection of Earth Observation data from the **Copernicus Sentinel satellites and all Copernicus Services** (marine, land, atmosphere, climate, emergency). They build on all Copernicus services and the Copernicus **WEkEO** infrastructure to deliver an easy data discovery.