



Copernicus Marine Service and the Copernicus Coastal Hub: A member state vision

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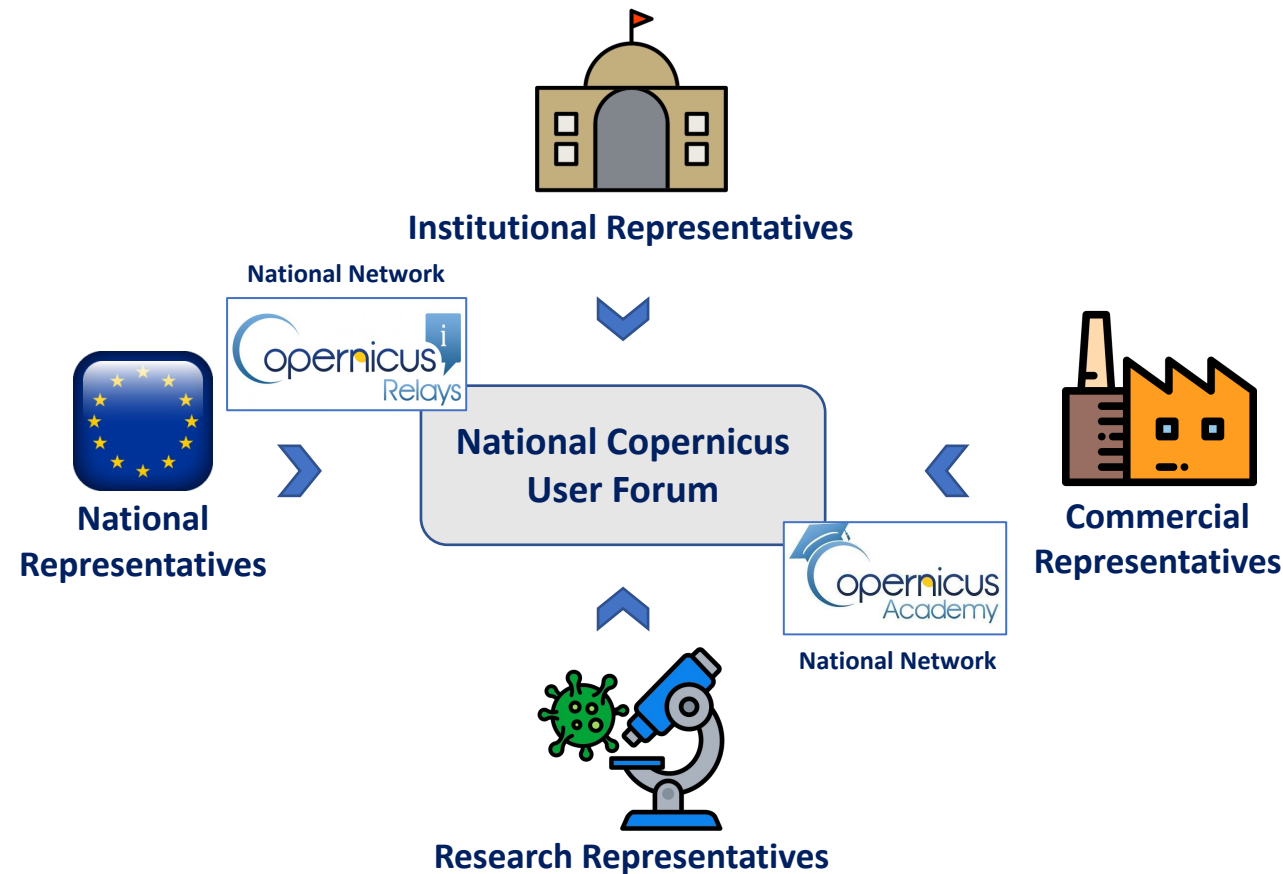
Scuola Universitaria Superiore Pavia



The National Copernicus User Forum

Goals

- to **disseminate** information about the ongoing and foreseen activities of Copernicus Bodies;
- to **collect** in coordinate way national **user** communities **needs**, troubles, expectation vs. Copernicus Programme;
- to **stimulate** a qualified, authoritative and coordinated national **uptake** of all Service offered by the Programme;
- to support an **user-driven approach** with respect to **national** and **European space-based developments**.



Copernicus products for Coastal users

Coastal areas are a key topic for Copernicus that hence drafted a “Roadmap for the evolution of Copernicus Core Service products to better serve coastal users” (MOI and EEA in 2018, under the umbrella of the EU Commission).



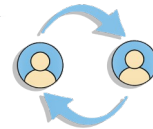
Long term
strategy



**Evolution of products delivered by
the Core Services**



Sinergy of Core Services



Link with national services

Copernicus products for Coastal users



Atmosphere
(CAMS)



Marine
(CMEMS)



Land
(CLMS)



Climate
(C3S)



Emergency
(EMS)



Security

Coastal areas topics range from land to seas, including habitat, atmosphere and extreme events. It is a cross-cutting theme with reference to the 6 Copernicus Core Services



Marine
(CMEMS)



Land
(CLMS)



Climate
(C3S)



Emergency
(EMS)



Security



Atmosphere
(CAMS)

Readiness to provide tailored data to coastal areas users (decreasing)

Data of interest for users in coastal areas are hence produced (or will be produced) by each Core Service. A «Thematic Hub» devoted to coastal areas is going to be created to gather all the different products together.

Copernicus products for Coastal users

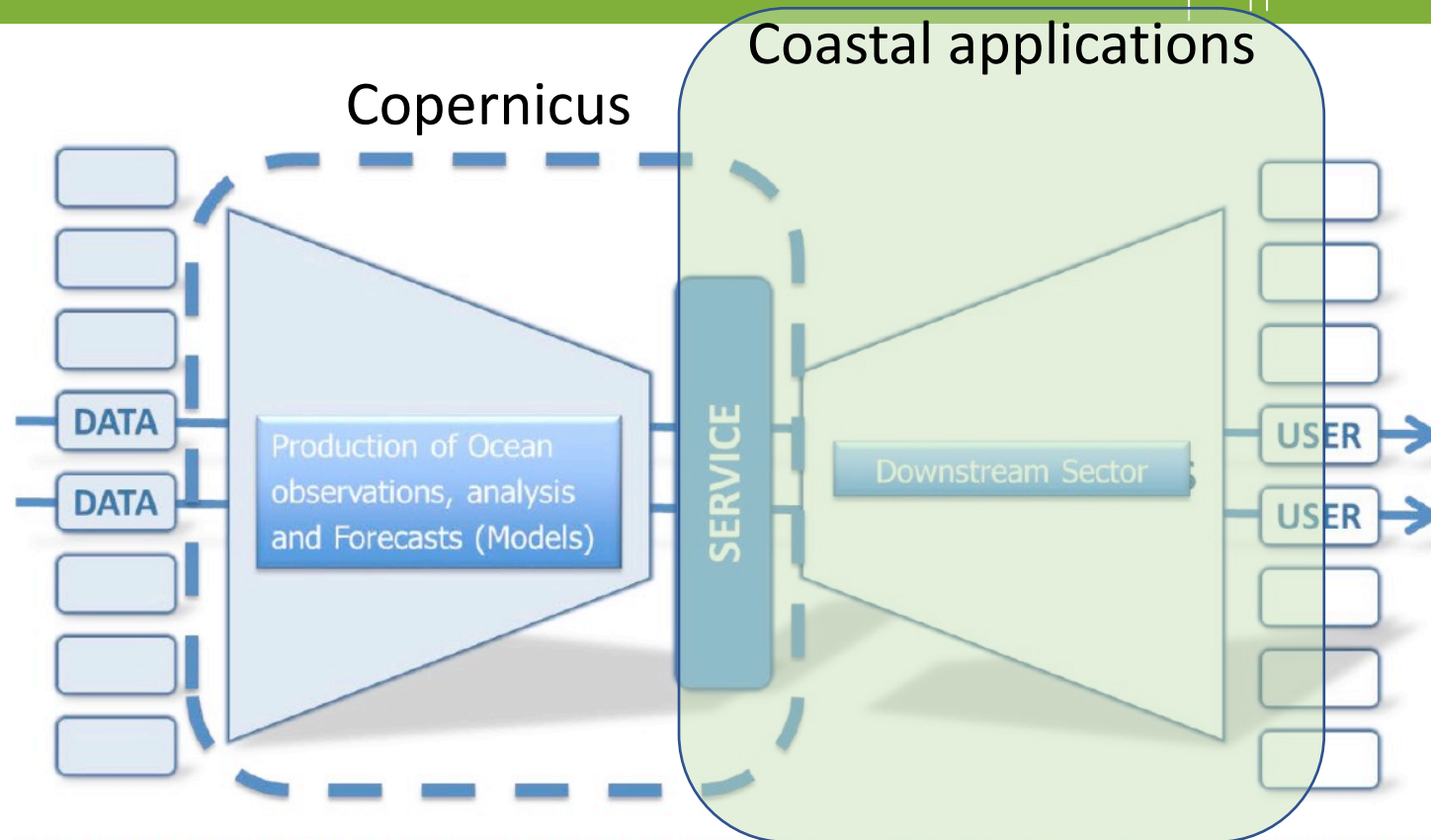
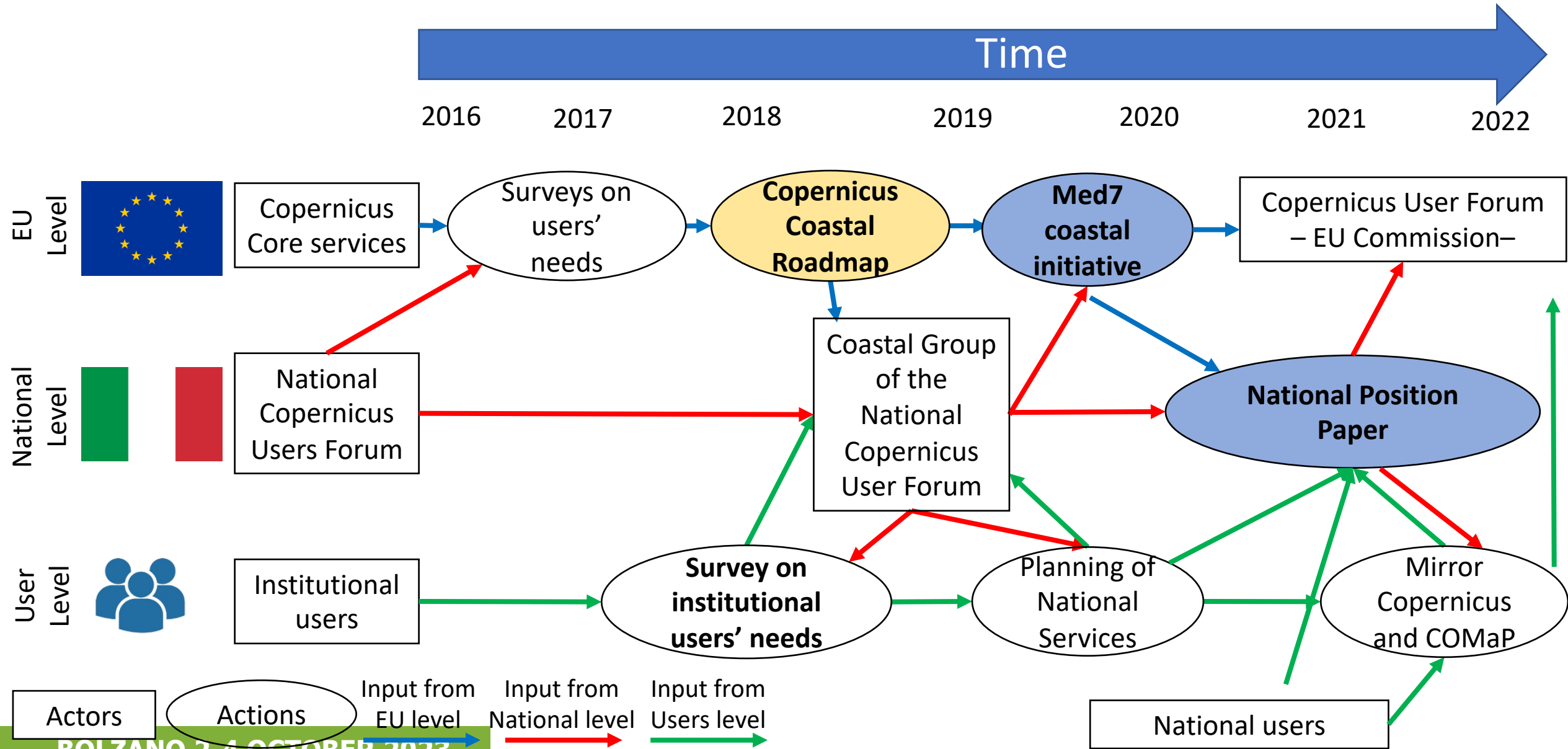


Figure 2. Schematic illustrating the relationship between CMEMS Production and Services (within dashed shape) and (left) the provision of data from observation networks and systems, and (right) users and the downstream sectors.

Coastal applications are mainly left to the “Downstream Sector”, since they generally rely on local data. Copernicus products provide a set of robust, homogenous and operational data and information necessary to provide the general framework for the desired application (e.g. off-shore forcing conditions, land use for coastal areas)

Italian RoadMap to sustain Copernicus uptake for delivering products in coastal areas: Actors and Actions



Med7 “Copernicus for Coastal” initiative

COPERNICUS FOR THE BLUE ECONOMY IN THE MEDITERRANEAN SEA AND BEYOND

White Paper | Final | 5 June 2020

Written by:

the Permanent Representations to the European Union of Greece, Spain, France, Italy, Cyprus, Malta and Portugal.

With contributions from:

the European Climate Medium-range Weather Forecast, the European Environment Agency, the Istituto Superiore per la Protezione e la Ricerca Ambientale, Mercator Ocean International

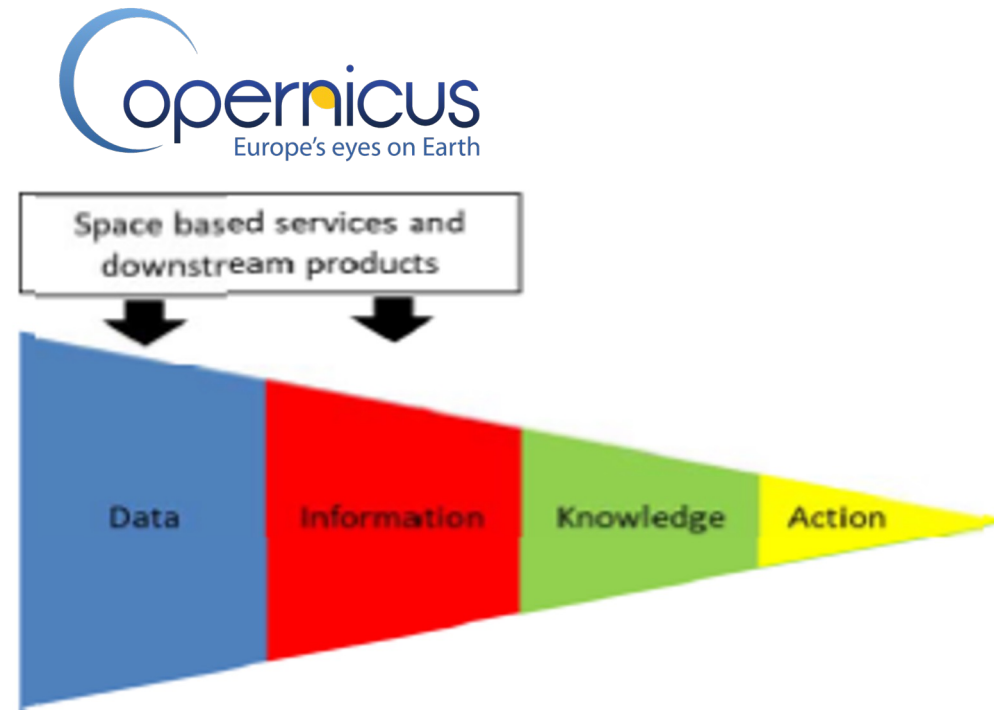
The white paper “Copernicus for the Blue Economy in the Mediterranean Sea and Beyond” is the main product of this initiative

- 28th of February 2019: First Med7 meeting to plan this action
- 9th of October 2019: Initiative briefly presented at CUF
- 5th of June 2020: White paper finalised and formally sent to DG DEFIS
- September 2020: extended presentation at CUF
- May 2021 Council of the European Union: “Space for people in coastal areas” recall and acknowledge white paper approach

It presents a **concerted and action-oriented approach** to develop further the **relation between Copernicus and Member States’ costal monitoring and managing capacities**, to the benefit of a sustainable and environment-friendly development in the coastal areas.

Med7 “Copernicus for Coastal” initiative

The **white paper** highlights the importance of EO for a **knowledge based approach** in the enforcement of EU **political agendas relevant for coastal areas**



Data and information facilitate the monitoring of coastal areas, including natural phenomena and human activities, supporting decision makers to understand and tackle the environmental challenges

Med7 “Copernicus for Coastal” initiative

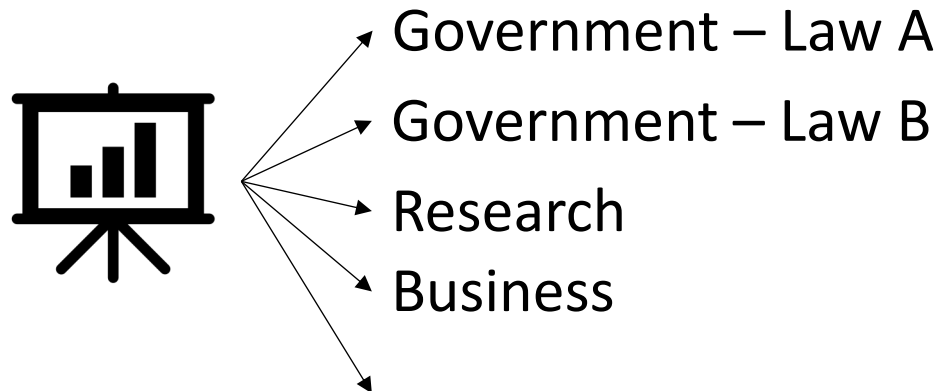
Main messages in the white paper (1):



Sharing coastal data and information for use and re-use to give added value to existing products

Measure once, use many times. Existing data and information should be exploited at maximum, avoiding the production of the same data or information twice under different umbrellas.

Easy access to data. Data and information should be easy to access. A national access point to coastal data and information would provide a complete picture of the available data



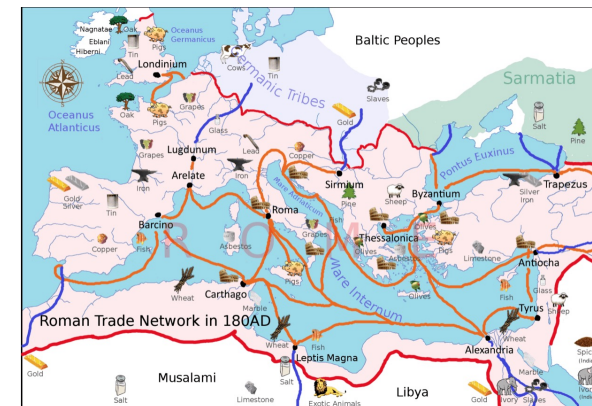
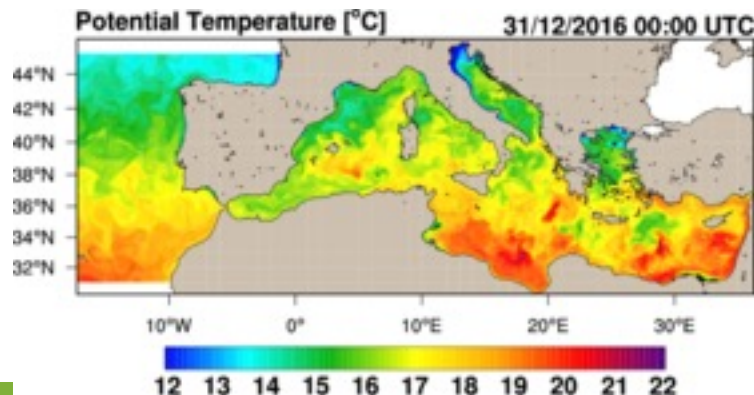
Med7 “Copernicus for Coastal” initiative

Main messages in the white paper (2):

-  Harmonisation of local coastal products across MSs and neighbouring countries

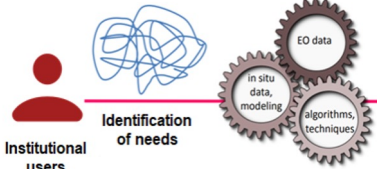
To obtain a homogeneous picture of the whole basin: To help EU Member States in the management of their coastal zones and neighbouring areas and fostering the use of Copernicus and downstream services in non-EU Countries.

To help the development of commercial initiatives in the basin. The availability of homogeneous products favours the development of the market and attracts large scale investments.



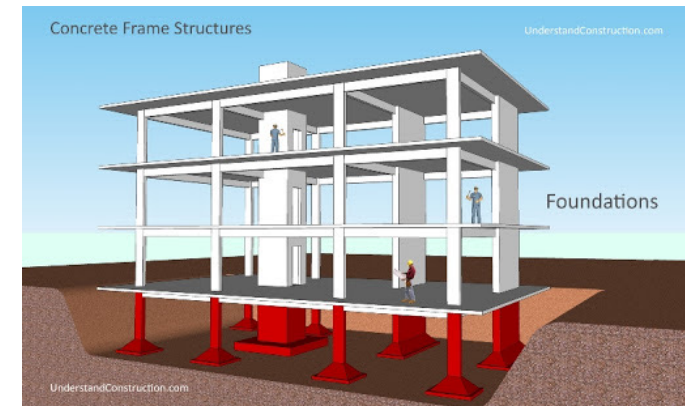
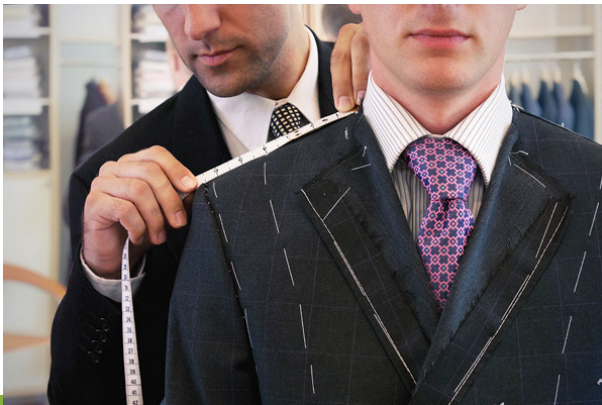
Med7 “Copernicus for Coastal” initiative

Main messages in the white paper (3):

-  Identification of user needs starting from the institutional market

To design tailored products: To help EU Member States in the use of EO products for institutional tasks

To help the development of commercial downstream products: The institutional market through the **expression of a qualified demand** provides a core set of products and services to favour the profitability of private investments.

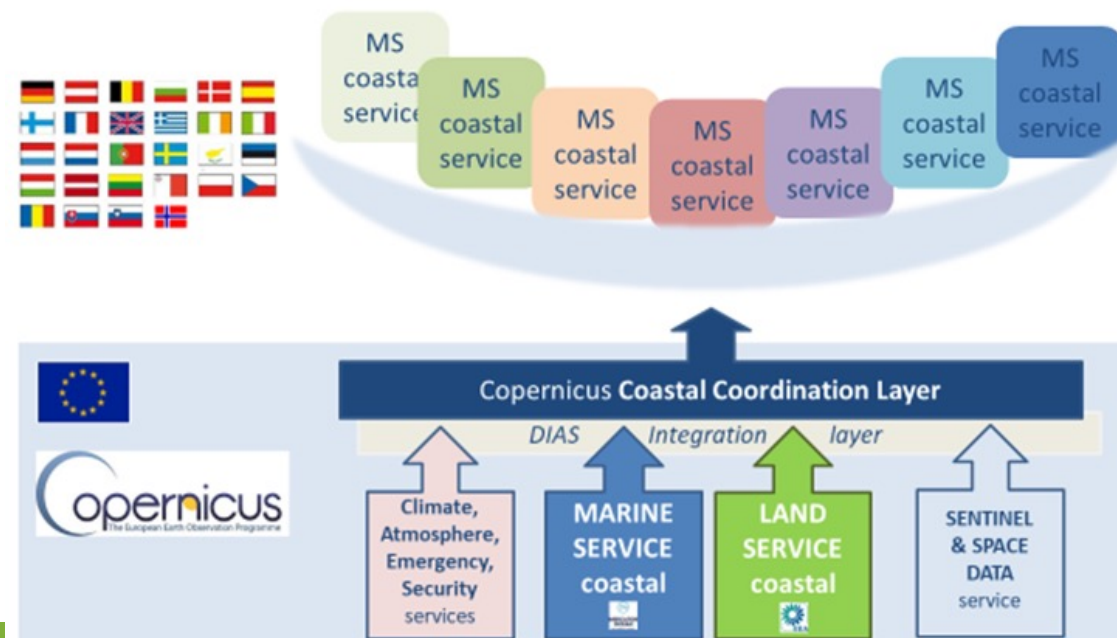


Med7 “Copernicus for Coastal” initiative

Call for actions in the white paper Priority and coordination



- **Set up a Copernicus coastal Thematic hub** to continue the current coordination of marine and land Copernicus Services and extend it to other Core Services (relevant to the coastal issues), and **appropriate interfaces with the national nodes**



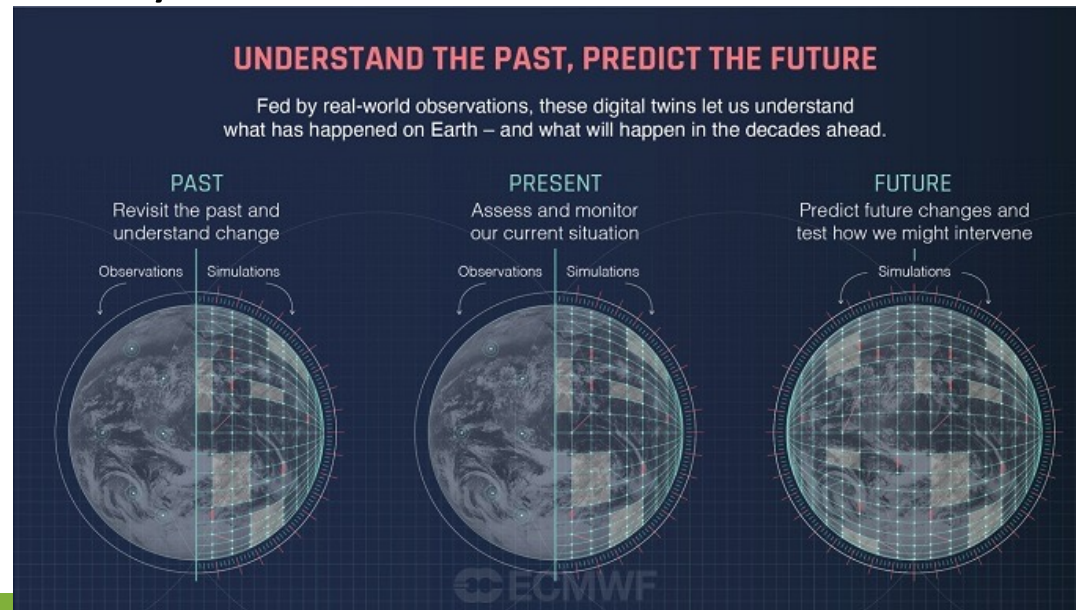
National position paper on coastal areas

MED7 white paper highlights the importance of a **knowledge-based approach** to support a sustainable **Blue Economy**.

Therefore, reliable coastal data and information are central.

This approach is also strongly linked to several **European Union objectives**, such as:

- the development of the **Copernicus** programme
- creating digital twins foreseen in the framework of the **Destination Earth** initiative
- recovery plans implemented in the framework of **Next Generation EU** fostering a knowledge-based economy



National position paper on coastal areas

In order to map the state of the art of existing tools and users' needs in Italy, in June 2020, the coastal discussion group of the Italian Copernicus User Forum started an action to draft a position paper.

It is based on 3 ad-hoc surveys aimed at collecting representative data from national actors.

1) Survey aimed at Institutional Users involved in Mirror Copernicus

Institutions

2) Survey aimed at participants to the coastal discussion group

Research

3) Survey aimed at participants to the Valorization - Industry and Enterprises board of the National User Forum

Commercial

Description of available coastal products and services in Italy, 2020–2021

Summary

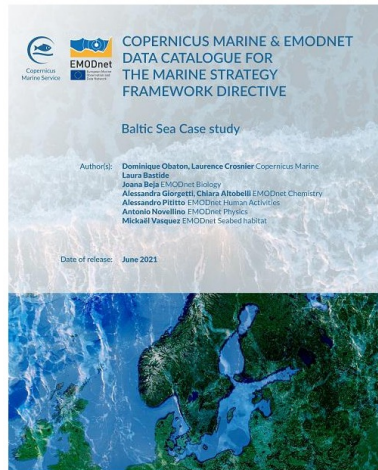
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Hints about the evolution of Ocean Reports supporting the Enforcement of EU Directives: eg the MSFD

It is important to clearly define roles in implementing MSFD.

- **CMEMS** and EMODNet have the important role of **providing useful data**
- **Member States** have the responsibility to **select and/or collect data of relevance to enforce MSFD** in their marine waters and specific National Public Bodies have the Institutional task to provide tailored products for MSFD

In the framework of implementing **MSFD**, **Member States** should be hence considered as **Intermediate Users**



Data catalogues collecting data useful for MSFD



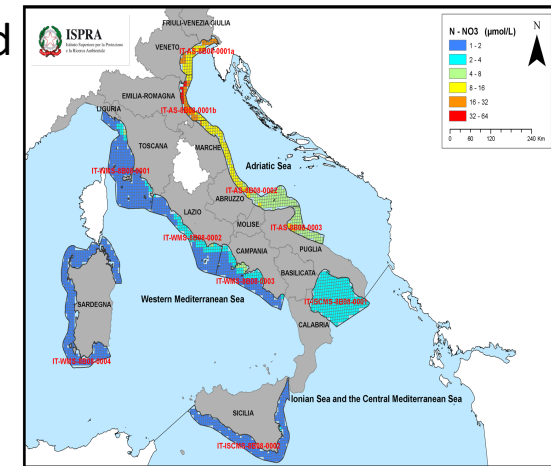
BOLZANO 2-4 OCTOBER 2023



General overviews of marine basins features and trend



Processed by ISPRA using CMEMS and national in-situ data



Processed information layers tailored for MSFD

