marine knowledge 2020

The importance of marine data for the development of the blue economy on local and regional level

Committee of the Regions

13 October 2016

- why we are doing it
- what we are doing
- what we will do next

- why we are doing it
  - save costs
  - promote innovation
  - reduce uncertainty
- what we are doing
- what we will do next

$$S^s = \sum_{i=1,N} (\propto_i^s \beta_i^s + (1 - \alpha_i^s)\gamma_i)0_i^s C^s$$

data can't be found and need to resurvey

assembling data with different formats, nomenclature, baselines, standards

The world's most popular M... & Lakes app!
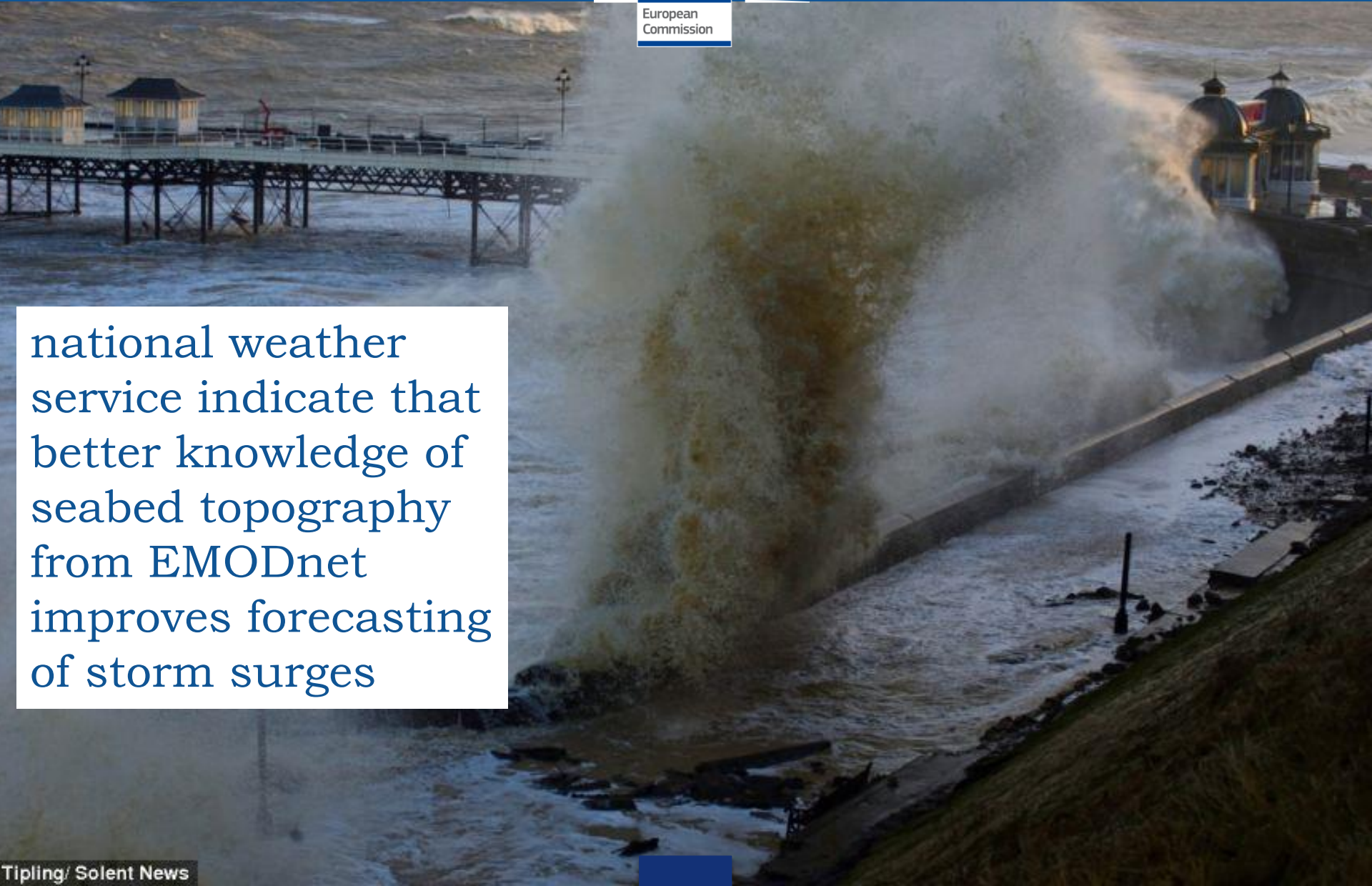Get the same detailed charts as on the best GPS plotters.

Coverage   Compatibility

Boating, try for free!

Search for Navionics Boating on the store of your device. Download the **free version**, then tap on **Menu>Charts** and select your region for a **two week free trial** to experience the overwhelming value of Navionics+! Or choose any paid app where

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reduce uncertainty

national weather
service indicate that
better knowledge of
seabed topography
from EMODnet
improves forecasting
of storm surges

Tipling/ Solent News

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- why we are doing it
- what we are doing
- what we will do next

working together

Application

160 organisations working together

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Copernicus
Ocean forecast

Assembly

Copernicus

Collection

DCF

Member State
in situ observation
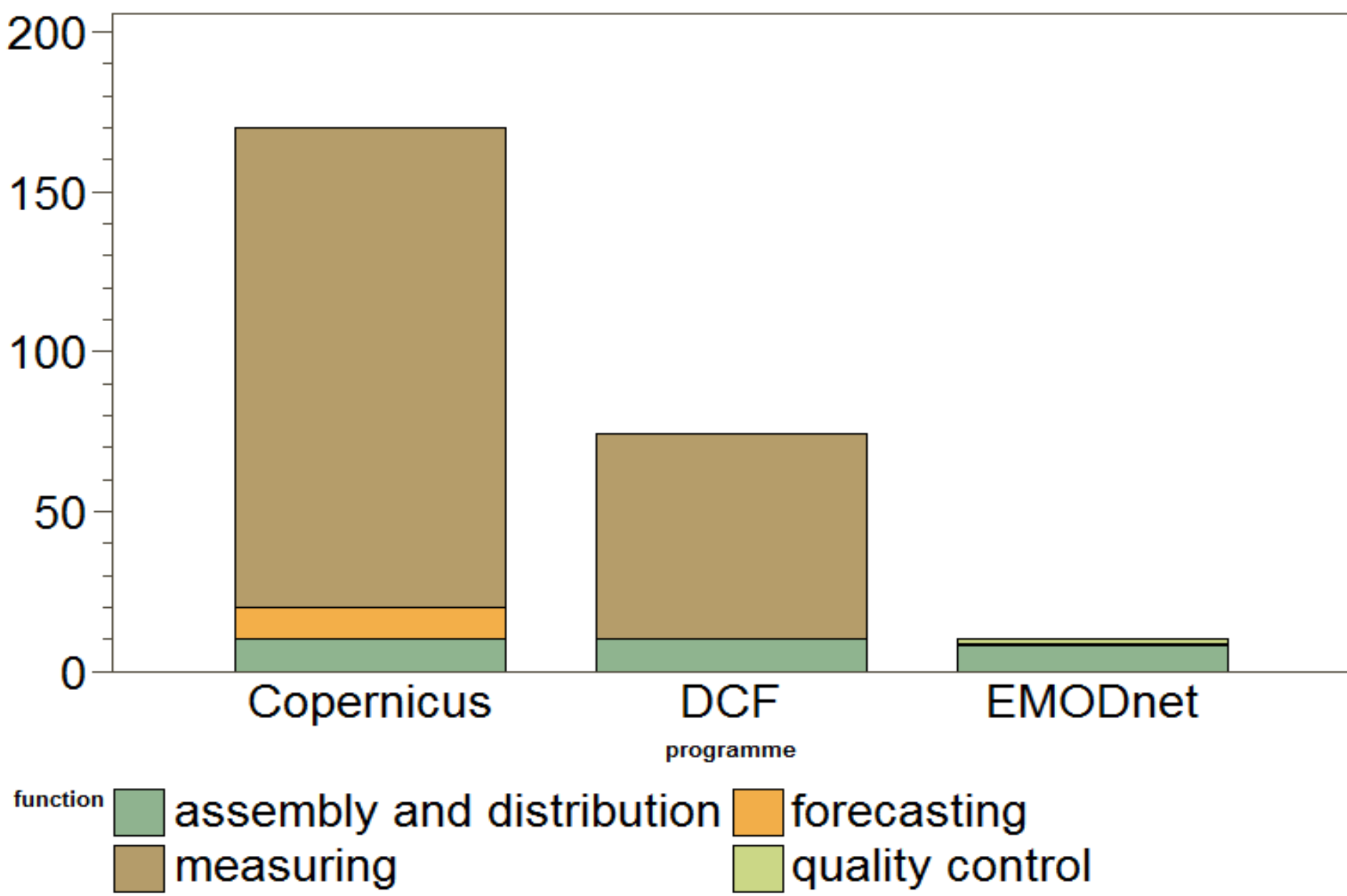
Copernicus

annual budget € millions

- access to data
  - INSPIRE compliant
  - common standards
- creation of data products
  - seamless across sea-basin
  - together with quality estimates
- free and open access
  - searchable
 - through common portal
  - machine-to-machine connections

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e European Marine Observation and Data Network (EMODnet) consists of more than 100 organisations assembling marine data, products and metadata to make these gmented resources more available to public and private users relying on quality-assured, standardised and harmonised marine data which are interoperable and free of restrictions use. EMODnet is currently in its second development phase with the target to be fully deployed by 2020.

More information about EMODnet and its development process

News Flash: EMODnet Checkpoints face 6 oil leak challenges

order to assess the potential of current marine data services to address commercial and policy 'challenges' relevant to the development of Blue Economy, the six EMODnet Sea Basin Checkpoints were requested to assess the impact of simulated oil spills in their respective sea sins (the Arctic, Atlantic, Baltic, Black Sea, Mediterranean and North Sea). The 'Checkpoint Oil Leak Challenges' were launched on /05/2016, with teams reporting after 24 and 72 hours on the fate and expected impact of the spills. Further information and the detailed orts can be found on the maritime forum here.

Bathymetry
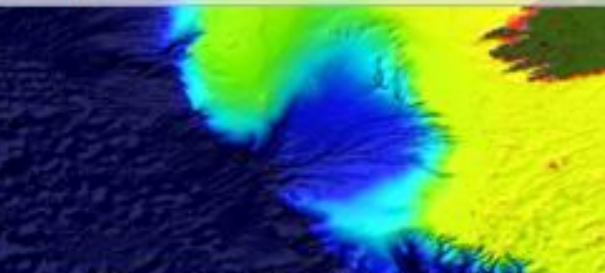
ata on bathymetry (water depth), coastlines, and eographical location of underwater features: wrecks.

Read more | Portal

Geology

Data on seabed substrate, sea-floor geology, coastal behaviour, geological events, and minerals.

Read more | Portal

Seabed Habitats

Data on modelled seabed habitats based on seadbed substrate, energy , biological zone, and salinity.
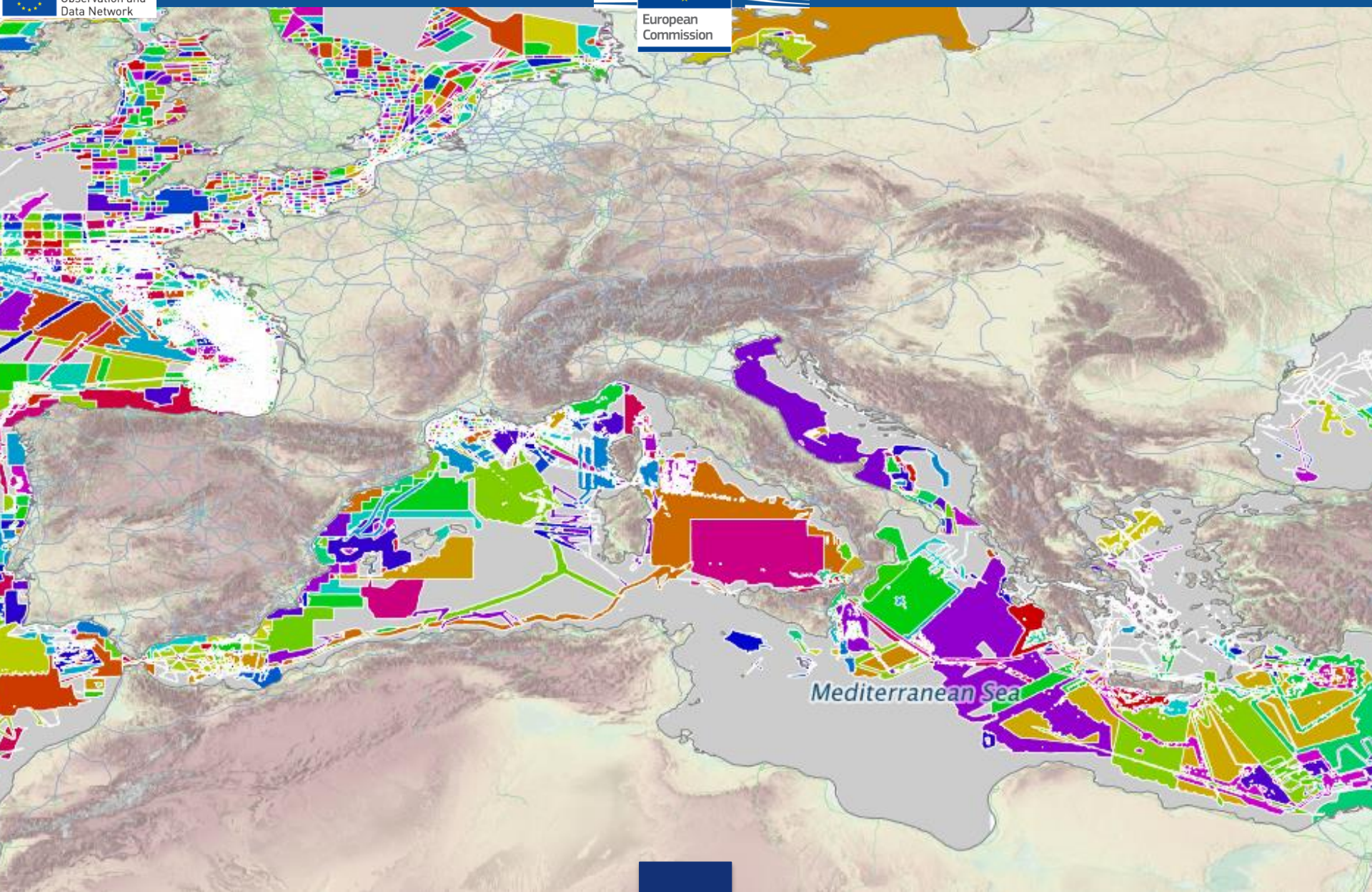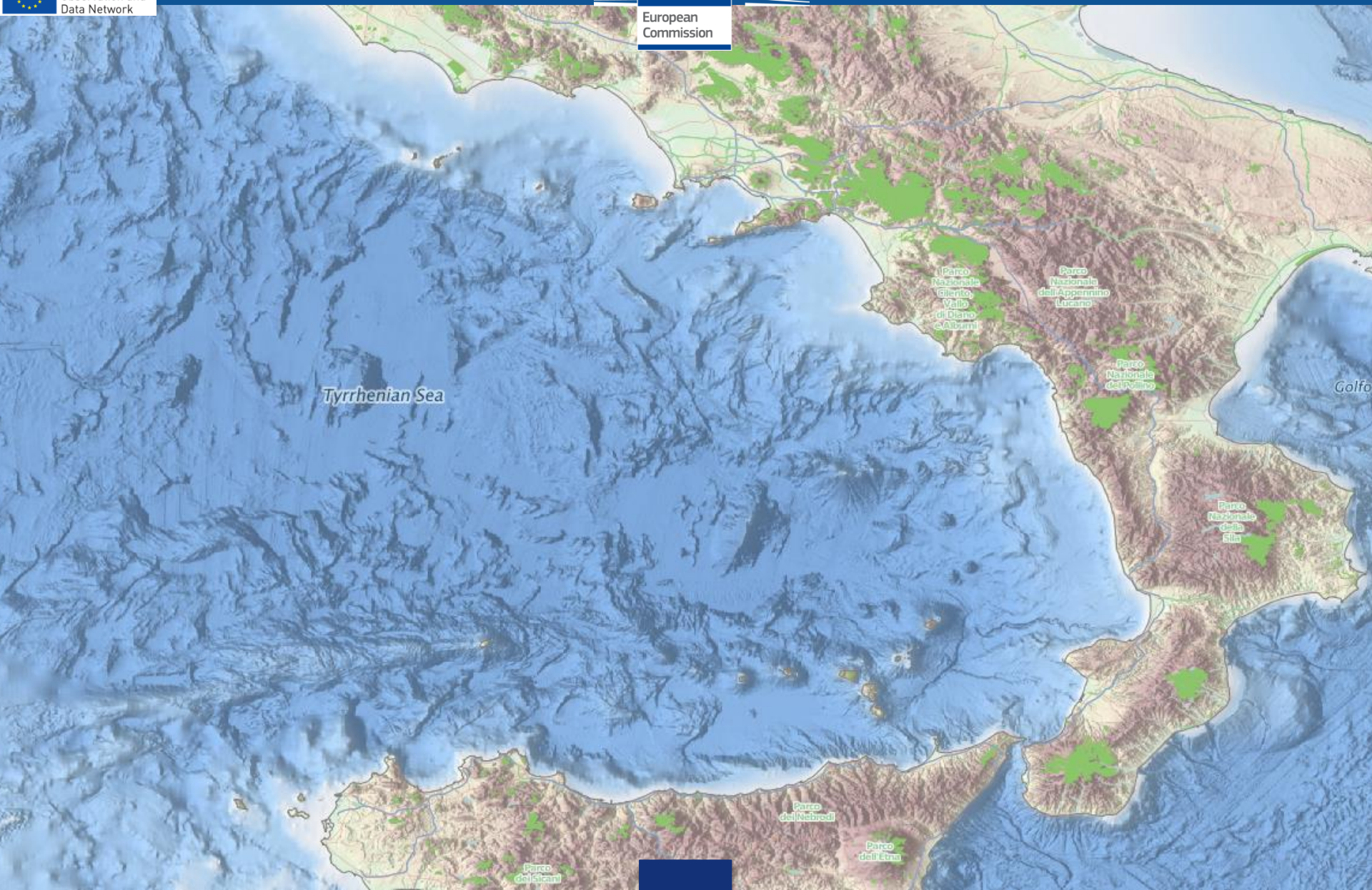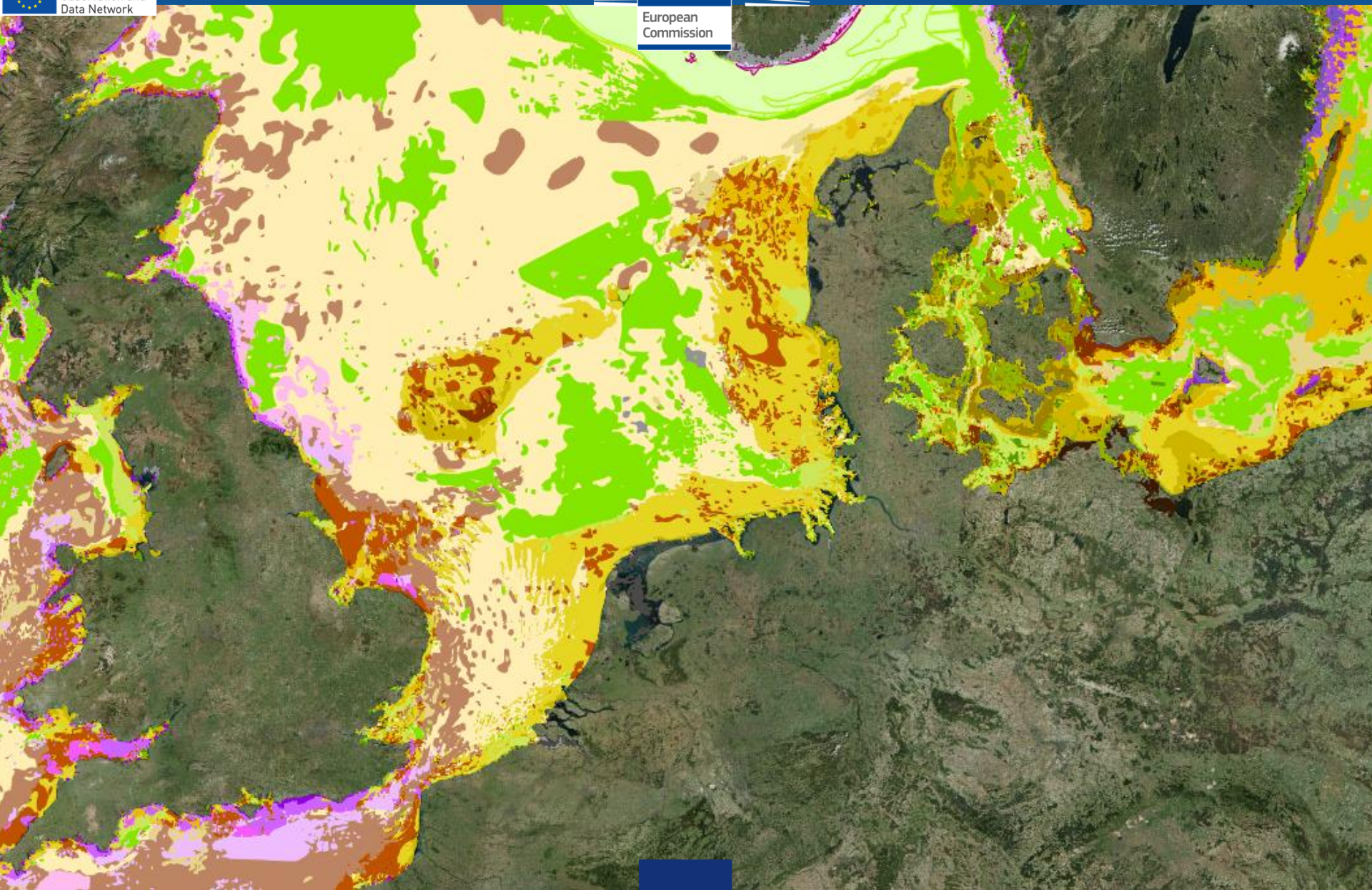
Read more | Portal

Chemistry

Biology

Physics

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Mediterranean Sea

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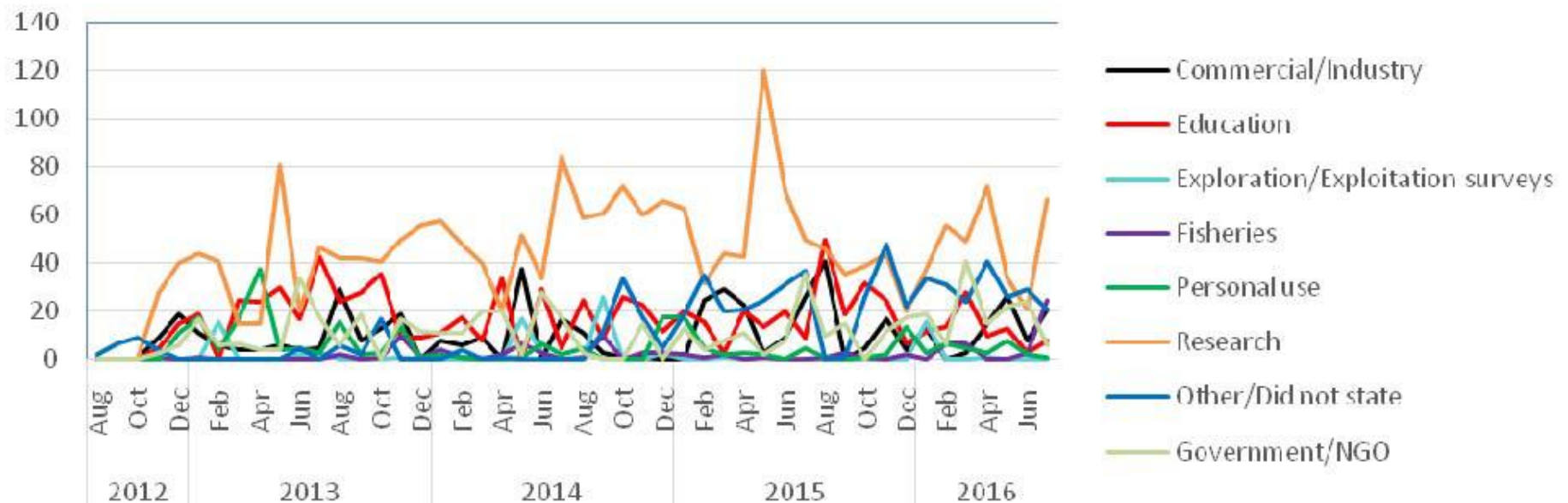Data Network

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habitats

Monthly downloads from EMODnet Seabed Habitats from August 2013 to July 2016

chemistry

Number of observations of Water body nitrate

10^0 10^1 10^2 10^3 10^4 10^5

min depth: [m]

0

max depth: [m]

10

min time: [ISO8601]

2000-01-01T00:00:00.0

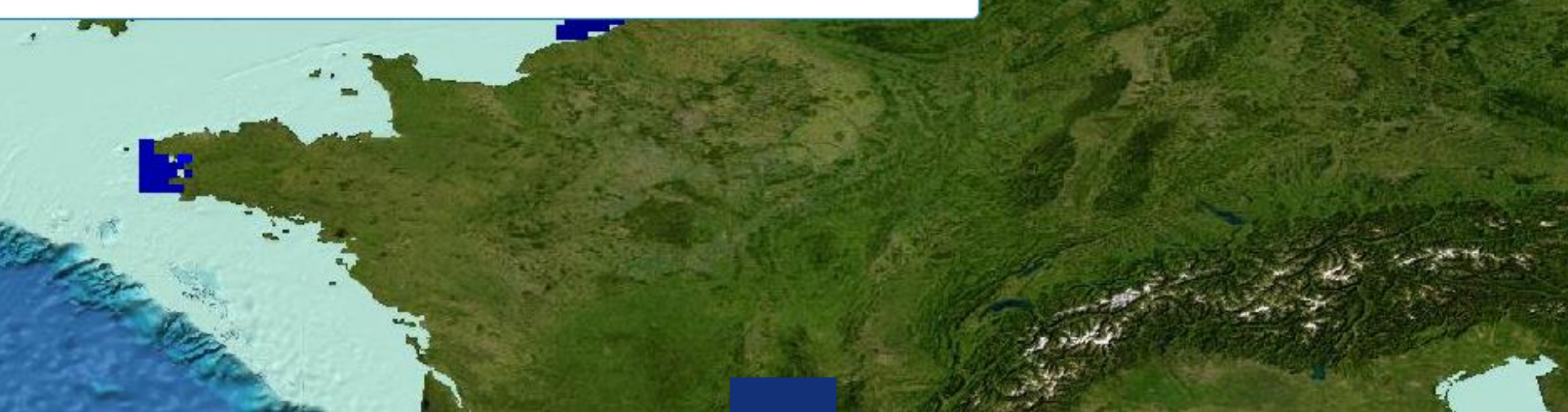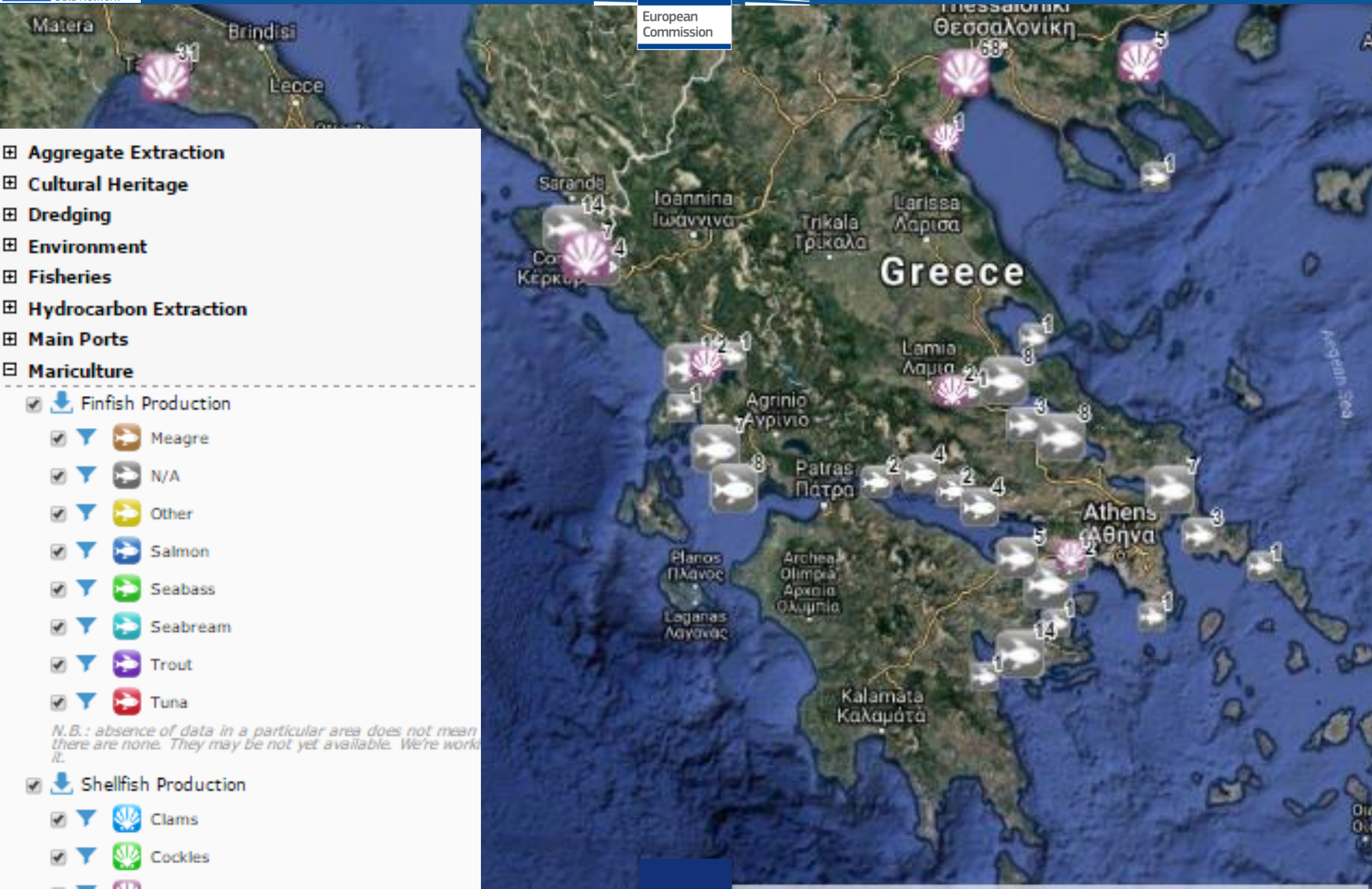max time: [ISO8601]

2001-01-01T00:00:00.0

Remove   Update

chemistry

pring (March-May) - 10-years running averages

- Water body ammonium
- Water body chlorophyll-a
- Water body dissolved oxygen concentration
- Water body nitrate
  - Water body nitrate masked using relative error threshold 0.5
  - Observations
  - Additional fields
- Water body nitrate plus nitrite
  - Water body nitrate plus nitrite masked using relative

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Cancel   Add layer

human activity

Aggregate Extraction

Cultural Heritage

Dredging

Environment

Fisheries

Hydrocarbon Extraction

Main Ports

Mariculture

- Finfish Production
  - Meagre
  - N/A
  - Other
  - Salmon
  - Seabass
  - Seabream
  - Trout
  - Tuna

N.B.: absence of data in a particular area does not mean there are none. They may be not yet available. We're working on it.

- Shellfish Production
  - Clams
  - Cockles

prototype method

2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020

Phase 1 – limited sea basins

Phase 2 - low resolution

Phase 3 - multi-resolution

Plan

Implement

Time →

Learn

Measure

we are here
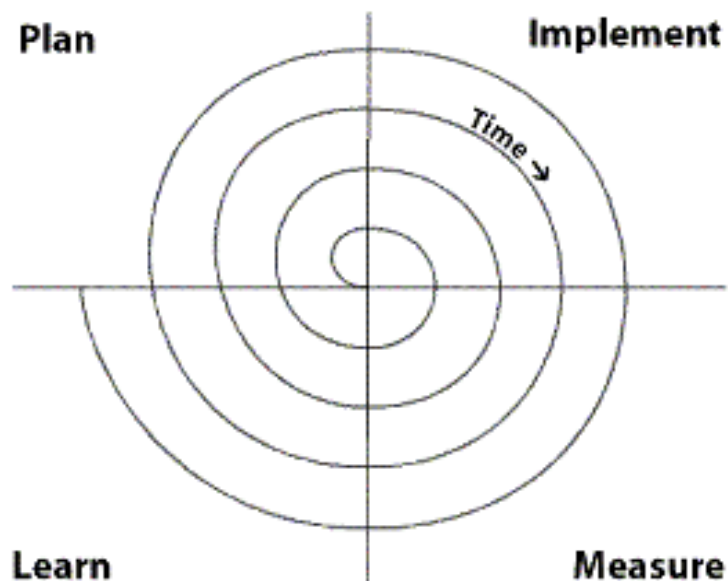
allows users to assess and
improve product by trying it out

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The EMODnet MedSea Checkpoint evaluates the quality of the data fro monitoring systems in terms of their accessibility, availability, multiple-use reliability, time consistency, space consistency, as well as the planning of te advancements, new accessibility, new assembly protocols and observationa required to meet Challenges described below.

- Mediterranean and North Sea
  - finishing
- Arctic, Atlantic, Baltic, Black Sea
  - beginning

Source: NASA MODIS

Marine protected areas
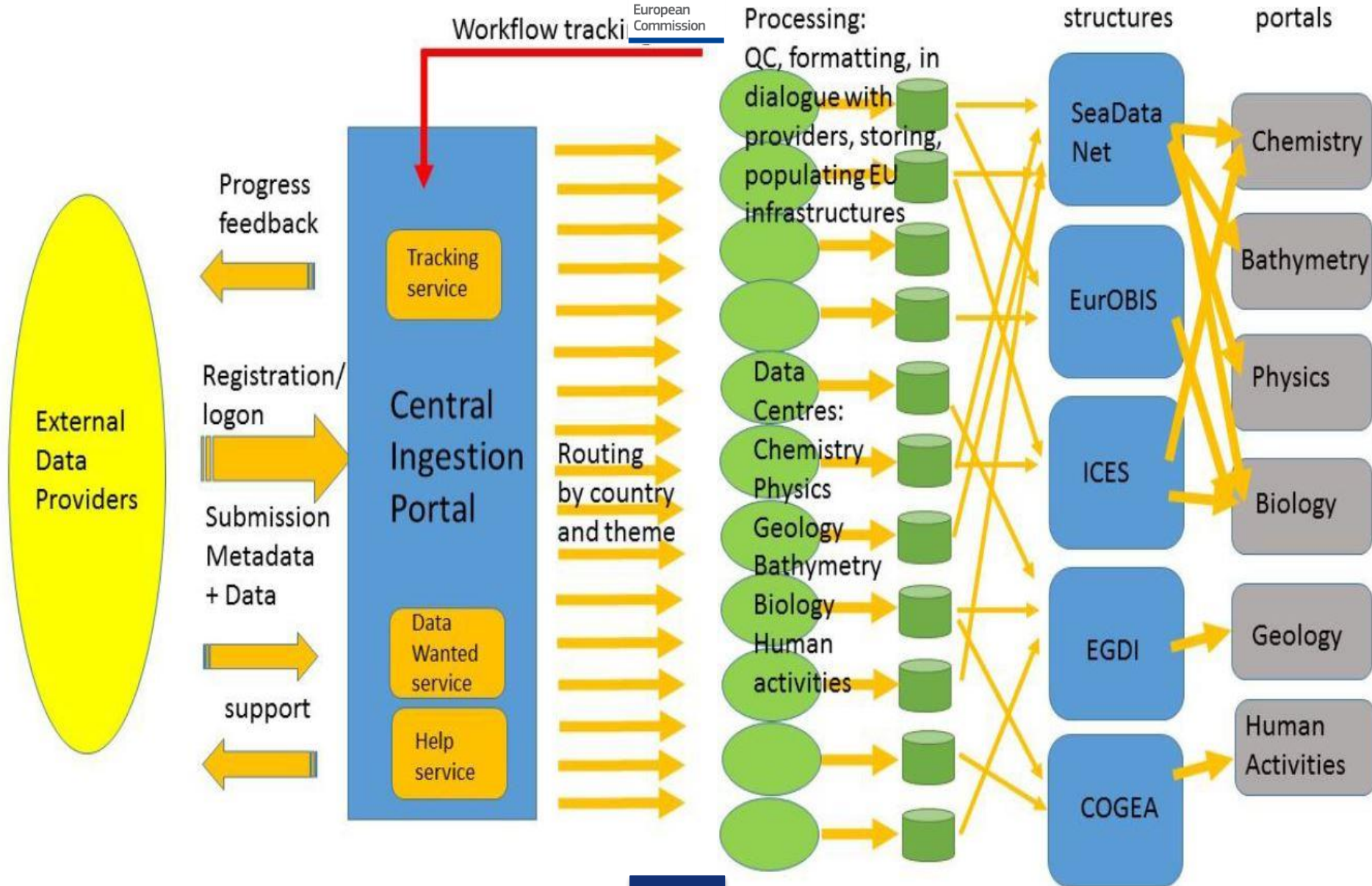
do we have coherent set of marine protected areas?

Oil platform leaks

how quickly can we assess damage from oil spills?

Climate and coastal protectio

how fast are our coasts eroding?

- why we are doing it

- what we are doing

- what we will do next

- more parameters
  - marine litter
  - noise
  - ship traffic density
  - Palaeolithic landscapes
- higher resolution
- data ingestion service
- intensify collaboration with sea basin conventions and industry

Any questions?

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