First DBCP Mediterranean Training Workshop on Ocean Observations and Data Applications

Overall Copernicus Marine In Situ data and information services

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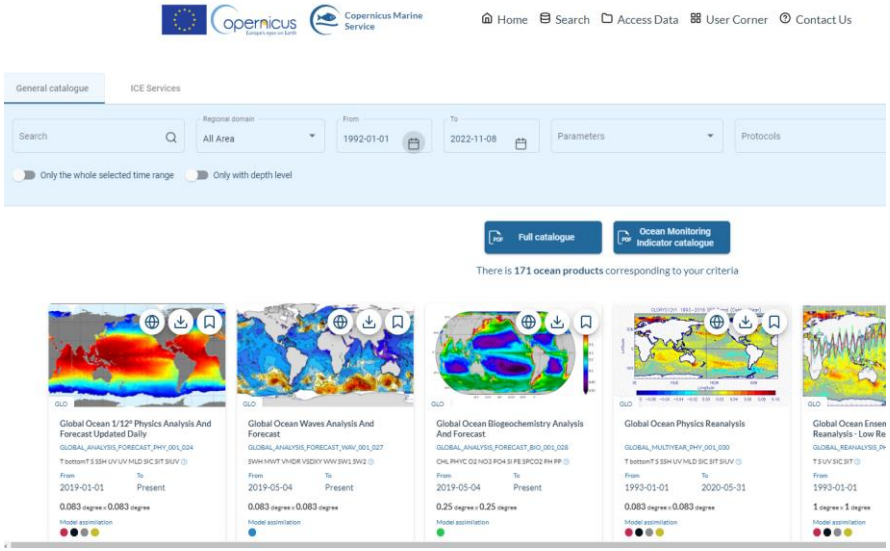
Copernicus

- Copernicus is a European system for monitoring the Earth.
- Full, Free and open access to data

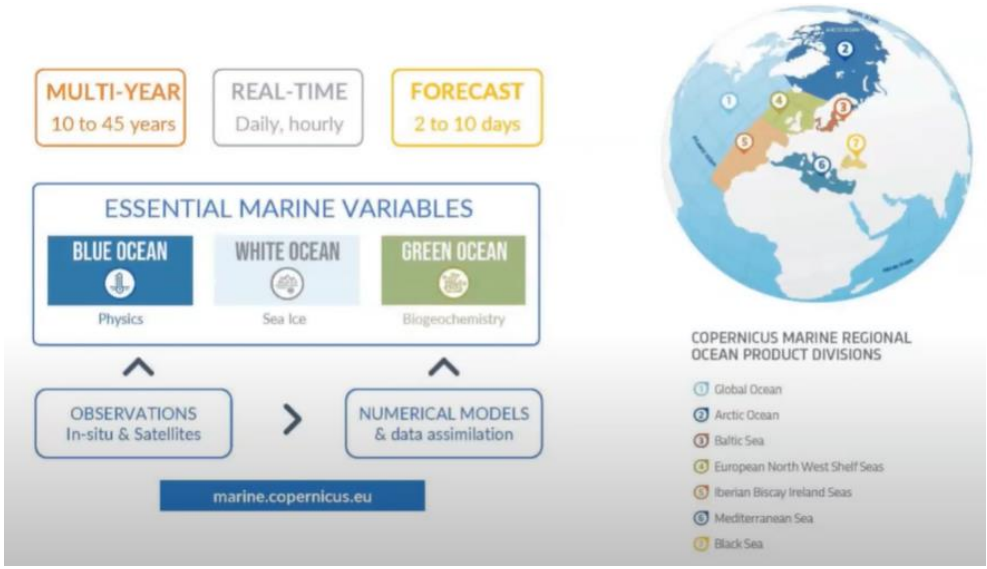
- Copernicus Marine Service products and services are meant to serve all marine applications: Marine resources, Maritime safety, Coastal and Marine Environment, Seasonal Forecast & Climate.

Copernicus Marine Service



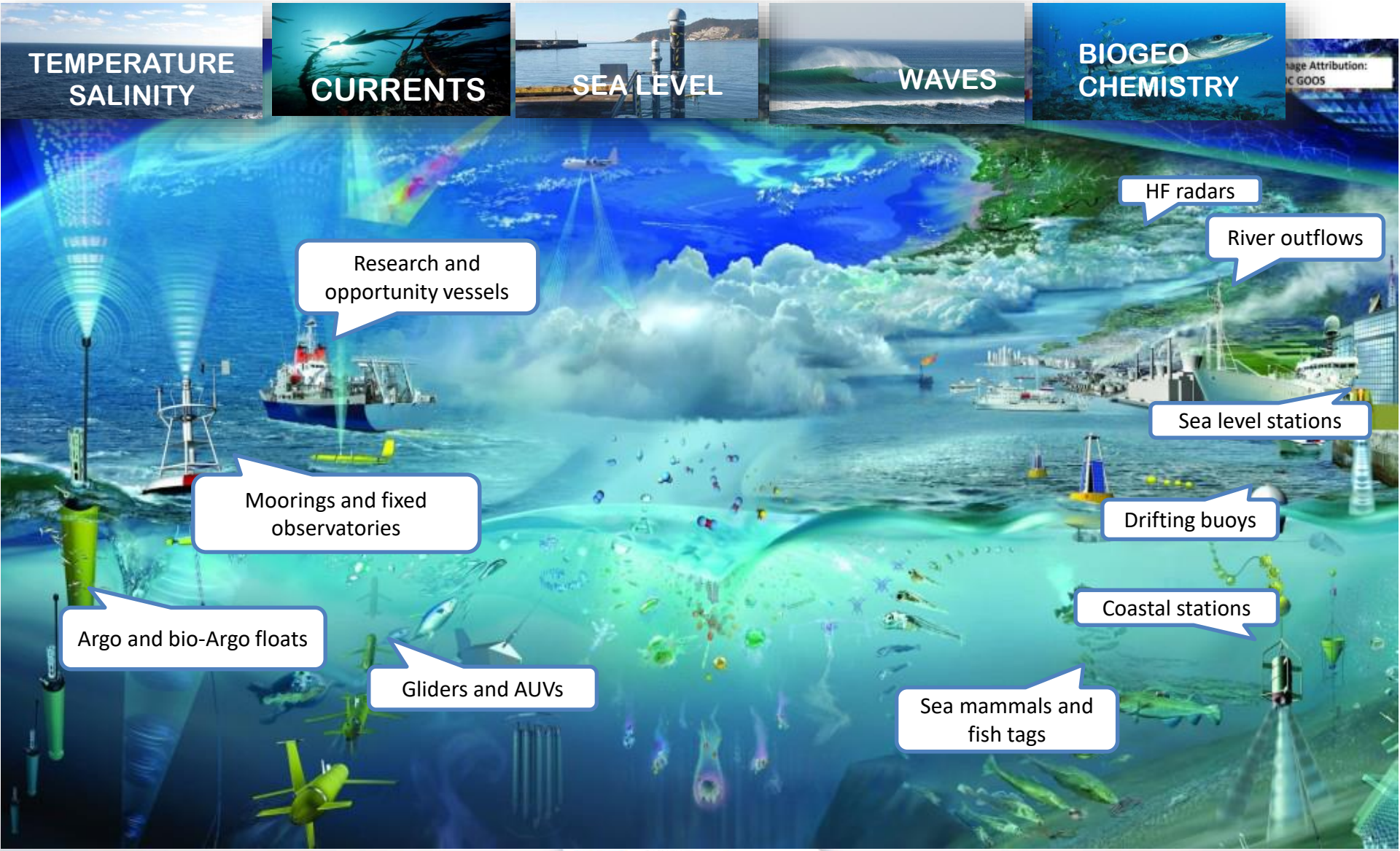
https://resources.marine.copernicus.eu/products

171 ocean products

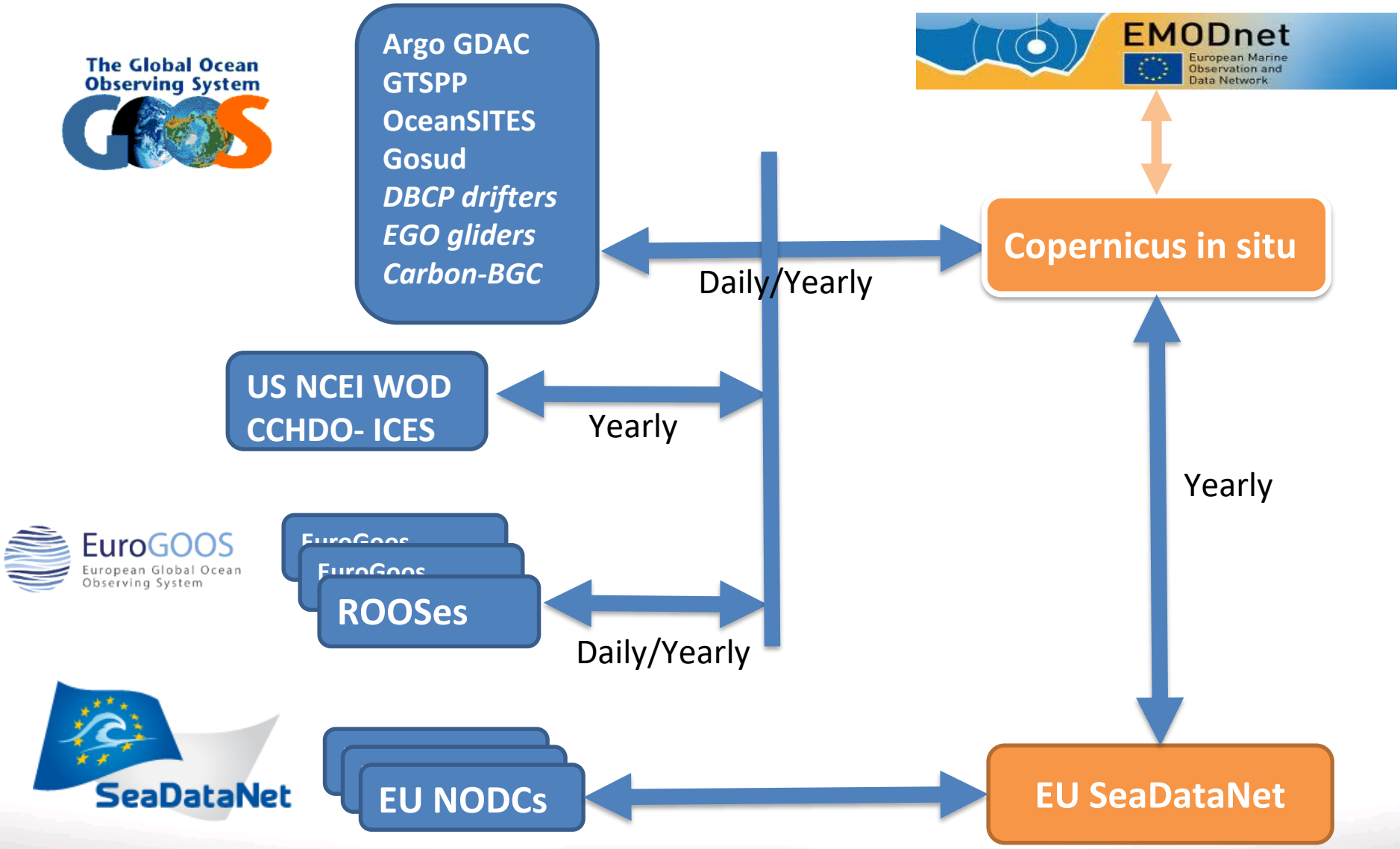


- In Situ TAC doesn't deploy any observing system and relies on data, exclusively funded by other sources

A multi-platform approach is essential



Interfaces with outside data systems



How are we organised

Management & NRT Operations in 7 Regions

Global: Ifremer / France

Arctic Ocean: IMR / Norway

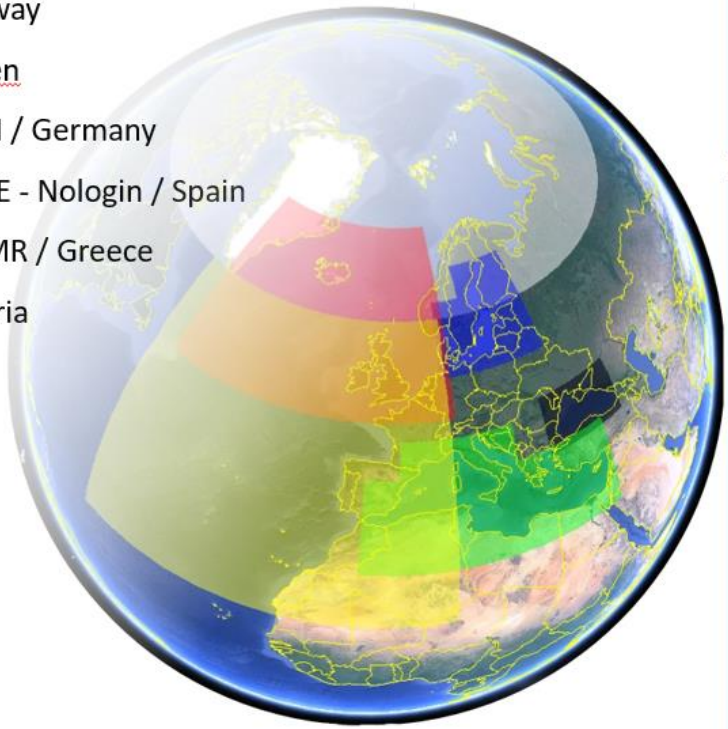
Baltic Sea: SMHI / Sweden

North West Shelves: BSH / Germany

Iberia-Biscay-Ireland: PdE - Nologin / Spain

Mediterranean Sea: HCMR / Greece

Black Sea: IOBAS / Bulgaria



Multi Year

T & S: OceanScope
Current (UV): CLS-AZTI-Ifremer-CNR-SOCIB
Waves: PdE-Nologin
BGC: IMR-Pokapok-HCMR-SYKE
Sea level: PdE-Nologin
Carbon: UiB
OSR/OMI: SOCIB-Pokapok

Cross Cutting

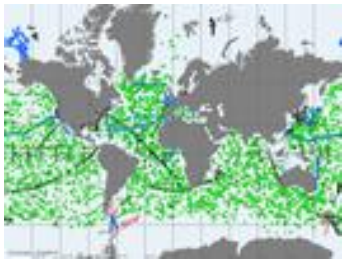
Product Quality: CLS-Pokapok
BGC assimilation: Ifremer-Pokapok
Technical WG: Ifremer-PdE
Communication: SOCIB

System Evolution

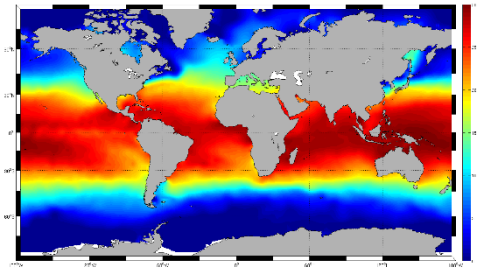
REP sea level: PdE-Nologin
Web & PQ Dash: SOCIB-PdE-HCMR-Ifremer
MinMax develop.: Pokapok
BGC enhancement: IMR-Pokapok-UiB
UV enhancement: CLS-AZTI-CNR-Ifremer-SOCIB

Copernicus Marine Service Catalogue

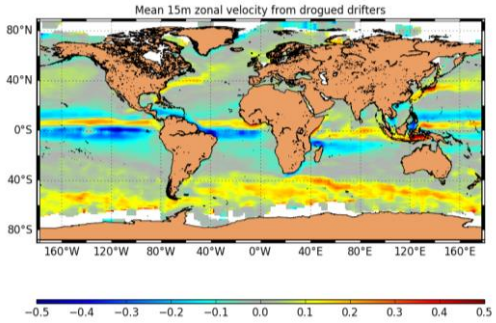
- **NRT – Near Real Time – products**
  - 7 regional multiparameter (continuously)
  - Global temp&sal OA/ISAS gridded (monthly)
  - Global currents (daily)



- **Global REProcessed products (twice a year)**
  - Temp&sal: CORA
  - Temp&sal OA/ISAS gridded
  - Currents
  - Waves
  - BGC: Oxygen, Chlorophyll, Nutrients, Carbon
  - Sea Level (2022)



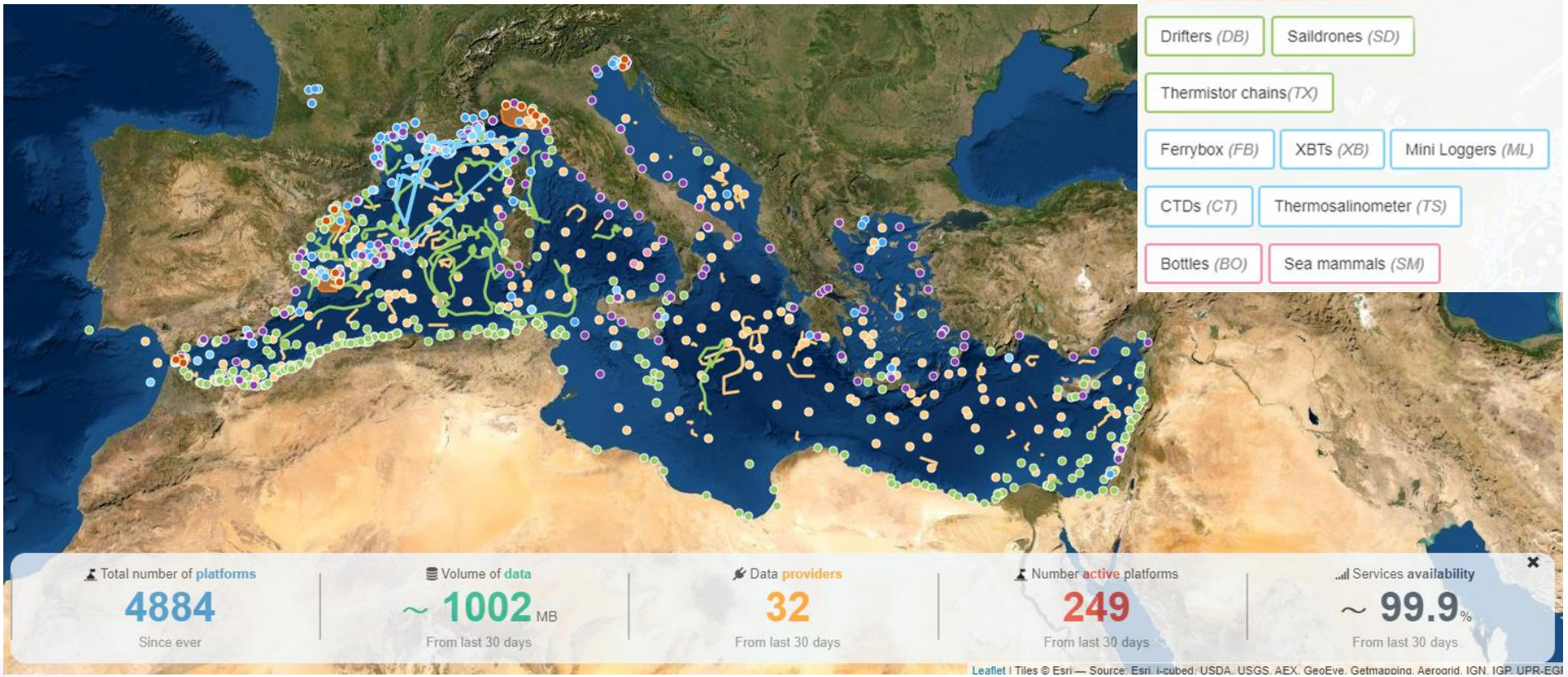
Surface temp. from CORA and ISAS



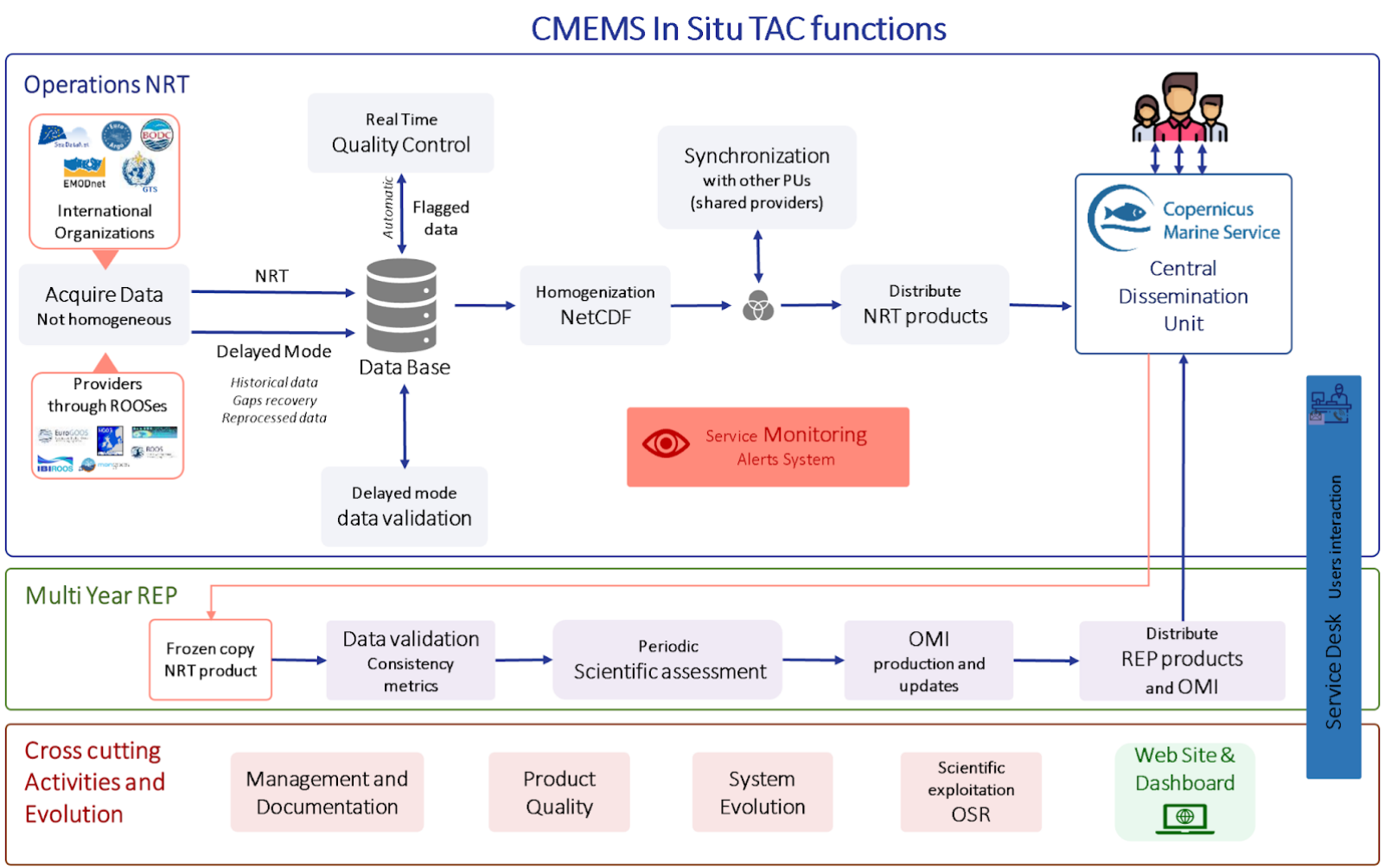
- **OMI – Ocean Monitoring Indicators (yearly)**
  - Extreme events in Baltic, NWS, IBI & Med

What we have

For the Mediterranean region

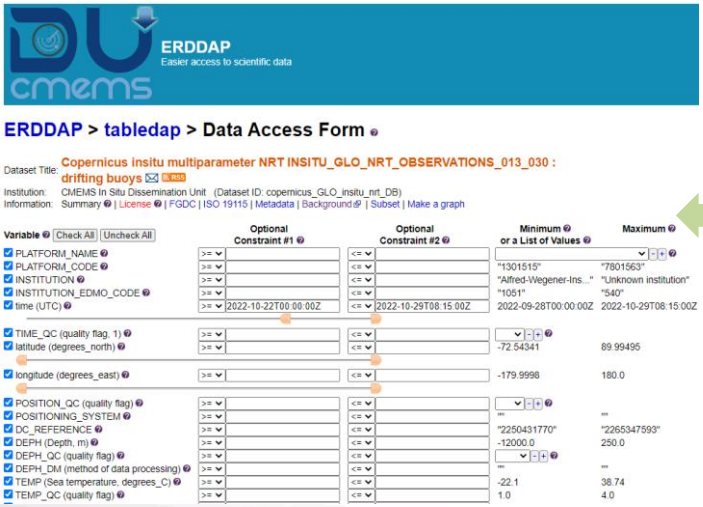


Data flow & quality control

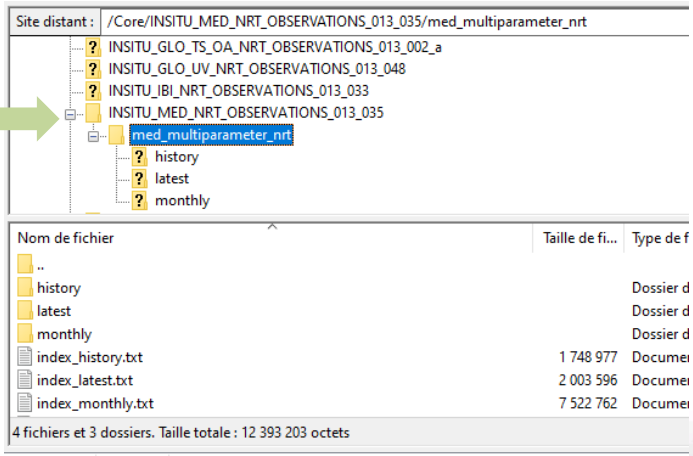


How to download the data

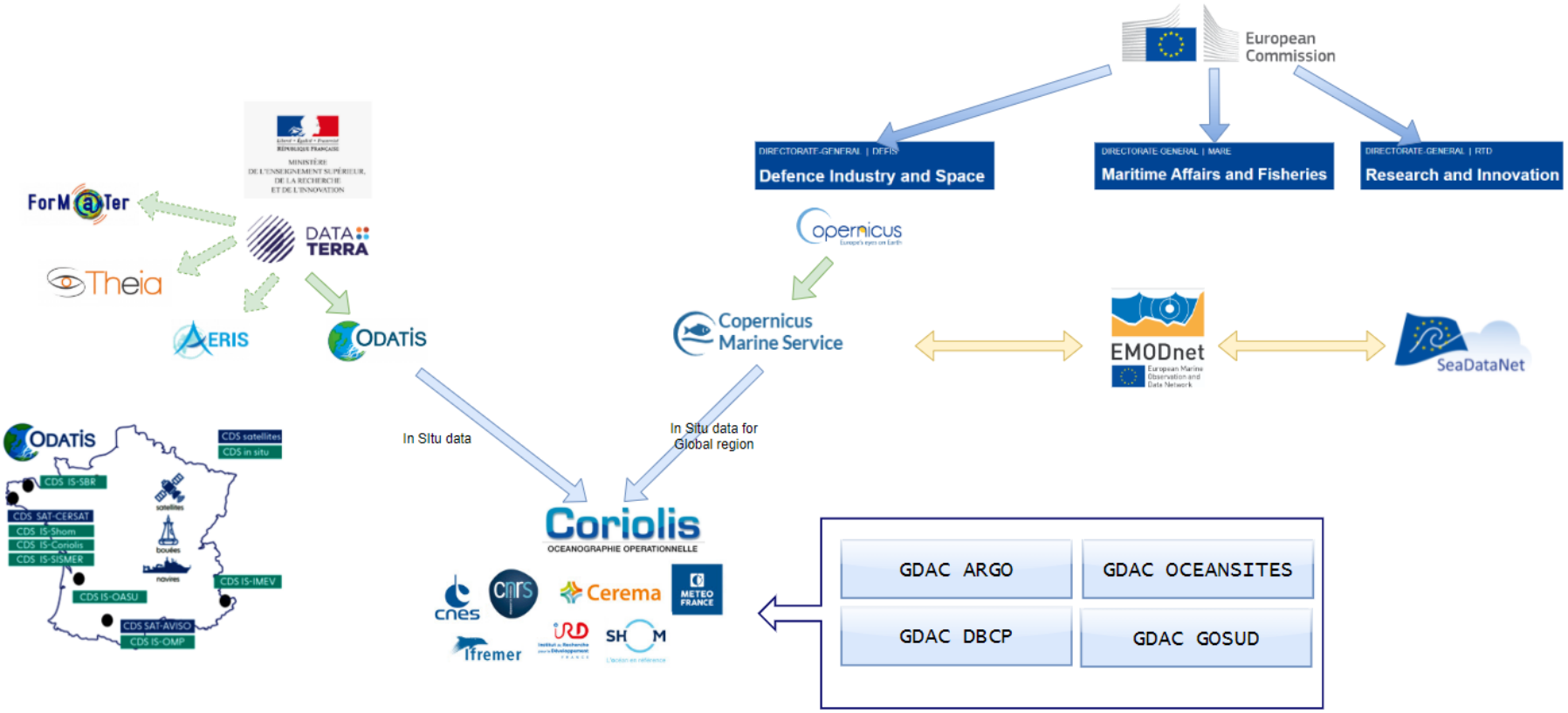
- Data in Mediterranean sea:
  - INSITU_MED_PHYBGCWAV_DISCRETE_MYNRT_013_035
    - cmems_obs-ins_med_phybgcwav_mynrt_na_irr
      - History => all the data from a platform organised by platform type
      - Monthly => the last 5 years organised by months
      - Latest => the last 31 days



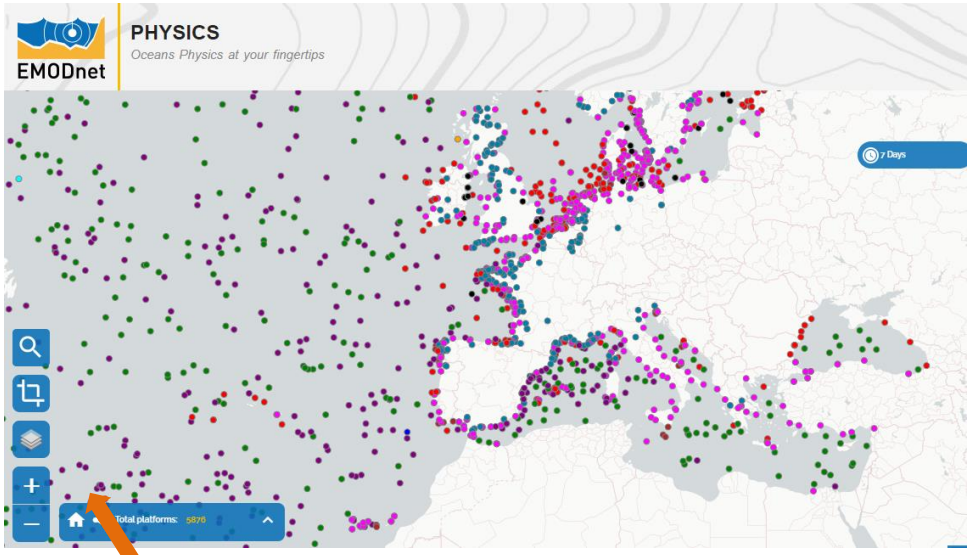
FTP
ERDDAP

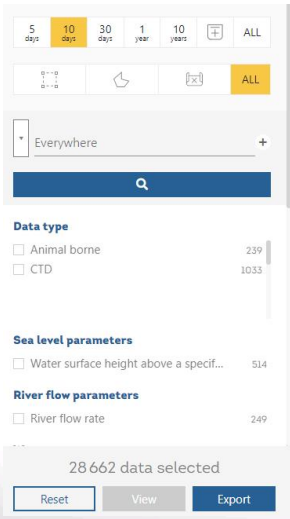


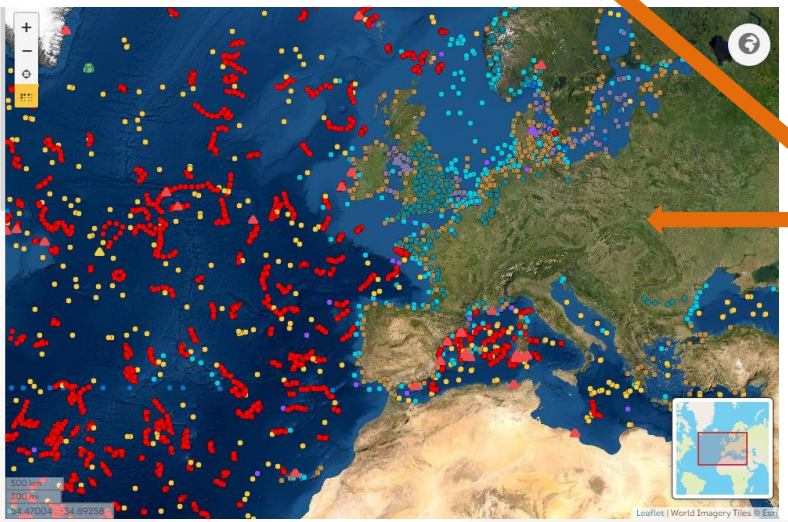
Different projects linked together



Different In Situ portals







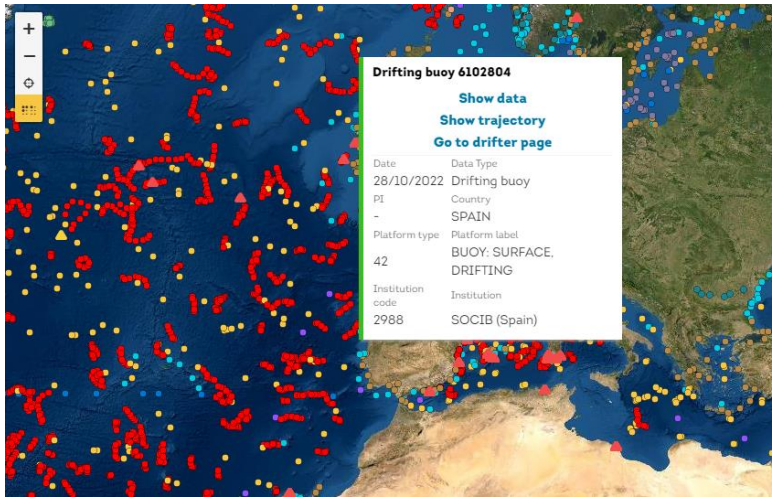
https://map.emodnet-physics.eu/

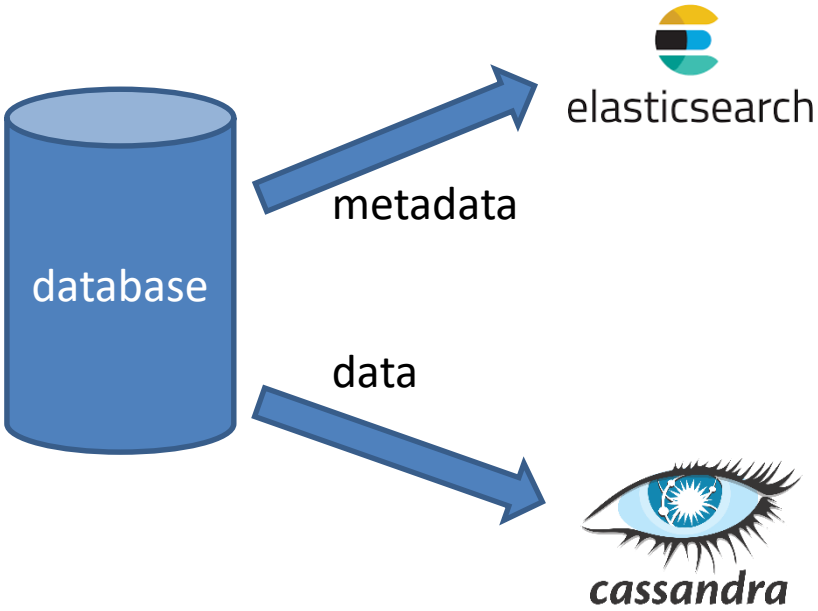
http://www.marineinsitu.eu/dashboard/

https://dataselection.coriolis.eu.org/

Big data technologies

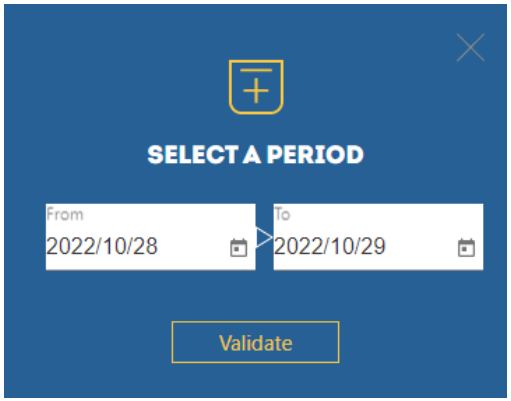
Coriolis : https://dataselection.coriolis.eu.org/
Fast access to 30 millions of metadata
and more and more data



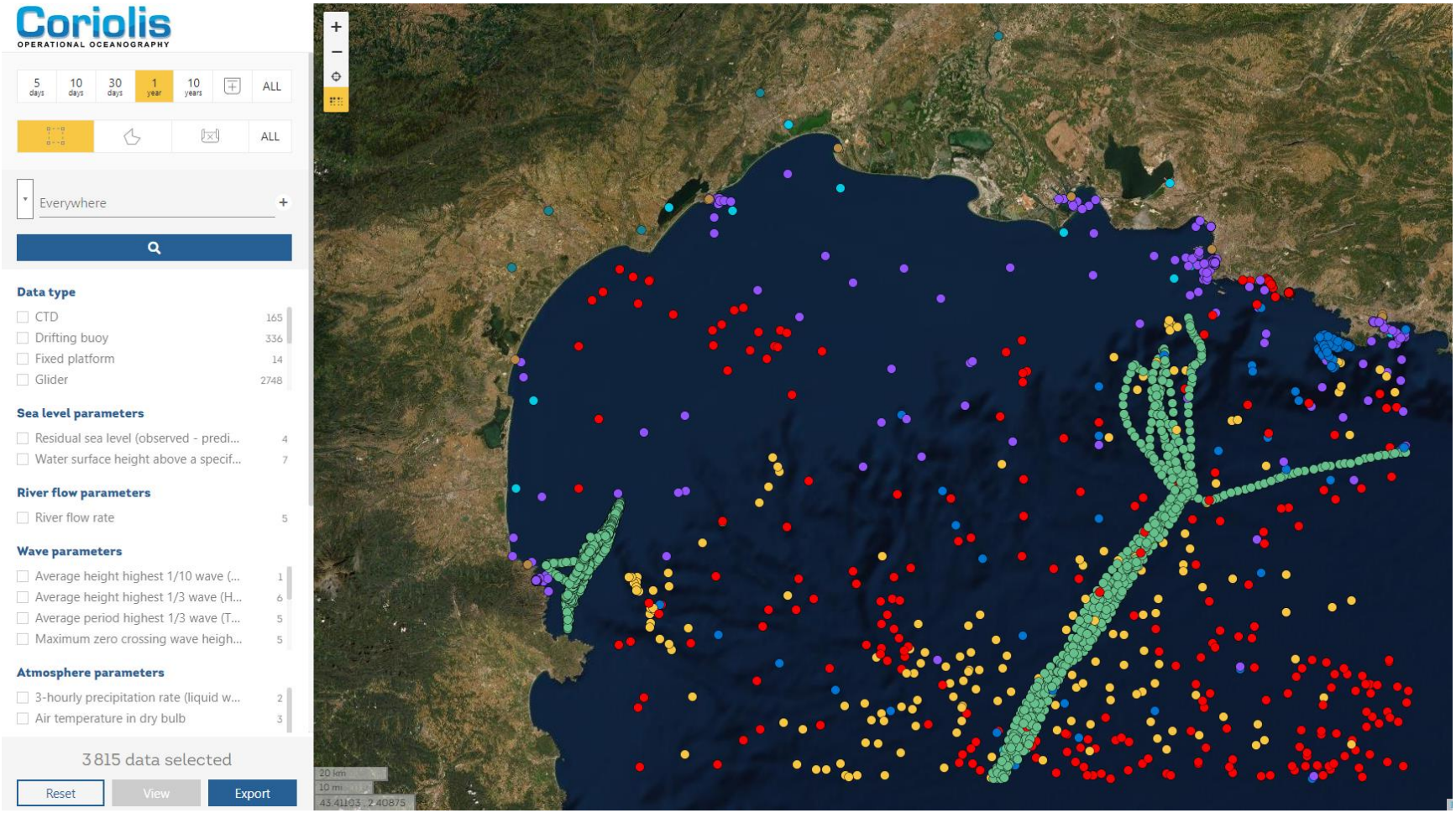


Advanced In Situ Data Portal

- https://dataselection.coriolis.eu.org
- Define an area / Define a time range



1 year - All parameters – all platforms



Visualise data

Drifting buoy 62698 - 22/02/2006 00:00:40

Drifting buoy

Country
FRANCE

Institution code
3548

Institution
IFREMER, Institut Français de Recherche pour l'Exploitation de la Mer

Platform type
42

Platform label
BUOY: SURFACE, DRIFTING

Status
Inactive

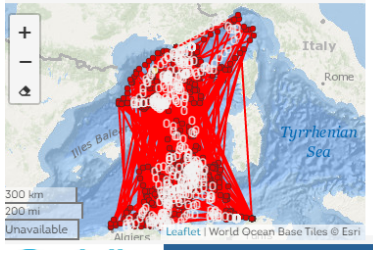
Data Center
CORIOLIS

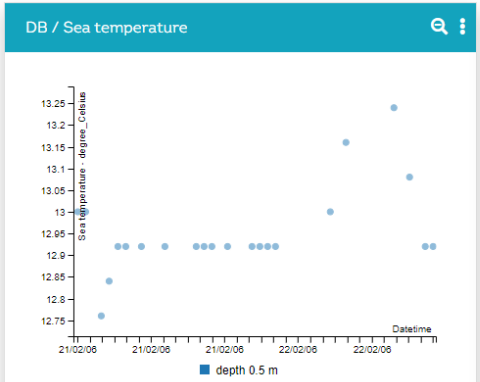
About

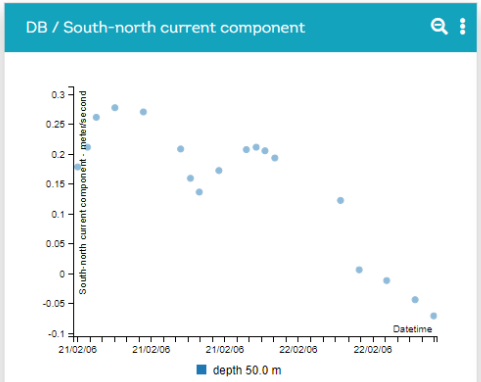
Datetime
22/02/2006 00:00:40 Quality: 1

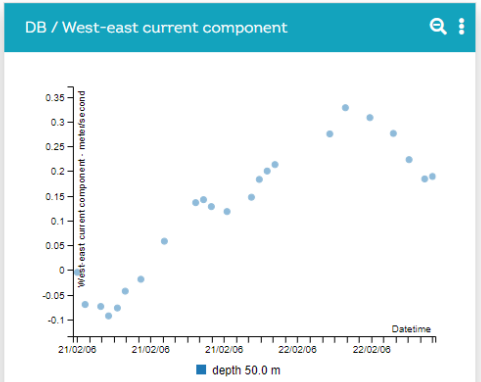
Last update date
27/10/2022 05:16:01 Quality: 1

Position
42.3279N 4.902E Quality: 1

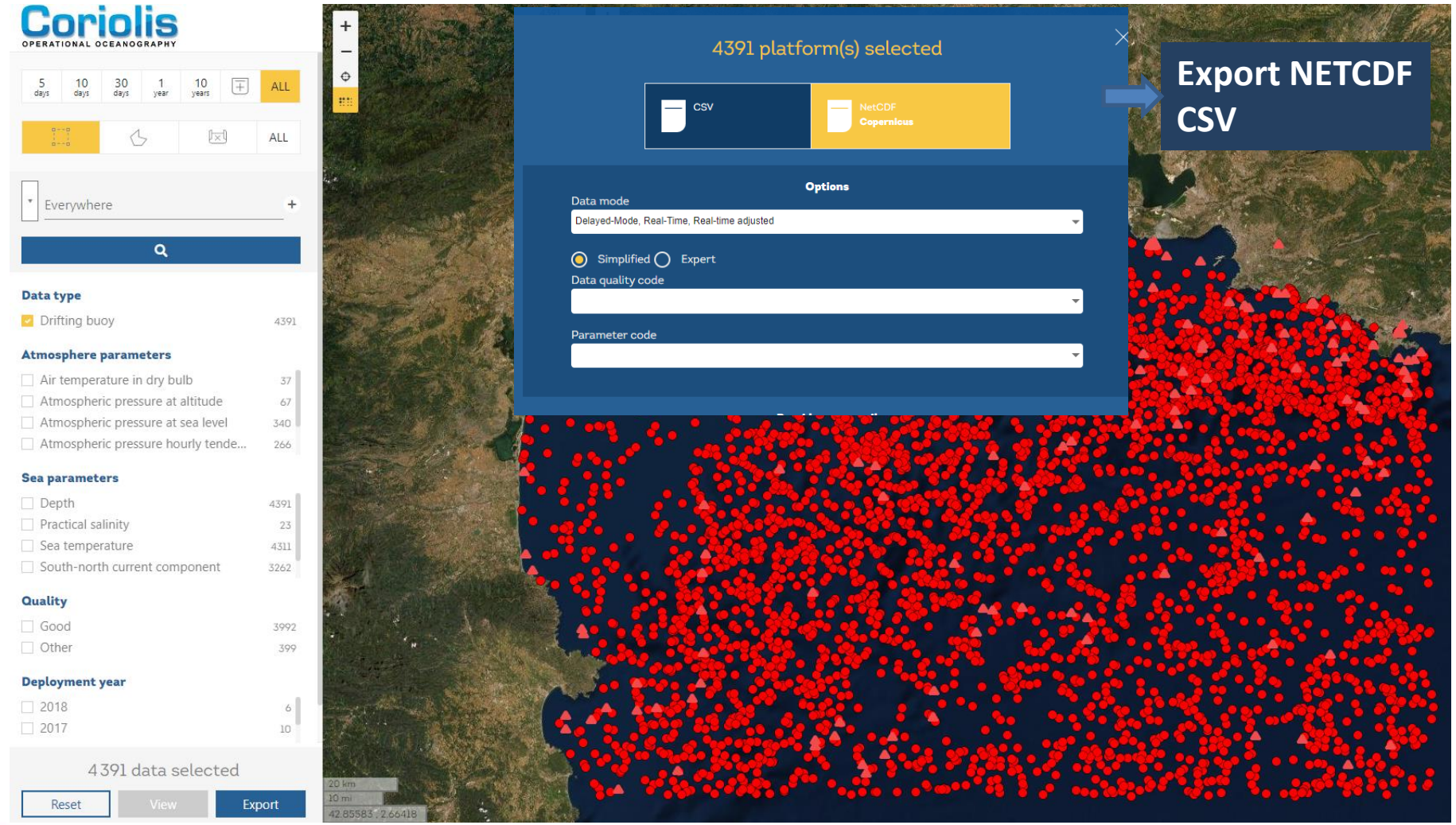








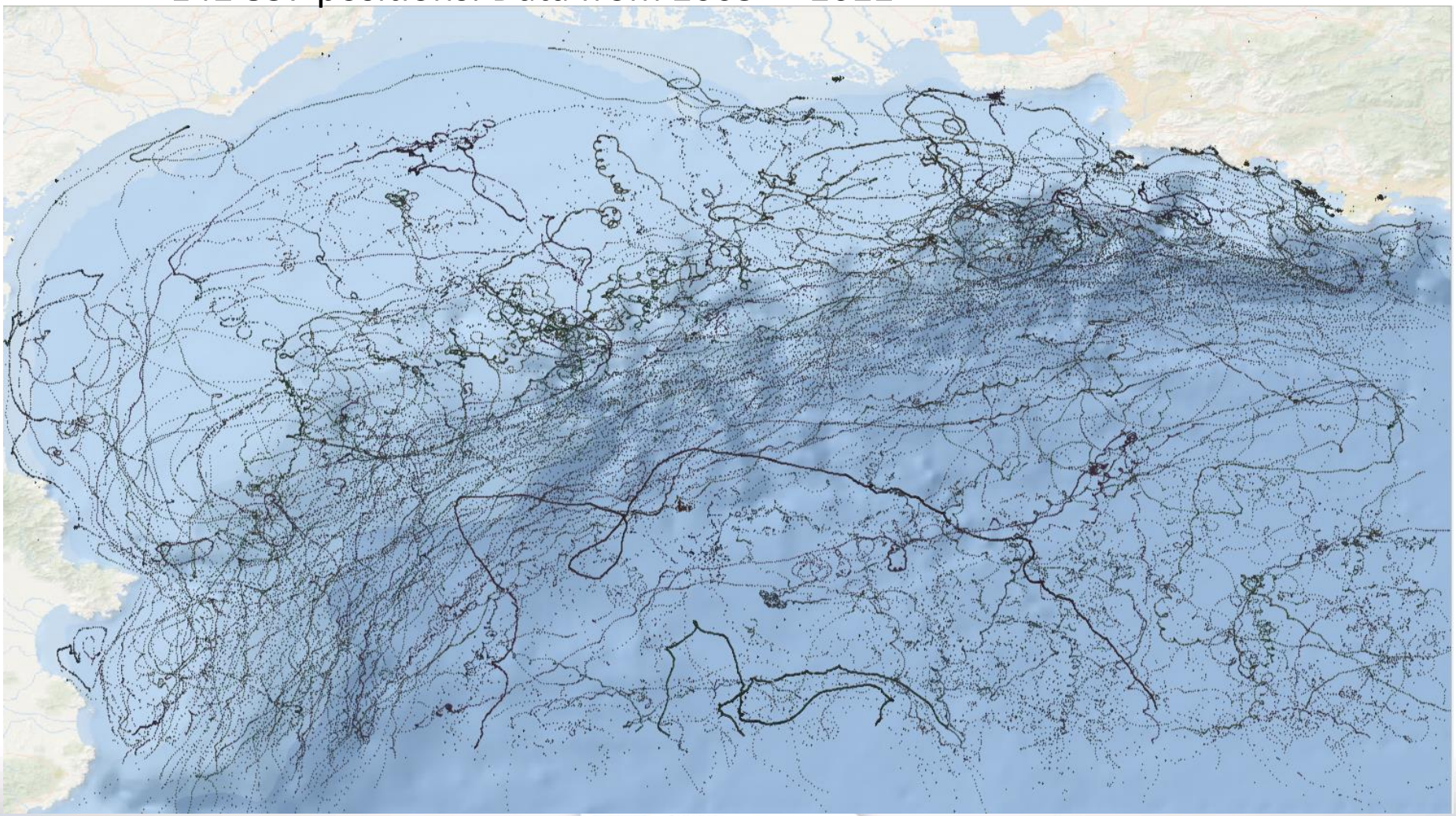
Download all drifting buoys data in this area



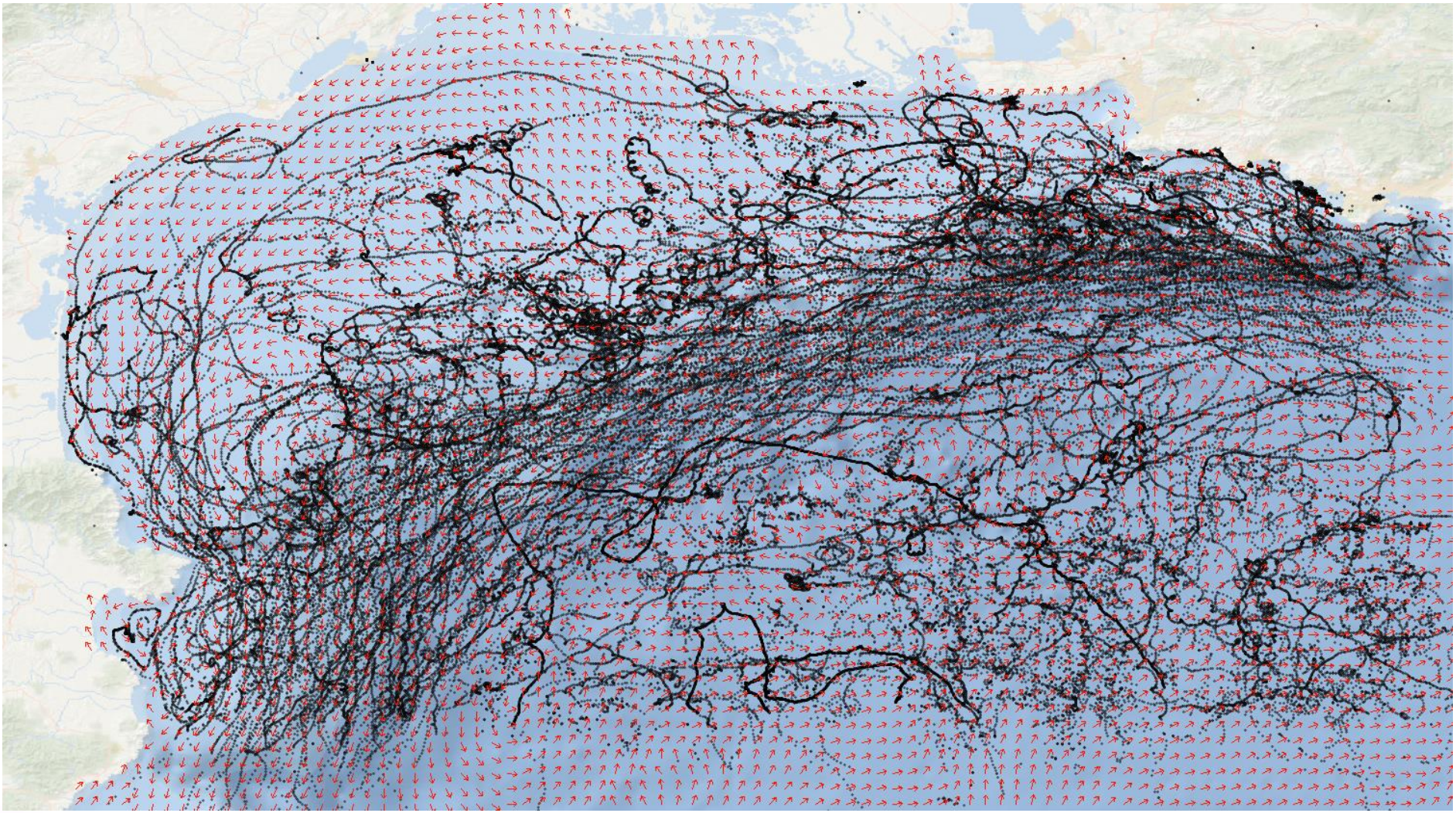
How long does it take ?

- 6h30 to retrieve all drifting buoys data in this area from Coriolis database :

  142 837 positions. Data from 2005 -> 2022



+ MEDSEA_ANALYSISFORECAST_PHY_006_013



The future ?

- Data portal will benefits from big data technologies
- One portal for In Situ + Satellites observation + Models
- virtual research environment (VRE)

Co-funded by the Horizon 2020 Framework Programme of the European Union