Copernicus
Marine Service

People working in
In Situ TAC
who and what

In Situ TAC consortium

15 partners from 8 European countries

- With regional and thematic experts
- Working in cooperation with in situ EU and international networks and initiatives (e.g. EuroGOOS, GLOSS, GOOS)
- And in collaboration with other EU in situ integrators

Dominique Obaton

Stéphane Tarot

Copernicus
Marine Service

Handling in situ data

From all over the world

- Open data (historical and near real time data)

- Collaborating with providers or groups of providers

- Ensuring management of the data (metadata harmonisation -FAIR, duplicate check, quality control)

- Taking account on regional (EU marine basins) specificities

- Having complementary knowledge on the different parameters (blue ocean: temperature, salinity, current, wave, sea level)
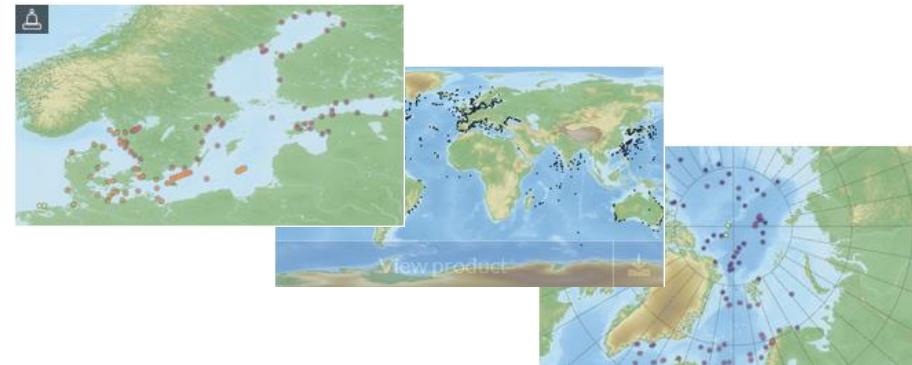
Copernicus Marine Service

In situ products within the Copernicus marine service

In situ products part of the Copernicus marine catalogue

16 in situ products in the catalogue

- 9 near real time products
- 7 multiyear products
- *Any data from the open ocean to the coast*

The near real time products (NRT): for most products, all parameters together (physical, biogeochemical and carbonate system ones)

The multiyear products (MY): global products by parameters. 5 blue ocean products, 2 green ocean products

In situ products = *data from programmes, data bases, institutes … and various platforms gathered together in one common product by regions or by variables.*
Data at measurement points (as much as possible close to the measure)

In situ products
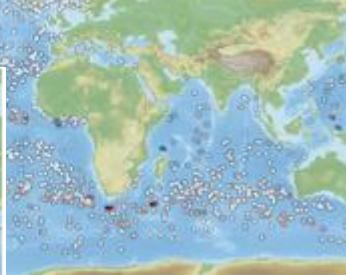
Continuous enhancement of products

By adding new sources of data (from new platforms and measurements, from old platforms recently unlocked, from new datasets …)

- This densifies the product over a region and over time

Duplicate check

- Each new source carefully checked to ensure the data is not already part of the product

Quality control (QC)

- Automatic QC applied on near real time (NRT) data
- Additional QC applied on delayed mode (MY) data, including scientific expertise

Copernicus
Marine Service

In situ products - focus on blue ocean (physical parameters)

Unlock of new or old data

Done within the In Situ TAC consortium and through collaboration with EMODnet and EuroGOOS -MIC WG

Data flow

● 1. As soon a new data is avaibable, it is harvested in EMODnet physics and accessible to users

● 1. In parallel, it is quality checked in In Situ TAC and afterwards made available in the Copernicus marine catalogue *–with all commitments linked to operational products*

● 2. EMODnet physics harvests In Situ TAC data 3 times a day

which then contents all In Situ TAC data

And other ones: some not QC yet by In Situ TAC, some additional parameters (e.g. river, noise), some datasets for which collaboration In Situ TAC-providers not established yet
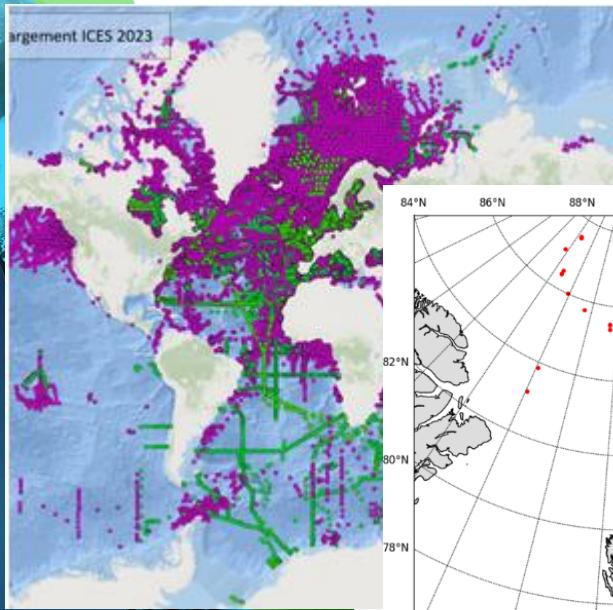
Main achievements

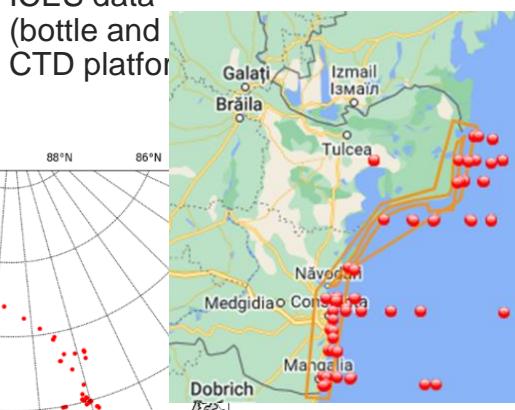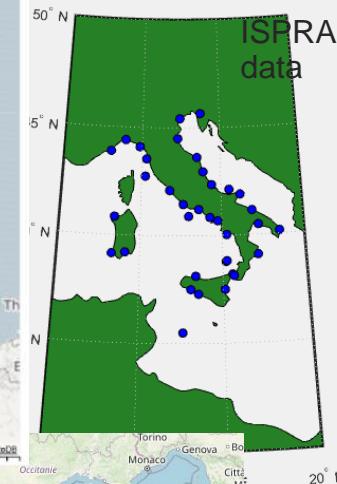# Integration of new data

ICES data
(bottle and
CTD platform

CEFAS
Wavenet
network

ISPRA
data

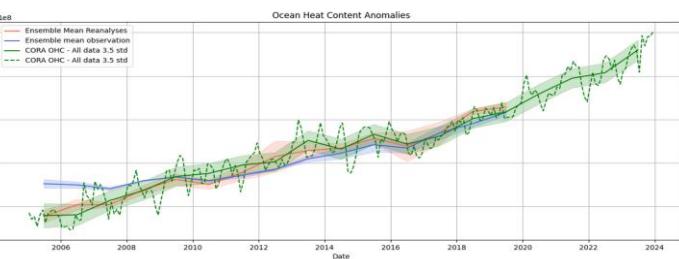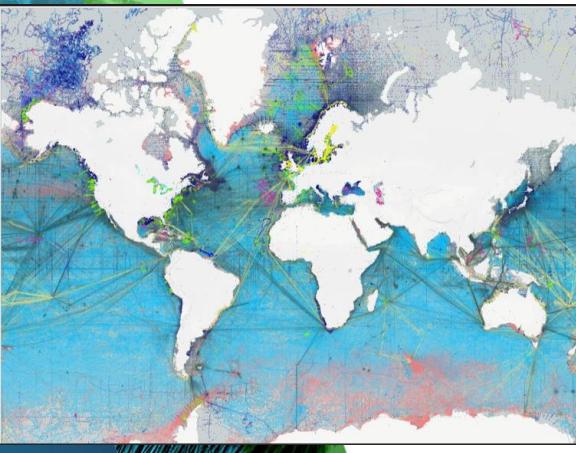The 7 NRT products
include synthetic argo
profiles

New
implemented
buoys

Copernicus
Marine Service

Improvements of the global multi year T&S product (CORA product)

Following mixed feedback from users

Discussions and meetings with users to understand and make corrections

- Change and evolution on the metadata, strengthening of the production chain
- Correction of the data following comparison with other data
- Additional document to detail the product
- More validation of the product
- Meetings organised with users in 2023 and planned in 2024
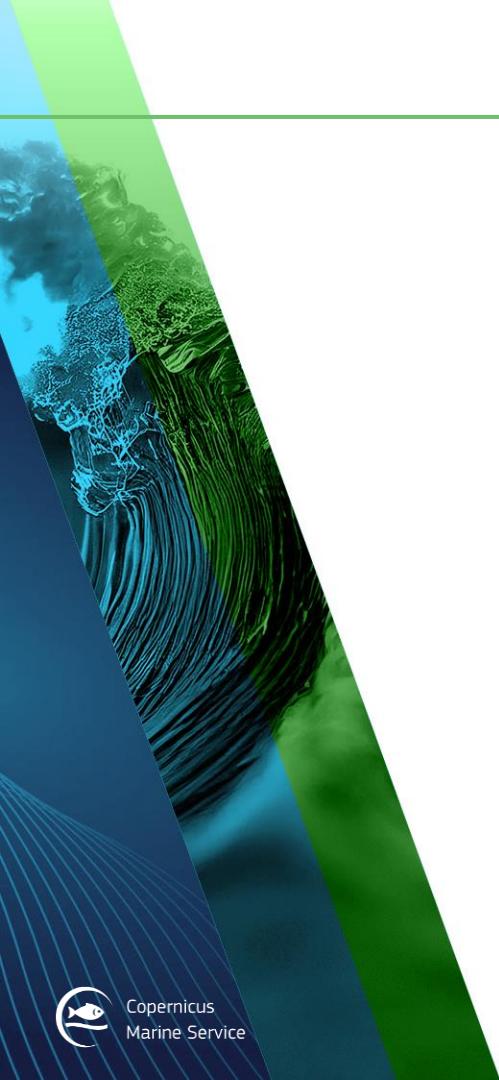
New format for all near real time in situ products

Products updated to take account on the latest CF convention 1.11 **with the improved definition of the discrete sampling geometries**

Important transition for users

- Heavy work
- Good management
- And good synchronisation among In Situ TAC partners

Copernicus
Marine Service

Collaboration: understanding and complementarities of the different EU initiatives

- With EMODnet (physics, chemistry and ingestion) and EuroGOOS

  Though the MIC WG for a better interaction with new providers (to unlock data)

- With EMODnet

  Through the stakeholder EMODnet chemistry board for a better understanding of both data integrators

  By the contribution to a common paper « European in situ marine data service landscape » and the preparation of an infography (MIC and EMODnet secretariat) to highlight the EMODnet and Copernicus marine (in situ) complementarities

- With JERICO

  Through the In situ TAC stakeholder board and the JERICO user forum

  Thanks to the FOCCUS EU project

  To better take account and highlight the coastal data and flow

Copernicus
Marine Service

2024 plans and perspective

2024: worldwide extension of sea level product

Non official agreement with GLOSS yet

But integration of GLOSS platforms within In Situ TAC is possible

- With a step by step approach and communication with GLOSS

- Plan for 2024: addition of at least 65 new stations distributed worldwide, to ensure global coverage

UHSLC (Hawaii) and IOC-SLSMF (VLIZ) data

New GLOSS stations MY Sea Level REP - Proposal March 2024

Number of years

Copernicus Marine Service
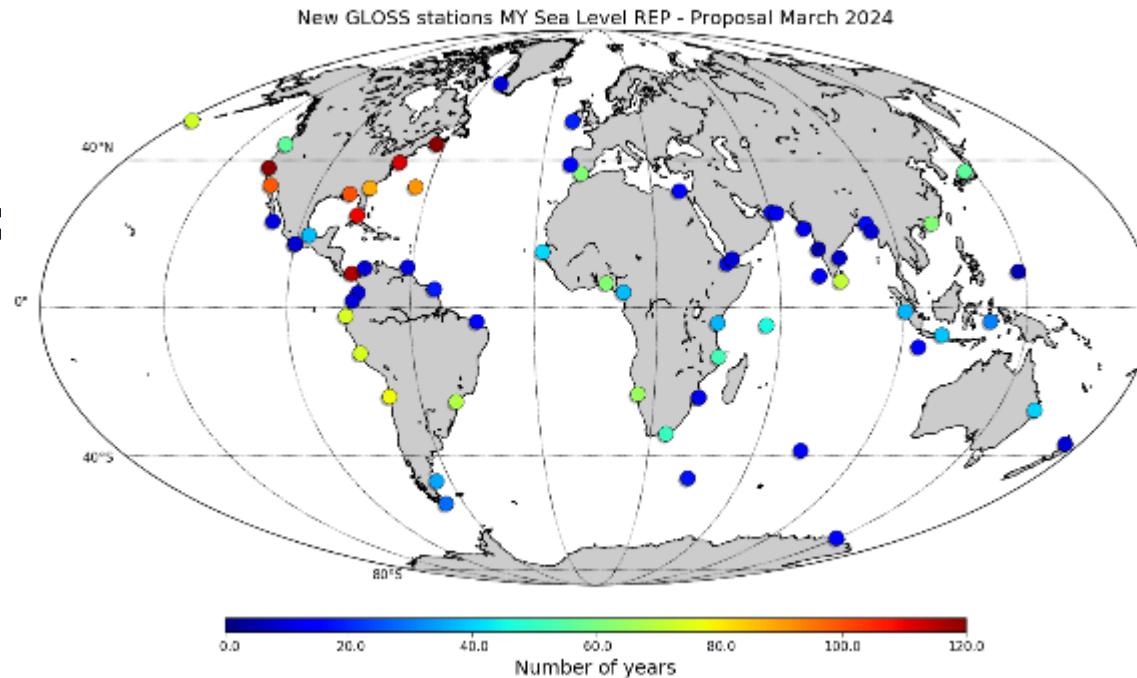
2024: better visibility of the in situ products

Thanks to the new CMEMS Marine Data Store -MDS

- MyOceanPro allows the visualisation of 11 in situ products (out of 16) the same way as the other products in the catalogue

- Still no subsetting possible for in situ products, but hopefully this year

As MDS is based on cloud computing and big data technologies, data cubes allow to consider sparse in situ data the same way as gridded model data

In Situ TAC follows with great interest all developments of the MDS

Perspective

Harvesting new data
- Additional parameters not yet considered from known platforms
- From new unlock platforms and new providers (with EMODnet support)

Highlight and enhancement of coastal data
- With the JERICO RI

Continuous improvement the QC
- From the multiyear products back to the near real time ones & the providers

In situ products visibility
- By providing feedback to the MDS developers
- By listening and answering to user needs