

Assessment of existing services and new services provided by the Copernicus Marine In Situ Thematic Assembly Centre (INSTAC)

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And the CMEMS INSTAC partners

Context

The Copernicus Marine Environment Monitoring Service (CMEMS) is one of the six operational services of the European Copernicus programme. It is designed to respond to issues emerging in the environmental, business and scientific sectors. The role of the CMEMS Thematic Assembly Centres (TACs) is to collect, process and quality control upstream satellite and in-situ data required both to constrain and validate modelling and data assimilation systems and to directly serve downstream applications and services.

Within CMEMS, the In Situ Thematic Assembly Centre (INSTAC) ensures that a steady supply of in situ ocean measurements is made available to the other service components and to other external intermediate and final users

The In Situ TAC provides vertical profiles and time series data coming from different types of instrument (floats, drifters, moorings, gliders, vessels...) and different physical parameters (temperature, salinity, currents, sea level, ...). In the frame of the first phase of CMEMS (May 2015-April 2018), the In Situ TAC has consolidated the Near Real Time products and added to the catalogue reprocessed historical products:

Existing services

During phase 1 (2015-2018) the project set up the operational service and provided data related to the following areas:

- In Near real time
 - Temperature and salinity at both regional and global levels
 - Wave at both regional and global levels
- In delayed mode (reprocessed products)
 - A merged product (1950-2017) between the V1 CMEMS product and ENACT4 product managed by MetOFFICE.
 - A surface current product, designed for reanalysis, that integrates the best available version of in situ data for Ocean surface currents for the period 1990-2017.
 - A wave product that integrates quality-controlled wave data, both near-real time and historical, collected from more than 400 platforms around the globe.
 - A first version of an historical BGC (O2 and Chla) product



Figure 1: Dashboard of the INSTAC service <http://www.marineinsitu.eu>
30 days of data coverage

The INSTAC is a distributed centre with a global component closely link the JCOMM networks and 6 regional components developed in partnership with the EuroGOOS ROOSes (Regional Operational Oceanographic Systems).

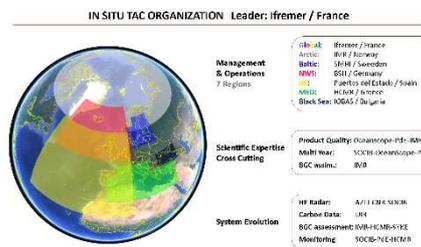


Figure 2: INSTAC organisation

Moreover, the CMEMS INSTAC is one key element of the in situ data management in Europe closely linked to the major European data integration initiatives such as EMODnet Physics, EMODnet Chemistry and SeaDataNet

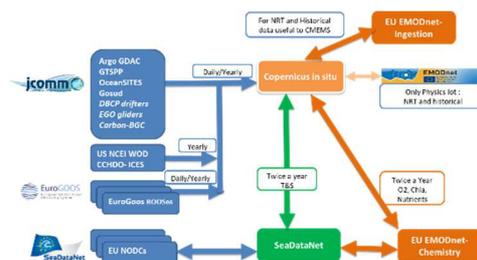


Figure 1: CMEMS INSTAC Interfaces with other data systems

New services planned for the CMEMS INSTAC phase 2 (2018-2021)

In the second phase on CMEMS INSTAC (2018-2021) will extend its activities to the distribution of HF-Radar, the integration of carbon products in link with ICOS and to the extension in time and space coverage of the existing products.

Integrated services such as CMEMS INSTAC products, facilitate and extend the use of existing in-situ observation by a wider community and also help highlighting the existing gaps in the observing systems within an integrated multiplatform design.

The proposed presentation will assess 3 years of IN SITU activity and will detail the ongoing work planned for phase 2