

EMODnet and Copernicus Marine Service: Towards a reinforced partnership

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Both initiatives have the same operational objective - providing free and open access ro quality-checked data on the marine environment. The aim was to benefit users by consolidating the partnership





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Towards a reinforced partnership

Toulouse, 18th September 2017

Minutes of the Meeting (action and agenda here [4])

Before starting with the Agenda, It has been agreed that 3 levels of discussions are needed: Operational & Technical level, Management & Secretariat level, Political & Policy level. During today's discussion, references to the first and second level will be done. Nonetheless, it is clear that a more political & policy level discussion is needed, in order to reach a consensus at political level.

1. Brief presentation of Mercator Ocean and Copernicus Marine Service:

Mercator Ocean [5] is an oceanography center based in Toulouse with more than 20 years of experience in the domain. Mercator Ocean will welcome new EU entities by the end of the year transforming the governance into a pan-European one.

The Copernicus Marine Service [6] reached fully operation in 2015 and since then it delivers everyday on a full, open and free basis to more than 10 000 users information about the state of the ocean. More than 150 products are presents in the catalogue of the Copernicus Marine Service today and they could be group in physics, biogeochemical and waves products. The products can be an in situ or satellites observations as well as a model output. Those products are delivered to the user via the friendly web portal marine.copernicus.eu upon registration. This can guarantee good statistics on the typology of users and the products download.

A presentation on the functional system [7] of Copernicus Marine Service has been provided underlining the pan-EU production of both Thematic Assembly Center -TAC (for In Situ data, Ocean Colour, Sea Level, OSI -Sea Surface Temperature, Sea Ice and Wind Satellite data) and for the Model Forecasting systems

-MFC (one per EU basin). The TACs, after processing the raw data, feed the MFCs which provide homogenous information per Basin (Artic, Baltic, NWS, IBI, Med and Black Sea) as well as publishing the data in the catalogue.

A visit to the Copernicus Marine Service Service Desk has been organized showing the helpdesk room center and its dashboard that constantly keep an eye on the user statistics (type, area of benefits, products download etc..)

In terms of major event, next week the Copernicus Marine Week will take place in Brussels. Mercator Ocean contracted to EuroGOOS the production of an institutional factsheet to shed light to the EU in situ world. The factsheet will be distributed to all participants and will contribute to the effort of highlight synergies as well as differences in the two systems in order to better serve the community and to avoid frustrated users.

1. Brief presentation on EMODnet

The European Marine Observation and Data Network (EMODnet) is a network of more than 150 organisations providing access to data, metadata and data products through 7 thematic portals (Bathymetry, Geology Seabed Habitats, Physics, Chemistry, Biology and Human Activities) and a Central Portal. It also offers a number of tools and services to discover, manipulate and display the data. EMODnet is funded by the European Commission/DG_MARE to support blue economy and has developed through a step-wise approach which began in 2009. In the current phase (Phase III) increased efforts will be done to achieve a greater coherence and ensure EMODnet becomes the gateway to marine data in Europe. This entails a reinforced Secretariat, with an extended mandate which includes giving support to the development of EOOS (European Ocean Observing System) and the European Atlas of the Seas. Helpdesk services are currently being implemented in the Central Portal as well as in the other thematic portals.

EMODnet holds some task in the development of the EU initiative EOOS: in concrete, a major conference will be organized in November 2018 to convey the EOOS stakeholders and discuss future plans. In spring 2019, a major EMODnet conference will take place.

Those have been identified as keys event where to promote both EU systems.

1. MoU: current state and future actions

Mercator Ocean signed a Memorandum of Understanding (MoU) in August 2016 with the EMODnet secretariat for the provision of In situ data from the Copernicus Marine Service to the physics portal of EMODnet. It has been stated that the MoU would need to better reflect the complementary of the two systems: if from one side we have the provision of the data from the other we have the visualization of them via different tools. Physics is playing also the important role of unlocking and putting in the common backbone infrastructure the data gathered. It is also important to acknowledge credits as much as possible and to increase visibility both side of this effective cooperation.

Action:

An important issue that requires attention is related to obtaining information and statistics about the use of the data, products and services. So far, no registration is needed to access data via the EMODnet Physics portal when retrieving data up to 60 days. Beyond that period, an EMODnet user shall register to CMEMS to be able to have products through EMODnet service and then statistics are possible and shared between CMEMS and EMODnet. There is a clear lack of statistics on the type of user and products used for the first 60 days on EMODnet side which we shall try to solve. Ideally, One possible solution is to add a registration process within the full range of EMODnet portals which would allow tracking the user habits in a way compatible with the CMEMS system to allow exchanging users' statistics between Mercator Ocean and EMODnet portal operators.

There is also a strong interest for Copernicus Marine Service to access (through its in-situ Thematic Assembly Center) part of the data from the EMODnet Chemistry portal. This is required to monitor the quality of CMEMS biogeochemical regional models and develop integrated assessments of the health of European Seas. DG MARE pointed out that the uptake of EMODnet chemical data by CMEMS should be very much encouraged and facilitated. Full visibility of EMODnet should, however, be ensured. MO explained that this can be easily achieved (this is currently done when CMEMS is using external data sets, e.g. from ESA CCI or Eumetsat SAF). Technical details on interfaces to set up between EMODnet Chemistry portal and CMEMS will be analyzed by MO and the CMEMS in-situ TAC. Results will be reported at the next meeting.

1. EMODnet Checkpoints

The EMODnet data stress tests or 'checkpoints' are a highly important exercise on the quality and fitness-for-purposes of existing marina data and to highlight gaps. One of the data sets screened is the Copernicus Marine Service – in situ component.

There is one Checkpoint for each EU sea basin and 7 challenges for each of them. In February 2017 a conference has been organized to provide results of these challenges.

Concerning the assessment of CMEMS products for these challenges from the Mediterranean Sea Checkpoint:

- general assessment very positive for CMEMS on appropriateness and availability
- more than 45 products used
- message to CMEMS: need to have higher resolution both horizontal and vertical in products Gaps in in situ observations have been identified.

Other Checkpoints are on their way to give the same information for the different sea-basins.

1. Take-up by business

Both parties has exchanged over best practices on how to involve the private sector in the uptake of the data/products.

No actions taken in relation to this point

1. Copernicus Marine Week

A detailed presentation on the upcoming Marine Week was provided. The Copernicus Marine Week is a 5 days event organized by Mercator Ocean and 18 partners – regrouping a big share of the Marine Community in EU. During the week, 5 plenary sessions, 14 splinter sessions as well as a side event at the European Parliament will take place. More than 130 speakers will join this major Marine event. The Marine Week is designed as open and transparent mid-review of the achievements reached since May 2015 (when the service turned fully operational) and the upcoming challenges that the Service will have to face in the second phase of the implementation – until 2020.

During the Marine Week, the visual on "in situ EU systems" will be made available to the participants.

- 1. CMEMS & EMODnet activities with respect to in situ observation
- CMEMS activities on the in-situ component of Copernicus

Mercator Ocean as the EU delegated body for the Copernicus Marine Service is working with European Environment Agency, Euro-Argo ERIC and EuroGOOS to consolidate and improve global and regional in-situ observing systems. Data access and data processing/dissemination issues are today well handled through CMEMS in-situ TAC and cooperation with EMODnet.

Main issue/concern is the upstream in situ infrastructure. There are critical sustainability gaps and major gaps for biogeochemical observations (e.g. carbon, oxygen, nutrients, chl-a) at global and regional scales. New mechanisms need to be set up between the EU and Member States to address them.

- EMODnet activities in the EOOS context

EMODnet holds some task in the development of the EU initiative EOOS: in concrete, a major conference will be organized on 21-23 November 2018 in Brussels to bring together the wide range of stakeholders, discuss future plans and progress the EOOS from concept to reality .

It could be worth considering a joint action between DG MARE (EMODnet), DG GROW (Copernicus and Copernicus 2), DG RTD (Galway, Belem, H2020 projects) in the framework of EOOS to address cross cutting issues.

1. Future joint activities

A presentation from the Sea Habitats portal has been done showing how new combined products can be made available to user serving better their needs. EMODnet Seabed Habitats uses Copernicus Marine currents and waves products for the Mediterranean and Black Sea and used boundary layer modelling to predict values at the sea floor (using bathymetry from EMODnet Bathymetry and substrate from EMODnet Geology).

Those derived products are extremely useful for the Sea Convention and their reporting obligation.

It can be considered as an interesting example of mutualizing efforts to better serve the needs of the Marine community: producing new products building on existing freely available parameters.

1. Wrap-up

At the end of the meeting the following actions have been agreed upon

- I. Regular meetings need to organized ideally every 6 months with the objective to better define the boundary and interfaces of the two systems, analyze dependencies and requirements (e.g. what are the long term needs of EMODnet Habitats with respect to CMEMS offer, what are CMEMS requirements for EMODnet bathymetric data), mutualise effort & offer when possible, agree on joint actions (e.g. in-situ observing system/EOOS, communication) and converge in the long term to a sustainable and effective cooperation.
- II. User tracking and user knowledge: both Copernicus Marine and EMODnet need to better know their users. Information on users should be shared between the two systems. On the longer run, common approaches to monitor users could be developed. There is also a need to share statistics for the EMODnet physic portal.
- III. EMODnet Physics Portal: It is important to continue ensuring visibility of the contribution of the Copernicus Marine Service (that provides input data to EMODnet physics).
- IV. EMODnet Chemistry Portal: interfaces with CMEMS in-situ TAC should be developed. This will be analyzed and reported back at the next meeting.
- V. Events/stakeholders interaction: it is beneficial to identify key events and mutualise effort to present a complementary offer to the Marine community. More cross fertilization is necessary – potential events identified could be: workshop mid next year for MSFD with regional sea conventions and regional EuroGOOS ROOSes), possible hacktaton (http://www.opensealab.eu/ [8]), EMD18, Copernicus Marine Service related events, EOOS conference in 2018.
- VI. Post 2020 issues? A meeting is needed in 6 weeks time more or less (beginning of the 2018 Brussels?) also in the presence of DG GROW staff.
- VII. MoU an update is needed before next summer 2018 for a good showcase at the EU Maritime Days. The updated MoU could feature interfaces between CMEMS and other EMODnet portals (chemistry, bathymetry and habitats).

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