EMODnet Secretariat progress update – April 2018

This update is based on the quarterly progress reports of the different EMODnet groups (Thematic Portals, Sea-basin Checkpoints, Data Ingestion Portal), and supplemented with updates from the Secretariat. This is the fifth Secretariat progress report since the start of the EMODnet Development Phase III (2017-2020) and covers activities developed within EMODnet in the period January-February-March 2018.

EMODnet progress overview

Common progress highlights

For this reporting period, the thematic groups were requested to provide input on the new progress indicators (including the ones provided by the MATOMO monitoring system which monitors user statistics), and using the new reporting templates which should lead to a more harmonised way of reporting. Following their inputs, some modifications on the template will be implemented, to improve clarity.

The EMODnet community met in Alcudia (Mallorca) on 21-23rd March for the 9th EMODnet Steering Committee (EMODnet SC), preceded by the 3rd Technical Working Group at the same location on 20 and 21st of March. During the SC, updates on activities from every partner in the community (EMODnet Secretariat, EMODnet thematic groups, EMODnet Checkpoints, EMODnet Data Ingestion project) were discussed. New action points were identified and listed to guide further developments and activities. In particular, the importance of engaging industry was stressed throughout the meeting at several occasions.

Another highlight concerns the implementations of the new progress indicators after the pilot phase in September 2017-March 2018. Thematic groups have provided input on these (including the ones provided by the MATOMO monitoring system which monitors user statistics) using new reporting templates towards a more harmonised way of reporting.

Specific progress and achievements of thematic groups

- **EMODnet High Resolution Seabed Mapping (HRSM)/Bathymetry** reported on a slight increase in the number of CDIs (from 26875 to 27066 records), the total number of data providers (39 to 41), and the progress in the generation of Regional Digital Terrain Models (RDTM). The integration into the overall EMODnet DTM of the latter has started since the beginning of March.

- At the end of March, **EMODnet Geology** made available on their portal the first version of the harmonised seabed substrate map at a scale of 1:100 000 with confidence estimates. They also report on an innovative approach to cover more use-cases with their data products by allowing registered users online access to a read-only database (PostgresSQL).

- After one year of work in Phase III, the revamped **EMODnet Seabed Habitats** portal was launched with 210 newly collected habitat maps added to the mapping portal. In addition, work is ongoing to transfer the EMODnet Seabed Habitats mapping portal over to GeoServer allowing for improved machine-to-machine connections.

- **EMODnet Physics** and Data Ingestion are currently following up new datasets from, among others, lighthouses, research cruises and gliders. In addition, a lot of effort has been put in maintaining the good collaboration with CMEMS INSTAC, one of its pillars as Physics uses their products to plot, redistribute data and create new products. Finally, one of the current key activities of Physics involves their work on (regional) underwater sound maps and making available more operational data on impulsive noise.

- Data providers are busy with populating the **EMODnet Chemistry** data infrastructure with data on contaminants and litter. Furthermore, since the end of 2017, the sea-basin coordinators are currently validating, harmonizing and aggregating the data collections of nutrients, chlorophyll and oxygen; the goal is to generate data products to be delivered by the end of April 2018.

- A major update of the **EMODnet Biology** database has taken place: 30 datasets were made available, 3 major dataset updates were done, and 45 new datasets were added to EurOBIS and ingested into EMODnet Biology. Furthermore, the portal is developing several new data products including (i) maps showing the spatio-temporal distribution of different trait types; (ii) basic species distribution models; (ii) time series of phyto- and zooplankton; (iv) distribution maps of benthos in the North Sea, Celtic Sea and Baltic Sea).

- The data of the vessel density are being cleaned and pre-processed, while the grid has already been created on the portal of **EMODnet Human Activities**. Meanwhile, it has been agreed that EMSA will start preparing the vessel density maps for EMODnet in 2019.

- The promotion of the **Data Ingestion Portal** by the partners has paid off: the number of submissions has almost doubled from 55 to 106 submissions (metadata forms and related datasets). An additional 50 submissions are currently under processing.

EMODnet Sea-basin Checkpoints progress

EMODnet Sea-basin Checkpoints for the Arctic, Atlantic Baltic and Black Sea are in the last months of their 36-month project duration, in the process of submitting their second and final Data Adequacy Reports (DAR).

- The portal of the **Arctic Checkpoint**, as well as the text and viewers of all challenges, are being updated to their final version. A preliminary date (30th and 31st of May 2018) has been fixed for the second panel meeting, where the second DAR will be presented and evaluated.

- The **Atlantic Checkpoint** completed all reports of the 11 challenges and updates to the Sextant metadata base. The methodology developed to assess fitness for purpose used by Mediterranean Sea, Black Sea and Atlantic Checkpoints will be used by members of AtlantOS project. To help them, a training session on Sextant was organised in March in which the organisation of metadata, the link between datasets and data products, and the quality indicators were explained.

- New products were developed by the **Baltic Sea Checkpoint**, which brings the total number of data products to 331. Additional products are currently under development. The Checkpoint has also dedicated time to the publishing of an article in the Proceedings of the 8th EuroGOOS Conference which was held in October 2017, and submitting another one to a special issue of GEO Blue Planet.

- The second DAR (Data Adequacy Report) produced by the **Black Sea Checkpoint** will be presented to and evaluated by the Panel Experts on the 9th and 10th of May 2018, in Istanbul (Turkey). The 2nd DAR documented the reliability and utility of the existing monitoring system at the level of the sea-basin, and identified the main gaps.

EMODnet data portals usage

The thematic lots collect a range of user statistics which are reported via a set of progress indicators. The summary below covers the three-month period January-February-March 2018. In this period, the thematic lots have reported using a new set of progress indicators after the pilot phase reported in the previous quarter. These new indicators cover not only different aspects of acquisition and development of data and data products, but also portal delivery and impact. Statistics for the Central Portal, Sea-basin Checkpoints and Data Ingestion Portal are also provided.

EMODnet

- In **EMODnet Bathymetry**, the number of datasets has increased by less than 1%. Nevertheless, the number of manual data downloads has increased by 138% compared to the previous reporting period. The users are either part of a company or academia. Also interesting to note is that EMODnet Bathymetry data or data products have been included in about 20 (published in near future and recently published) publications.

- Overall, the volume of downloaded data and data products from **EMODnet Geology** increased compared to the previous reporting period. "Seafloor substrates" remains the most popular map in terms of volume downloaded (10500 MB compared to 3740 MB in previous period). In total, 155 manual downloads were done. As for most of the other portals, research is the main reason for users to download data.

- No new datasets or data products were implemented in **EMODnet Seabed Habitats** portal. In total, about 6300 manual downloads have been done from the thematic portal. Overall, the number of visitors has increased with the interactive map being the most popular page (about 1789 unique views in the last reporting period). Visitors from Academia/Research are the most frequent users of the portal, followed by Business & Private Companies.

- Compared to the last quarterly period, less data was downloaded from **EMODnet Physics** (70% less manual data downloads were done compared to the previous period). On the other hand, the number of manual data product downloads increased by more than 200% since last period (3.487 compared to 1.024 downloads). Also, the map viewer gained in popularity as there were 21% more map data visualisations compared to the previous period. The majority of the users are from the academic or research environment followed by companies.

- A total of 177.485 data records have been downloaded from the **EMODnet Chemistry** portal, which is an increase of 16% compared to previous period. Similarly, an increase of 77% has been reported in the number of downloads of data products. The Map tool is a very popular tool to visualise the data products, as evidenced by the high number of visualisations (66.387). EMODnet Chemistry data and data products are particularly popular in research environments (research and theses).

- **EMODnet Biology** reported on a number of 213 manual data downloads, mostly for research purposes (research, data exploration and testing). The webpages, *Data Download* and *Data Catalogue* are also the most visited ones. As already mentioned, the database experienced a major update (30 new datasets were made available; after one year of the project about 50% of the identified datasets are now feely available on the EMODnet Biology portal). The release of new products is planned in the second year of contract (beginning in April 2018).

- The View data page (the map viewer) of **EMODnet Human Activities** is the most popular one (about 1965 during the actual reporting period). New datasets on windfarms have been made available. The downloaded data from EMODnet Human Activities has been used most often for Research purposes, followed by Environment purposes and "Other". Also Transport, Energy and Tourism sectors make use of the data.

- On the **Central Portal**, the Bathymetry page is the most visited one, followed by Seabed Habitats and Human Activities. Whereas Chemistry is the least visited portal. EMODnet in general currently has 2305 Twitter followers (at the time of reporting) and 58 Facebook Likes. Continuous efforts will be undertaken to spread the word about EMODnet and increase the number of Twitter and Facebook followers.

- The **Data Ingestion Portal** remains a popular portal: every month, between 7500 and 9200 unique visitors were recorded.

- In the **Atlantic Sea-basin Checkpoint**, the monthly number of visitors remained stable (on average about 299 visitors per month) compared to the previous period, while for the **Baltic Sea Checkpoint**, the monthly number of visitors decreased to below 200. Especially January was a very quiet month for the latter checkpoint, possibly due to the holidays. The **Black Sea Checkpoint** was

EMODnet

visited 216 times during the last period, especially in April, among which there were 190 new visitors. The **Arctic Checkpoint** did not provide numbers on the user statistics, but reported that the number of visitors is low and declining (on average 2 visitors per week) and that they will try to give an overview in the next progress report. They believe this portal is only interesting for a small amount of people working on the Arctic area.

Challenges to be addressed

- The previously reported delay in the timely provision of datasets in the agreed way by Croatia and Slovenia to **EMODnet Bathymetry** has been solved. Communication with Denmark remains difficult, which might have implications for the resolution of source data in Danish waters.

- **EMODnet Geology** WP5, which is dealing with Coastal behaviour, is currently challenged with an unavailability of detailed data for many areas. To overcome this challenge, they are using a new satellite-based approach of determining decadal coastline change. Also, the efforts to tie with the Regional Sea Conventions (RSCs) are up until now unsuccessful. The RSCs do not respond or are too busy at the moment to get involved with EMODnet Geology.

- **EMODnet Seabed Habitats** has concerns about its compliance with the General Data Protection Regulations (GDPR) which comes into force by the end of May. Other portals are facing similar issues.

- **EMODnet Physics** reports on the non-interoperability of the PANGAEA system which uses another system than EMODnet Physics.

- When data is coming from different Member States, chances are high that the information received is heterogeneous in many ways. This was the case for the data on beach litter for **EMODnet Chemistry**, where huge heterogeneity was detected in sampling methods, spatial-temporal information and litter categories coding.

- No permission was granted to **EMODnet Biology** to make available fishery data from IOF (Croatia), as the organisation had no permission exchanging them/DG-MARE is looking into this issue.

- Most of the Spatial Planning zones plans, coming from different country, will not be approved until the end of 2021. **EMODnet Human Activities** thinks about including proposal as well as final management plans.

User feedback

Feedback to users is essential to improve the services provided by each thematic lot but also to support users in all possible ways. In the past quarter, EMODnet Geology, Seabed Habitats, Physics, Chemistry and Human Activities dealt with some technical inquiries such as support to download a specific dataset which were usually solved within the week (but mostly within a day), support to handle maps in non-ArcGIS software, or support to handle ODV data files. EMODnet Biology mostly dealt with data requests, and EMODnet Bathymetry answered several simple questions (e.g. on how to use the WCS service). All inquiries are usually dealt with within a few days.

Recent meetings and events

- The Technical Working Group and Steering Committee met in Mallorca on 20-21/03/2018 and 21-23/03/2018 respectively for the **9th EMODnet Steering Committee Meeting**. During these meetings, fruitful discussions regarding the overall progress, outcomes of past activities and highlights of future new activities, and challenges of the Thematic lots, the Data Ingestion Portal and the Secretariat were held.

- EMODnet was represented at **Oceanology International**, which took place in London from 13-15/03/2018 and attracted many companies. Members of the Secretariat and the Physics lot welcomed a lot of enthusiastic people at the booth and many contacts were made.

Upcoming EMODnet meetings and events

- Annually, Europe's maritime community meets to network, discuss and forge joint action on the **European Maritime Day** (EMD) 2018. This year, the 2-day meeting will be held in Burgas (Bulgary) from the 31st of May until the 1st of June. The meeting will consist of several stakeholder workshops, a high-level debate on the Black Sea, and a plenary session on EU funds for Blue Growth and sea-basin cooperation. Registrations are still open.

- EMODnet goes Italy! **EMODnet Day – Italia** is coming up, and will be held in Trieste (Italy) on the 8th of June 2018. On this day, EMODnet members and users will have the opportunity to exchange ideas. Use cases of EMODnet will be presented and open a discussion on how marine data can foster the development of several sectors in Italy's blue economy.

- From 9-14 July 2018, the **JERICO-NEXT Malta Summer School 2018** will be organised, hosted by the University of Malta (Physical Oceanography Research Group). The title of the event is "Operational Oceanography for Blue Growth". The course will focus on the exploration and elaboration of oceanographic data, and the creation of products for Blue Growth.

More information

More detailed information can be found on the EMODnet thematic and sea-basin checkpoint portals, also accessible through the EMODnet Central Portal.

Thematic portals

- EMODnet Bathymetry - www.emodnet-bathymetry.eu
- EMODnet Geology - www.emodnet-geology.eu
- EMODnet Seabed habitats - www.emodnet-seabedhabitats.eu
- EMODnet Physics - www.emodnet-physics.eu
- EMODnet Chemistry - www.emodnet-chemistry.eu
- EMODnet Biology - www.emodnet-biology.eu
- EMODnet Human Activities - www.emodnet-humanactivities.eu
- EMODnet Coastal Mapping - http://www.emodnet.eu/coastal-mapping

Sea-basin checkpoint portals

- North Sea checkpoint - www.emodnet.eu/northsea/home
- Mediterranean checkpoint - www.emodnet-mediterranean.eu
- Artic checkpoint - www.emodnet-arctic.eu
- Atlantic checkpoint - www.emodnet-atlantic.eu
- Baltic checkpoint - www.emodnet-baltic.eu
- Black Sea checkpoint - www.emodnet-blacksea.eu

Data Ingestion Service

- Ingestion and safe-keeping of marine data - https://www.emodnet-ingestion.eu/

EMODnet