

Meeting minutes of 15th EMODnet Technical Working Group - Spring 2024

Virtual meeting on EMODnet Zoom

Date: Wednesday 12th March 2024 (09:30-17:30), all times in Central European Time.

Meeting Chair: Zoi Konstantinou (EC, DG MARE), Conor Delaney (Technical Coordinator, EMODnet Secretariat).

List of Participants: See Annex I

1 Actions list – To be tracked in JIRA

Action	Description	Status	Who?	Remarks	JIRA
1	PDFs of all TWG presentations to be sent via email to the thematic lots.	Done	Conor Delaney		
2	With respect to MetaGIS ID for layers, Bart Vanhoorne indicates that it could be another possibility to do have links with UUID (easier for thematics), but convert it to MetaGIS ID's on the VLIZ side. The JIRA ticket on this will be updated.		Bart Vanhoorne		EM-657
3	All lots to review their services and products by the next TWG.		All lots to be managed by the CP_team	Tracked via JIRA	EM-960
4	For future reference, the Secretariat and Chemistry to document the process of publishing eutrophic products.		Alessandra Giorgetti & Nathalie Tonné		EM-801?
5	Alessandra Giorgetti to add here review of the GeoNetwork interface to the existing Jira Ticket		Alessandra Giorgetti		EM-533
6	Conor Delaney to follow up with George Spoelstra on converting the HR DTM to netCDF and implementing the download from ERDDAP and the viewer		George Spoelstra and Conor Delaney		EM-958
7	User guide to the EMODnet Portal. This is to be a collaborative effort involving the CP_team and the thematic lots.		Conor Delaney & Nathalie Tonné		EM-959
8	Challenge of presenting attributes from complex datasets: Human Activities need more filters to the map viewer. They will create a Jira ticket		Helen Woods		
9	Challenge of presenting attributes from complex datasets: Joana Beja indicates that there are conflicting requests coming from the thematics. The CP_team will collate information on this issue so that an informed decision can be made.		Joana Beja		

2 Meeting Minutes

Wednesday 12th March, 09:15 EMODnet TWG convenes

2.1 Welcome & introduction (Zoi Konstantinou (DGMARE) & Conor Delaney (EMODnet))

Zoi Konstantinou (DG MARE) welcomes everyone. Her main goal for this meeting is to review the progress done in last 6 months and how to improve the work that we do, both in thematics as well as EMODnet as a central unified service

2.2 Update and progress since previous TWG (Secretariat, VLIZ)

2.2.1 Action list from 14th TWG

Conor Delaney (EMODnet Secretariat) ran through the previous (14th) TWG meeting Action List.

Action	Description	Status	Who?	Remarks	JIRA	Comment from the TWG 15
1	Conor to send link to the dashboard to check if coordinators can view it + provide feedback on finding the filters for their thematic.	Done	Bart Vanhoorne	Done during meeting		Jira dashboard should now be visible to all thematic
2	EMODnet thematics to activate the polar projection in the WMS service for this to work (see list of projections in slide show)	Done	EMODnet Thematics	Seems to be done		Conor has reviewed the map viewer, and it seems to work for the layers checked. If not, Thematics should contact CP team
3	VLIZ to remove the Stamen terrain background layer from the MapViewer configuration.	Done	CP_Team	Done	EM-886	Done
4	VLIZ to follow up with EMODnet bathymetry on the GeoFabrik layer	Ongoing	EMODnet Bathymetry	Ongoing	EM-544	Bathymetry indicates that they will keep hosting this service and VLIZ should not take it over. Action Done.
5	EMODnet Physics to look into this if viewer proxy can be whitelisted	Done	Physics	Done – this part of a bigger set of changes to animation on MapViewer.	EM_627	None from Physics in the meeting at this time.
6	Physics to share this information on collecting data from ERDDAP logs with the CP_Team.	Not done	Marco Alba	Not done		A github repo from a group that is working on logs from ERDDAP was shared. Physicscs

Action	Description	Status	Who?	Remarks	JIRA	Comment from the TWG 15
						asked to share how they do it.
7	CP_TEAM to add tracking of 'Clicks' to the improvement list for 2024.	Done	CP_Team	Discussed with TrustIT plan in place		First scoping done. Update on that later in the meeting
8	Secretariat to create a technical newsletter for TWG and others. To be published on regular basis and to be available online.	Done	Conor Delaney	Plan in place for new contract		In between TWG's to provide a 3 monthly update on technical issues
9	Secretariat to reach out to Dick Schaap to understand how DIP plan to do the implementation of the download links in the metadata this can feed into the best practices document they plan to produce	Ongoing	Tim Collart	In Progress	EM-782	Discussion at the Jamboree. Presentation on it later in this meeting.
10	Geology to create a Jira ticket to explain what should change in the CP GeoNetwork harvester and to confirm the other endpoint has the same information.	Ongoing	Uffe Larsen	In progress	EM-935	This is ongoing and will be tracked in the Jira ticket.
11	Geology to communicate the issues about styling of data attributes in JIRA	Done	Uffe Larsen	Ticket closed, 10/11/2023	EM-884	
12	Geology to create a Jira on where geotechnical data can be stored ticket on this and add Dick Schaap as a watcher on it.	Not done	Uffe Larsen	Not done		Ongoing discussion within Geology
13	Human Activities to create a Jira ticket on implementing these extra filters to avoid hitting the 50 records cap.	Not done	Nick Earwaker	Not Done		This has been requested for implementation by Bilbomatica and will go into the future releases.
14	Human Activities to create a Jira ticket on how they want the filter to be implemented	Not done	Nick Earwaker	Not done		HA still to create a Jira ticket to detail what exactly is required

Action	Description	Status	Who?	Remarks	JIRA	Comment from the TWG 15
15	EMODnet Physics to document in a JIRA ticket their requirements on interactions they want tracked in the viewer (map layer loading, getfeature interation, filters?)	Ongoing	Antonio Novellino	Discussion with Trust-It	EM-875	This is part of the work we are doing with Trust_IT to track clicks in the viewer (Presentation on this in the meeting).
16	EMODnet Physics to create JIRA to request Antarctic projection to be added to the viewer.	Ongoing	Antonio Novellino	Jira not created but feature to be included in next MapViewer	EM-900	Will be included in the next viewer release. All lots to ensure that they can support this projection in their products.
17	CP-Team to send an email with the new features of each release and the planned development	Done	Conor Delaney	Done		Done
18	SBH to create a Jira ticket on how to update the tools and guidelines section of the website.	Done	Helen Woods	Jira ticket created, task is ongoing	EM-644	This task is being tracked in the Jira ticket.
19	SBH to create a Jira ticket on how to update the data products summary page.	Done	Helen Woods	Is this needed?		Done
20	CP_TEAM to Investigate the metadata harvesting issues flagged by Ingestion. Ingestion to create a ticket on this.	Ongoing	Sissy Iona	In progress	EM-782	Done
21	TWG members to submit topics for discussion in this session.	Done	TWG	done		Done

Question from George Spoelstra (EMODnet Bathymetry): What is the polar projection used? He needs to check if it matches what they offer in the base layer:

Answer: EPSG:3031

Question from Sissy Iona (EMODnet Ingestion): Do JIRA tickets have a deadline in which they have to be closed?

Answer: No and the CP_team does not want to impose that

2.2.2 JIRA overview and usage (Tim Collart, EMODnet Secretariat),

Presentation: EMODnet_15TWG_JIRA_Final

The latest statistic on the usage of EMODnet JIRA was presented:

- 914 JIRA tickets, almost 80 more than 6 months ago.
- 85% tickets completed.
- More tickets resolved than created.
- Peaks in ticket creation, usually after TWG meetings.

EMODnet JIRA will migrate to Atlassian cloud. It will look similar but slightly different. The URL will also change, but this will all be communicated at the appropriate time.

2.2.3 OGC service monitoring Update and INSPIRE compliance and updates (Tim Collart, EMODnet Secretariat)

Presentation: EMODnet_15TWG_OGC_Service_Monitoring

The latest analysis of the operational monitoring of EMODnet metadata URLs and quality of service was presented:

- Biology, Chemistry, Physics do not have all metadata and/or data URLs published (Chemistry and Physics is due to the new webservice instances).
- Quality of Service, all webservices meet the threshold, except for SBH WMS (many layers, service takes time to load). Availability of service is met by most thematics, except for some services from SBH.

Request from Alessandra Giorgetti (EMODnet Chemistry): Alessandra Requested access to presentation.

Action 1 Conor Delaney (EMODnet Secretariat) to send PDF documents with all presentations via email to all lots.

2.2.4 Updates from the new Secretariat Work plans (Conor Delaney, EMODnet Secretariat)

Presentation: EMODnet_15TWG_SecrWorkplanOverview_final

Those elements of new Secretariat workplan that are relevant to the TWH were presented:

- Work Package 2 of the work plan looks after centralisation:
 - Includes meeting with CP team thematics and ingestion.
 - Improvements to the map viewer.
 - Review and harmonisation of metadata.
 - This is informed by Work Package 3 (progress monitoring).

Question from Joana Beja (EMODnet Biology): Are these plans public?

Answer: Not public, but if can be made available to interested members of the TWG.

- Work Package 3: Progress monitoring:
 - Business as usual, only major change is that D3.10. After every thematic quarterly report, a consolidated report containing highlights from all the thematic reports was produced. However, the web stats for the consolidated report indicated that it is not being read, so instead an annual consolidated progress report that focuses on the metrics will be created. This will tie into the DG MARE reporting needs and the Secretariat Annual Report.

2.3 Updates from Central Portal technical team on Centralization progress.

Presentation: EMODnet_15TWG_MapViewer_DevPlan_final

2.3.1 Updates to the map viewer and portal since the last TWG (Joana Bega, VLIZ)

Since centralisation there have been ten releases of the Map Viewer, the last one was in November.

Changes in that release:

- WFS download format for shapefiles (accepts both SHAPE-ZIP and SHAPEZIP).
- Tracking for Europa Analytics was added to the viewer.
- Changes to time parameters in the filter as this was not a consistent across thematics.
- Physics advanced filter based on an API that needed to be changed.
- Advanced Filtering of WMS View params needed to be updated.
- WFS download functionality now also applies the view params filter (advanced filter).
- Download functionality with animated layers. Added time parameter to WFS download requests.

Please do keep checking how your layers work.

2.3.2 Map Viewer release plan (Joana Bega, VLIZ)

Features in next release

- Inclusion of CQL filtering.
- A fix to the stop the catalogue window being cut off when many layers are listed.
- Fixes due to physics animations was overloading their server.
- The download bounding box in the request will be limited to the actual data bounds of the product.

2.3.3 Community development plan (Conor Delaney, EMODnet Secretariat)

Now the development of the Map Viewer is mainly done, the role for Bilbomatica in development will be reduced. They will deliver two more releases:

- Spring 2024
- Late Summer/Autumn 2024

In the future it will be up to the thematics to contribute code for new features in the Map Viewer code, which will be hosted on GitHub.

Comment from Carlos Cerezo (DG Mare). He raised the issue of hosting open code in a Europa environment/Europa service, He will look into this.

Conor Delaney (EMODnet Secretariat) introduces the plan for code development and implementation in the future releases:

- Map viewer will still be maintained by the CP team with help from Bilbomatica (they will check the impact of new contributed code on the full systems)
- New features: responsibility for testing and bugs is on the developers (they need to write unit tests and make sure their new features are working as intended)

Comment from Alessandra Giorgetti (EMODnet Chemistry): Chemistry has some issues with the time domain, will introduce this in their slides.

Comment from CP TEAM on specific feature request to use the UUID to in the link to a specific layer in the map viewer (currently it is using the MetaGIS ID).

- The CP team advice is not to do this as some layers are pointing to the same UUID .
- The CP team will keep the same MetaGIS ID for the same layers, so that links do not break. In addition, when layers are no longer published in the viewer, we could add them as an external layer (Bilbomatica could work on this new feature).

Comment from Bart Vanhoorne (VLIZ): He indicates that it could be another possibility to do have links with UUID (easier for thematics) but convert it to MetaGIS ID's on the VLIZ side. In addition, we should also look into being able to link to a specific themes or sub-theme (e.g. Bathymetry).

Action 2 Bart Vanhoorne to update the Jira ticket on this.

Question from Alessandra Giorgetti (EMODnet Chemistry): They indicate they do have a unique UUID for each layer.

Answer from CP_Team: This is not entirely true for chemistry (e.g. one document for all layers in a netCDF file) and it is also not be the case for other thematics.

Question from Amandine Thomas (EMODnet Chemistry): Can we use the UUID to search for layers in the viewer catalogue.

Answer from CP_Team: How will the users know they can and should use the UUID? It's probably not an ideal procedure.

Question from Helen Woods (EMODnet Seabed Habitats): Is there anywhere where we can find the MetaGIS IDs for each layer?

Answer from CP_Team: CP team can provide a list of all active layers and MetaGIS IDs, but CP team will continue to investigate this and decide on the best course of action by the next release.

2.3.4 EMODnet Ingestion centralisation? (Joana Beja/Conor Delaney)

Presentation: EMODnet_15TWG_CP_Plan_Ingestion_final

An update on the status of the centralisation of Data Ingestion was presented:

- The static web content that will be migrated has been identified and demonstration page for Data Ingestion has been set up on the EMODnet development website.
- Ingestion submission form
 - This will be a page on the EMODnet portal.
 - It will require the use ECAS as a login (rather than marine ID).

- The back office will remain where it currently is.
- Ingestion Catalogue, the catalogue of ingestion was successfully harvested into the Central Catalogue, so this part of the work is done.
- Sensor Web Enablement demonstrator:
 - Implementation will be done in the viewer, using existing technology that is already there.
 - Some changes needed in input files by Physics, but this should work as expected.

2.3.5 Metadata review process. (Tim Collart, EMODnet Secretariat)

Presentation: EMODnet_15TWG_MetadataReview_Final

Tim Collart presented an update to the ongoing post centralisation task of reviewing EMODnet metadata, with goal to harmonise metadata across the thematic lots:

- There is a need to improve metadata and download options, and this requires metadata to be formatted in a common way by all thematic lots.
- The EMODnet catalogue is harvested by other catalogues (e.g. GEOSS, Ocean Info-Hub), therefore, to improve interoperability with these platforms require that metadata to be formatted according to ISO/INSPIRE standards.
- The proposed workflow for metadata harmonisation: Secretariat creates guidelines, TWG reviews and provides feedback, thematic lots implement changes and Secretariat will monitor via the progress monitoring work package (WP3).
- The focus on the Distribution information, Resource constraints information:
 - Format options populated for 43% datasets, 54 uniquely worded data formats, many are redundant.
 - Transfer options populated for 59% datasets.
 - Use Constraints populated for 71% datasets, specific licenses are not part of ISO.
 - Access Constraints populated for 89% datasets, specific licenses are not part of ISO.
 - Use Limitations populated by 68% datasets, ISO standard but not INSPIRE.

Question from Sissy Iona (EMODnet Data Ingestion): What should be taken into consideration is that only full open license should be used. Propose use CC-BY license. For the exchanged formats we can maybe use the BODC vocabularies (used in Ingestion)

Reply from Tim Collart (EMODnet Secretariat): He agrees with using BODC vocabularies

Reply for Joan Beja (EMODnet Biology) points out that licenses for datasets are decided by the data providers. We encourage CC-BY but some providers prefer the use of CC-BY NC and others

Reply from Conor Delaney (EMODnet Secretariat): points out that all EMODnet products should be CC-BY, as per the European Commission's requirement.

Comment from Antonio Novellino (EMODnet Physics): He suggests that this guidance is shared through JIRA so we can improve the information exposed by GeoNetwork.

Reply from Tim Collart (EMODnet Secretariat): Document will be shared with TWG and it includes examples and links to GeoNetwork on how to make the changes.

Reply from Antonio Novellino (EMODnet Secretariat): We need to know the exact field we need to correct.

Reply from Tim Collart (EMODnet Secretariat): We link to the specific page where this information is given.

2.4 EMODnet product discussion on what should be the goal in terms of usability of EMODnet products (Zoi Konstantinou (DG Mare))

Zoi Konstantinou indicates that the accessibility of EMODnet data products can be improved. Not just how users can access the data, but also how they are presented through the map viewer.

EMODnet started as a network of experts that had an audience of mainly experts. In recent years, this has changed as EMODnet has become more well known and has become a core data service of DG MARE.

This has changed how we need to present our data and data products to the world. One step in this was the centralisation of the EMODnet data offer through one service.

There is however still work to be done on how the data is presented, in a harmonized way. We do not present all data products in a way that information can be combined within thematic or across thematics. There was a discussion already on this subject with the Chemistry thematic. What we are doing through the MapViewer is a step towards this harmonisation, but it's only a first step. Not all products are presented in the same way. We need users to be able to subset and merge products from different lots.

Zoi Konstantinou (DG Mare) asked the lots to review how their data products are being presented and identify information that may confuse users. It is necessary that technical and non-technical users have direct access to the products of EMODnet. It's not acceptable that a user needs to be redirected to external websites to view, subset and download the full product. This is a core priority for EMODnet and needs to happen as soon as possible. This also relates with the creation of the Digital Twin of the Ocean data lake, EMODnet products need to be accessible quickly and in a common manner. This is a sustainability plan for the continuity of the service we provide in EMODnet.

ACTION 3: All lots to review their services and products so this can be further discussed at the next TWG

Important, do not create products that are assessments (e.g. used by MSFD) as this is the role of other EU institutions. But do provide the objective data for them to make the assessment. We need to be mindful how we present the data products, and we must provide the background information for users to understand the limitations of the data products.

Comment from Conor Delaney (EMODnet Secretariat): He suggests the creation of a mission statement to present to our users. We can have a description in the JIRA ticket so that the lots keep in mind the point of this discussion.

2.5 Move to Drupal 10 and ECAS login – (Bart Vanhoorne, VLIZ)

Presentation: EMODnet_15TWG_Mar2024_Drupal10-ECAS

Bart Vanhoorne presented an update to the ongoing post centralisation task of moving the web content management system to Drupal 10 and the integration of the ECAS login system:

- Drupal 10 is ready; all content has been migrated and the layout (according to EC web guide) is done.
- Integration of ECAS, good progress. We have implemented the Drupal module from the EC, and we are currently waiting for the EC to grant us permission it to access ECAS from our domain
- Once it is all in place, the new website can go live.
- Development environment is accessible to thematics, where they can test the Drupal deployment.

Question from Tim (EMODnet Secretariat): In the EMODnet portal when we link to an external website we need to add an icon. Is this something that is already part of the OE_Theme CSS or is this something that still needs to be added (e.g. like what Bilbomatica did for the MapViewer).

Answer from Bart Vanhoorne: Yes, it needs to be resolved in the CSS. We need to check if it is already included in the OE_theme or not, and if not, we need to implement it ourselves.

2.6 Update on audit DG COMM (Conor Delaney/Nathalie Tonné EMODnet Secretariat)

DG COMM audited the EMODnet website for security (3rd party content) as well as Website Accessibility:

- 3rd party content was fixed right away
- Accessibility has been requested to be level AA, but before that can be done, we need to add an Accessibility Statement that describes how our website deviates from it

This accessibility statement was added to the EMODnet website and can be found via a link in the footer of the web site. (<https://emodnet.ec.europa.eu/accessibility-statement>)

2.7 Presentation on the collection of metrics for reporting (Nathalie Tonné/Conor Delaney, EMODnet Secretariat)

Presentation: EMODnet_15TWG_ProgressMonitoring_final

Nathalie Tonné presented the latest developments from the ongoing progress monitoring work package (WP3 of the Secretariat work plan).

2.7.1 Progress monitoring indicators

- The reporting templates have been simplified.
- The statistics for data/products usage needs to be collected manually by thematics from their own backend servers.
- Web traffic is collected by Europa Analytics and sent by the secretariat on a quarterly basis.
- Ingestion continues to use Grafana dashboard until such time as they are centralised, thematic lots use Europa Analytics.
- Reporting templates available in the Steering Committee Google Drive. Important to use as it has an updated funding statement as well some other small updates.

2.7.2 Plans for improving metric collection.

- Trust-IT is assessing how we can centrally collect download statistics from the backend ERDDAP and GeoServers. Trust-IT is looking into using the GeoServer monitoring plugin for this which may require that you install this plugin in thematic servers, alternatively we can use Apache/Tomcat logs
- In addition, Trust-IT is looking into collection stats on interactions with the Map Viewer. Where possible information will be displayed in Europa Analytics

2.8 EDITO Update (Frederic Leclercq, VLIZ)

Presentation: EMODnet_15TWG_Editto

Frederic Leclercq presented the latest developments from the European Digital Twin of the Ocean infrastructure (EDITO-Infra) project:

- All EMODnet products will exist in the Data Lake in original format, i.e., in the format that product is available through the EMODnet portal. Some of the products will be also available in an Analysis Ready and Cloud Optimised (ARCO) format.
- Subcontracts are foreseen for thematic lots to help with the process of optimising EMODnet products on EDITO, details can be discussed in follow-up meetings per thematic.
- Data lake will have a Spatial Temporal Asset Catalogue (STAC, <https://stacindex.org/>) based on parameters to facilitate discovery for the user.
- User interface: <https://dive.edito.eu/>.
- UI is available in staging environment. You need to ask a whitelisting of your email address to be able to use it (contact Fred).
- The EDITO development team are providing toolkits and tutorials (scripts and API's to use the EDITO catalogue). EMOOnet thematics are invited to upload tutorials as they get familiar with the system.
- At the Digital Ocean Forum (DOF), there is a need to showcase of some demonstrators for EMODnet data in ARCO format (June 12,13 deadline).

Question from Alessandra Giorgetti (EMODnet Chemistry): She asked about the ARCO format.

Reply: It is a file object in the cloud (not a file format) that allows for fast subsetting.

Question from Grigore Rischitor (DG MARE) asked what data from EMODnet will be cloud optimized?

Reply: Eventually everything from EMODnet will be optimized, but it will take time as it more straightforward for some datasets than other.

Question from Antonio Novellino (Physics): He asked who is going to transform the data from the format that they provide to the ARCO?

Reply: This will be done by VLIZ together with the thematic (subcontracts available for this). Important to consider the full pipeline of the data transformation that Physics is doing. the information we need from thematics is on the data model and what fields are available.

Comment from Antonio Novellino (Physics): Regarding the data, it can be complicated to reformat data to ARCO. Some EMODnet physics products can be consumed from EMODnet as well as Copernicus, we need to clarify from where they should be "harvested". This will be further clarified in the follow-up meetings.

Question from Alessandra Giorgetti (EMODnet Chemistry): How do you keep data in EDITO up to date with the updated datasets from EMODnet (this occurs at different schedules).

Reply: This is part of the discussions that will happen with each thematic (how to do the harvest, the frequency, etc).

Comment from Antonio Novellino (Physics): He indicates that they should come up with a common strategy to do this. (e.g. updates can be done on demand based on a specific metadata field being updated).

Comment from Kate Larkin (EMODnet Secretariat): The EDITO offers a great opportunity to show what EMODnet has to offer at the Digital Ocean Forum as well as the upcoming EDITO hackathon. Important to prioritize which data products to showcase, especially in the demonstrators.

3 Technical Updates from EMODnet Thematics and Data Ingestion (All Coordinators)

3.1 Biology (Joana Beja, EMODnet Biology)

Presentation: EMODnet_15TWG_EMODnetBiology

3.1.1 Data

- There have been 3 data harvests since last TWG.
- There are now over 40 M occurrence records published.
- The number of datasets now 1325.

3.1.2 Data Products

- There are 6 new data products
- There is 1 new R package:
 - It is currently in review but already in EMODnet GitHub.
 - EMODnet Biology plan for EMODnet WCS and WFS R packages to be reviewed and published on CRAN (easier for users to download).
- They are planning publication of several external products in the viewer (**see slides**)
 - They are assessing of two CEFAS (Centre for Environment, Fisheries and Aquaculture Science) products:
 - Analysing if they can be integrated as a biology product.
 - They provide information of fish, of which there is not much currently in Biology.

3.1.3 Deliverables

- A list of submitted deliverables with link in the slide.

3.1.4 External interactions

- A list of meetings attended is presented on a slide, of note:
 - They attended EuropaBON a biodiversity initiative in Europa.
 - They were invited to join the MSFD expert network on bycatch threshold values.

3.2 Chemistry (Alessandra Giorgetti, EMODnet Chemistry)

Presentation: EMODnet_15TWG_EMODnetBiology

3.2.1 Data Products

- New contaminants maps on new GeoServer (hosted by HCMR) now available in map viewer.
- New eutrophication maps in ocean browser, currently still in testing environment, release in production viewer soon:
 - CP team has automated the ingestion into MetaGIS (the content management system of the viewer).
 - The EMODnet portal has requirements on how data is published in Chemistry:

- WMS layers need a metadata URL in the getcapabilities to that layers can be mapped to catalogue entries.
- Layers need to be published in the THREDDS for harvest in the Central Portal ERDDAP.

Action 4: Secretariat & Chemistry to document process for eutrophication product publication

- They are waiting for the publication of 5 map layers from webODV in Map Viewer. These were available, but they cannot advertise WebODV service in the map viewer, so a new solution is being developed.
- Data products in the catalogue:
 - The new metadata records for the maps & regional data collections (pollution litter eutrophication) have been harvested in the central catalogue.
 - Need to inform users that in the viewer, only the latest version is available, but in the catalogue, all versions of the data products remain available.
- Request to have a direct link from the metadata to the layer active in the viewer (this was present in the old viewer of chemistry). See discussion on UUID links above.

3.2.2 Map Viewer

- To improve contaminants maps: Add first layer with all years + add unit in the legend.
- To add new type of contaminants maps.
- To identify the barriers for publication of 5 webodv maps with OGC WMS-WFS services.

3.2.3 Data Access

- A new version of the regional data collections released in April 2024.
- They are exploring the use of ERDDAP to give users access to the regional data collections through the map viewer (at the present they are made available from the catalogue and from webODV linked from the thematic description).

3.2.4 Use Case

- There are 4 new use cases are underway.

3.2.5 Statistics

- They are building a system with GreyLog to collect metrics on data usage from OGS, Ifremer, HCMR and Uliege.

3.2.6 Requested Improvements to the Catalogue

- They are request changes to the filtering options currently available & improve the user interface:
 - Set appropriate order.
 - Eliminate duplicates.
 - Use vocabularies.
 - Filtering.
 - CP team can control what filters are listed. The content of the filters is being read from the thematics metadata.
- Make download buttons download the data and not the metadata.

Reply from the central portal technical team: This is planned and for this reason we are reviewing the distribution info (see metadata review agenda item). The plan for the GeoNetwork is to first update to a newer version then customize the filters and how the records are rendered (as per the feedback in child tickets of EM-612 EMODnet Catalogue Tags & Filters).

Action 5: Alessandra Giorgetti (EMODnet Chemistry) to add the GeoNetwork feedback to the existing ticket (EM-533).

Question from Joana Beja (VLIZ/EMODnet Biology): What is the data dashboard and is this something that will be implemented in the viewer/CP?

Reply from EMODnet Chemistry: It is a use case by someone/organisation that implemented a dashboard based on Chemistry's data

Request from EMODnet Chemistry: They requested improvements for the viewer:

- They think that there are Too many file formats options for downloads.

Reply from the Central Portal Technical Team (CP_Team): the list is what ERDDAP is providing, we cannot adapt it.

- comments on downloads functionalities, she thinks the full file download is hidden.

Reply from the CP_Team: Agree, plan to change this and move the metadata button up, which is envisaged in the next viewer release.

- Issue with the litter layers where download only allows to give one year of the data. Alessandra Giorgetti to create a Jira ticket on this.

3.3 Bathymetry (Thierry Schmitt, EMODnet Bathymetry)

Presentation: EMODnet_15TWG_BATHY

3.3.1 Data products

- There are 42396 CDI, 278 CPRDS in the 2022 version of the DTM
- They show the timeline towards the 2024 update. The final release planned for early 2025.

3.3.2 Interactions:

- PANGAEA: finding option to share PANGAEA bathymetry holdings
 - Meeting held on 09/2023 described the preference for the EMODnet methodology for XML production and data transformation.
 - Collaboration with German member of the consortium to help produce these data entries.
- FUGRO: delivery of data outside country EEZ to EMODnet Data Ingestion (XML and format agreed).
- GEBCO: on-going discussion to avoid redundancy in bathymetric data gathering in EMODnet.

3.3.3 R&D

- Research into better interpolation techniques

- Web Processing Service (WPS) collaborative virtual environment allowing to add hillshades and other operations.
- Collaboration with Danish Geospatial Agency and Satellite Derived Bathymetry partner EOMAP to improve bathymetry in Danish waters.

Question from Conor Delaney (EMODnet Secretariat): He asked if the HRDTM's can be produced as netCDF rather than EDMO.

Reply: George Spoelstra indicates there is no technical barrier to produce netCDF files as well so they can go into ERDDAP.

Action 6: Conor Delaney to follow up with George Spoelstra on converting the HR DTM to netCDF and implementing the download from ERDDAP and the viewer.

3.4 Physics (Antonio Novellino, EMODnet Physics)

Presentation: EMODnetPhysics_15TWG

3.4.1 Activities:

- They have completed work on data harvesting:
 - They have published new controlled vocab on BODC NVS:P33: <https://vocab.nerc.ac.uk/collection/P33/current/>
 - They have improved synch with OCEANOPS for international program metadata management.
- They have reviewed the in-situ filter specs on the map viewer with the CP team.
- Updates on products & suggestion to clean catalogue:
 - They indicate they would also like to simplify the GeoNetwork interface by cleaning up the metadata.
 - They want to improve and harmonize the UX of some products they were removed from the viewer (still available in the catalogue).
 - The T/S CORA product has been updated.
 - Products in development, sea level, noise, and wave
 - Interest from the community that Physics published external data products.
- Developing a new workflow to provide the Central Portal team with news and newsletter
 - Need to be updated to match specs from the CP team.
- Develop KPI to complement those reported to the CP
 - Internal indicators to track the typology of platform and the source.

They present the simplified Architecture of Physics. They want to develop this pipeline directly with the needs of EDITO in mind.

3.4.2 Plans:

- To update their GeoNetwork.
- To complete the inclusion of the in-situ collections in the CP viewer.
- To improving the performance of the pages presenting in situ data.
- Update static pages.
- Participation at several events.

3.4.3 Wishlist:

- User guide on the CP MapViewer

- We have an FAQ but we do need a reference guide

Action 7: Conor Delaney (EMODnet Secretariat) presents the idea to collaborate on a document as this is a task the CP team cannot take on by themselves.

Question from Joana Beja (EMODnet Biology): Do you receive feedback from users?

Reply: Yes, but mainly on how to find in situ data as the information is quite hidden

3.5 Data Ingestion (Sissy Iona, EMODnet Data Ingestion)

Presentation: EMODnet_15TWG_Ingestion

3.5.1 Update on an online workshop "Data management in offshore licensing procedures"

- Aimed at aquaculture and Offshore energy section.
- Governmental stakeholders from 18 countries, 65 participants.
- Plan to analyse the findings of a survey on current practices in these sectors to explore if a harmonized data management approach for licensing procedures is desired, and lay out a roadmap for this.

3.5.2 Ingestion Centralization progress updates

- The migration of the ingestion catalogue was successful:
 - used the ISO19115 model, enriched with controlled vocabs from SeaDataNet, EDMO, EDMERP and CSR.
 - They created an XML that included all fields, using keywords for the missing fields which was exposed using the WAF protocol for harvesting by the CP catalogue.
- Migration of the Ingestion Submission Service to the Central Portal:
 - They have converted the system to an API based system and will provide the backend for the new submission services (remains at HCMR).
 - The Frontend will be in the Central Portal and communicates with the API
 - They still have to start the migration from Marine ID to ECAS authentication

3.5.3 Exchange Mechanism with Marine Data Exchange (MDE) of the Crown Estate

- They have developed the mechanism for incorporating the data in ingestion.
- They have mapped the metadata into ingestion, licenses still to do.

3.6 Geology (Uffe Larsen, EMODnet Geology)

Presentation: EMODnet_15TWG_Geology

3.6.1 Phase 5.2 has started

- Kicked on in November 2- year Extension until September 2025.
- No new major product updates yet.
- They will add geotechnical data as a new data category. They are still investigating what kind of these data the partners can provide.

3.6.2 CSW services

- They present the architecture of geology system
- Currently they have GeoNetwork that harvest from EGDI, which is then harvested by the CP GeoNetwork.
- They requested if it is possible to harvest directly from EGDI: it contains more than just EMODnet metadata.

3.7 Human Activities (Nick Earwaker, EMODnet Human Activities)

Presentation: EMODnet_15TWG__Human_Activities

3.7.1 Data

- They list all the recently updated datasets.
- They added one new dataset on Aquaculture Shellfish Licensed Areas.
- Removed a few datasets due to inaccuracies:
 - EEA coastline.
 - Maritime Boundaries.
 - EEZ, this is pending marine regions update (in approx. one year).
- Coming soon: Update on vessel density (data up to dec 2023).

3.7.2 Technical updates

- Producing route/vessel density in netCDF file format.
 - Presenting attributes from complex datasets in the EMODnet viewer. More filters will need to be added.

Action 8: Human Activities to create a ticket on this.

- Would like to filter by all the available options.

Comment from Uffe Larsen (EMODnet Geology): Uffe indicates they also have the issue that you need to fill in all the filter fields. He asked if that is planned in an upcoming release.

Reply from Joana Beja (EMODnet Biology) explains that there are opposing requests:

- Some thematics (Geology) would like that users only need to fill one of the filter fields.
- Other thematics would like that users need to fill all fields.
- Changing this has many implications for all layers so we need to be careful what we do here.

Action 9: CP team with collate information on this issue so we can decide on what is the best solution

3.8 Seabed Habitats (Helen Woods, EMODnet Seabed Habitats)

Presentation: EMODnet_15TWG_March2024_SHs

3.8.1 Recent activities:

- EDITO:
 - Identification of priority layers/attributes and associated information for inclusion in EDITO.
- Reports were updated on the Central Portal
- They are doing metadata corrections. Adding metadata URLs.
- Data, new data submitted by partners and EMODnet ingestion:
 - 19 SBH maps.
 - 14 essential fish habitat maps and models.
 - 2 point datasets.
- New layer to be added to the Viewer
 - Summary layer or all individual models of specific habitat maps.
 - Users asking where these have gone? They were no longer on the viewer as we cannot have so many layers, but summary layer with bounding boxes is a solution.
 - Ideally implement this similar to the DTM TILE layer, where in the attributes, you have the link where the files can be downloaded.

3.8.2 Upcoming activities

- Working with EMODnet Biology to progress transfer and display of habitat point data.
- Continue to implement improvements to data to improve GeoServer performance.
- Re-evaluate filters and groupings

4 Wrap up, actions, next meeting

- Next Technical Working Group Meeting: format, date, and location (Secretariat & all)
 - Meeting in person, in October/November?
 - In Brussels,
 - Option to have the next TWG together with the OSL

TWG Session Closes

5 Annex I: List of Participants

EMODnet Thematic portal	Participant	Affiliation
HRSM/Bathymetry	George Spoelstra	GGSGc
	Thierry Schmitt	SCHOM
Geology	Ulla Alanen	GTK, Finland
	Uffe Larsen	GEUS, Denmark
Seabed Habitats	Helen Woods	JNCC, UK
Chemistry	Alessandra Giorgetti	OGS, Italy
	Amandine Thomas	Ifremer, France
	Eugenia Molina	OGS, Italy
Biology	Joana Beja	VLIZ, Belgium
Physics	Marco Alba	ETT Italy
	Antonio Novellino	ETT Italy
Human Activities	Nick Earwaker	Lovell Johns
Data Ingestion	Sissy Iona	HCMR, Greece
Central Portal	Frederic Leclercq	VLIZ, Belgium
	Bart Vanhoorne	VLIZ, Belgium
	Joana Beja	VLIZ, Belgium
EMODnet Secretariat	Kate Larkin	Seascope Belgium (SSBE)
	Conor Delaney	Seascope Belgium (SSBE)
	Tim Collart	Seascope Belgium (SSBE)
	Nathalie Tonné	Seascope Belgium (SSBE)
EC, DG MARE	Zoi Konstantinou	DG MARE A1
	Grigore Rischitor	DG MARE A1
	Carlos Cerezo	DG MARE A1
CINEA	Fabrice Pourceau	CINEA
	Juan-Carlos Fernández Gomez	CINEA