



EMODnet



European Marine
Observation and
Data Network

EMODnet Thematic Lot n°5 - Chemistry

EASME/EMFF/2020/1.3.1.11/Lot 5/SI2.846161

Start date of the project: 03/10/2021 (24 months + 24 months)

Operational Phase

Quarterly Progress Report (16th)

Reporting Period: 01/07/2025 – 30/09/2025



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1. Highlights in this quarter

[List the quarterly progress for each of the tasks specified in Section 1.4.1 of the Tender Specifications; provide an explanation for any tasks in which progress has not been noted. Provide in the table a list of all Milestones and Deliverables as from the technical workplan in numerical order, the date due, status and date delivered. Max 2 pages]

Task 1: Maintain and improve a common method of access to data held in repositories

EMODnet Chemistry uses the SeaDataNet infrastructure and standards to integrate and harmonise the marine chemistry datasets managed by its network of expert data centres (mainly NODCs). During the reporting period, population of multiple new data sets but also deprecation of a few existing data sets took place because of identified errors. As a total result 8.297 new datasets were added to the EMODnet Chemistry distributed CDI system, which manages eutrophication, contaminant and marine litter data. These new data sets were provided by 14 organisations, which are all members of the EMODnet Chemistry consortium.

Task 2: Construct products from one or more data sources that provide users with information about the distribution and quality of parameters in time and space

In July 2025 two data harvests have been undertaken, one for seafloor litter and one for micro litter data sets. Following the harvest, the data packages were delivered to OGS as coordinator for the marine litter data collections. The delivery included lists indicating which data sets were newly added or had been updated since the previous harvesting round, and which data sets were still the same as before. The latter helps OGS as it implicates that they do not have to repeat their validation and harmonisation activities again for those 'old' data sets. These were the last harvests for the current contract.

Task 3: Develop procedures for machine-to-machine connections to data and data products:

All EMODnet Chemistry data products are integrated into the ULiege Ocean Browser for the eutrophication maps, the HCMR Geoserver for the contaminants maps, and the IFREMER Geoserver for the marine litter maps. These map layers are accessible through the EMODnet Map Viewer. In addition, all interpolated DIVA eutrophication maps are available via the EMODnet ERDDAP service.

During the reporting period, work continued to expand the Chemistry ERDDAP service, managed by OGS, by incorporating the harmonised and validated EMODnet Chemistry data collections. In particular, efforts focused on importing and standardising metadata related to marine litter and contaminants (<https://erddap.emodnet-chemistry.eu/erddap/index.html>).

Task 4: Contribute data, data products and content to a central portal that allows users to find, view and download data and data products:

All EMODnet Chemistry data, data products and content are made available via the EMODnet map viewer, the EMODnet products catalogue and the narrative in the EMODnet portal. The EMODnet portal services are fed by machine-to-machine services from EMODnet Chemistry partners to provide the map viewer and catalogue with data and data products that are made available for direct download.

During the reporting period, the aggregated and validated collection of eutrophication data were produced and published on the EMODnet Product Catalogue and in the Chemistry narrative section. In addition, the DIVA maps for different parameters used to assess trophic status of sea and ocean were produced

Task 5: Contributing content to dedicated spaces in the Central Portal:

During the reporting period, EMODnet Chemistry took over the task of updating the content of its narrative section, via DRUPAL. In particular, all content regarding the P36 vocabulary was updated to reflect the new nomenclature. The "Reports" section was also expanded with 1 new report, namely the Q22025. In the section "News and events", 2 webnews/newsletters, and 2 upcoming events were published. Finally, 1 guideline was published in the "Tools and Guidelines" section.

Task 6: Ensure the involvement of regional sea conventions:

Since its launch in 2009, EMODnet Chemistry has engaged stakeholders from the Regional Seas Conventions and the Marine Strategy Framework Directive (MSFD). In 2017, this outreach was formalized with the creation of the MSFD Board of Experts, with ICES maintaining regular dialogue on behalf of EMODnet Chemistry.

On September 29, a meeting with the MSFD Board of Experts was held to present and refine new DIVA maps on key eutrophication parameters.

Collaboration with ICES and HELCOM was strengthened, enabling beach litter data from OSPAR and HELCOM countries to be made available through the EMODnet Chemistry SDN data discovery and access service and included in the 2025 data collection. These data also support HELCOM's environmental assessments.

The workflow for microlitter data from the ICES DOME database to EMODnet Chemistry was further consolidated, thanks to cooperation with the ICES Data Centre, ICES WGML, OGS, EU TGML, BODC (NERC vocabulary server), AMAP, OSPAR, and HELCOM. This ensures the availability of sediment and seawater microlitter data via SDN and inclusion in the 2025 floating microlitter dataset.

Finally, thanks to ICES activity, eutrophication and hazardous substances data from HELCOM and OSPAR were integrated with EMODnet Chemistry data and delivered to the EEA for computing the indicators to be included in periodic environmental assessment reports.

Task 7: Contribute to the implementation of EU legislation and broader initiatives for open data:

EMODnet Chemistry contributes to the implementation of EU legislation in line with the discussions and agreements resulting from participation in the MSFD working groups and technical groups (DIKE, Data, ML, Contaminants).

During the reporting period, the OGS represented EMODnet Chemistry in the Technical Group on Marine Litter (TG ML) on 2025. In parallel, the OGS team was in regular contact with the JRC team to obtain support for the proposal for the management of seafloor litter from imagery. During the reporting meeting, the DBMS was drafted and the related guidelines were prepared.

Finally, the International Working Group on Ocean Acidification met regularly to discuss the metadata model for the federated ocean carbon data system and the vocabulary system.

Task 8: Monitoring quality/performance and dealing with user feedback:

Since centralisation, access to the Chemistry narrative on the EMODnet Portal is monitored via Europa Analytics and the EMODnet Secretariat provides quarterly statistics. Chemistry has developed an additional tool (Graylog) to monitor the viewing and downloading of EMODnet Chemistry data products from its providers. The Graylog widgets are configured to collect viewing and downloading statistics from AWI (for webODV), Maris (for CDI distribution layers) ULiege (for Ocean Browser), IFREMER Geoserver, HCMR Geoserver and OGS (for DOI landing pages). The EMODnet Chemistry Helpdesk is also centralised: all user interactions are recorded by the EMODnet Secretariat Helpdesk and forwarded to the batches via JIRA tickets. Relevant JIRA tickets are answered immediately.

Task 9: Maintain the existing thematic web portal for a maximum of 6 months from the start of the project:

This Task refers to the first project phase. No activity is reported for the renewal period as Chemistry has migrated to the EMODnet Portal.

Status of the Milestones and Deliverables listed in the workplan					
Milestone/Deliverable in numerical order	WP	Date due	Status (To do/ Delivered/ Delayed)	Date delivered	If Delayed: reason for delay and expected delivery date
D1.1 Quarterly concise progress reports	WP1	M3 (03/01/2024), M6 (03/04/2024), M9 (03/07/2024), M12 (03/10/2024), M15 (03/01/2025), M18 (03/04/2025), M21 (03/04/2025)	Delivered (M3 Q42023, M6 Q12024, M9 Q22024, M12 Q32024, M15 Q42024)	15/01/2024, 15/04/2024 15/07/2024 15/10/2024 15/01/2025 15/04/2025	
D1.2 Annual Interim report	WP1	M13	Delivered	03/11/2024	
D1.3 Final report	WP1	M26			
D1.4 Handover plan for service continuity	WP1	M26			
D1.5i Short minutes/action list of project meetings	WP1	M1 (03/10/2023), M6 (03/04/2024), M12 (03/10/2024), M18 (03/04/2025), M23 (03/09/2025)	Delivered (M1, M6, M12)	28/11/2023 (PFG meeting) 19/04/2024 (SC meeting) 23-24/09/2024 (PFG+SC meeting) 21/03/2025 (SC meeting) 22/09/2025 (SC meeting)	
D1.6 Providing content to the central portal	WP1	Continuously	Delivered		
D2.2i Training activity for DC	WP2	M4 (03/02/2024)	Delivered	30-31/01/2024	
D2.2i Data harvested for eutrophication, including rivers	WP2	M3 (03/01/2024), M12 (03/10/2024)	Delivered	M3 15/02/2024, M12 06/12/2024)	
D2.3i Data harvested for contaminants	WP2	M4 (03/02/2024), M14 (03/12/2024)	Delivered	(M4 28/03/2024, M14 04/12/2024)	

D2.4i Data harvested for beach and seafloor	WP2	M7, M17	Delivered	M7 26/09/2024 (beach litter) 26/11/2024 (seafloor litter) M17 delayed	
D2.5i Data harvested for micro-litter	WP2	M7, M17	Delivered	M7 25/06/2024 M17 Delayed	
D2.6i Data harvested for new litter types	WP2	M16	Delivered		
D2.7 Updates on marine litter guidelines	WP2	M6 (03/04/2024)	Delivered	02/10/2025	
D3.1 Validated pan-European collections for eutrophication, including rivers	WP3	M7, M19	Delivered	28 June 2024 (M7) 30 June 2025 (M19)	
D3.2 Validated collections for contaminants	WP3	M7, M19	Delivered	28 June 2024 (M7) 30 June 2025 (M19)	
D3.3 Validated collections for beach and seafloor litter	WP3	M11, M21	Delivered	Beach litter 27/11/2024 & seafloor litter 12/12/2024 (M11) Beach litter, seafloor litter & microlitter 03/10/2025 (M24)	
D3.4 Validated collections for micro-litter	WP3	M11, M21	Delivered	12 September 2024 (M11), 03/10/2025 (M21)	
D3.5 Validated collections for new litter types	WP3	M20	Delivered	03/10/2025	
D3.6 High-resolution DIVA maps near river mouths	WP3	M21	Delivered	September 2025	
D3.7 New maps for contaminants	WP3	M15	Delivered	January 2025	

D3.8 New pan-European and regional DIVA maps for eutrophication	WP3	M21	Delivered	September 2025	
D3.9 New maps for micro-litter	WP3	M17	Delivered	February 2025	
D3.10 New maps for beach and seafloor litter	WP3	M17	Delivered	February 2025	
D4.1 Standard machine-to-machine services	WP4	M3	Delivered	January 2024	
D4.2 Dedicated machine-to-machine services and APIs adapted / delivered for special functionalities	WP4	M9	Delivered	June 2024	
D4.3 Upgraded databases for new litter types	WP4	M12	Delayed	02/10/2025	
D4.4 Improved services for eutrophication	WP4	M10	Delivered	July 2024	
D4.5 Improved services for marine litter	WP4	M10	Delivered	July 2024	
D4.6 Improved services for contaminants	WP4	M12	Delivered	September 2024	
D4.7 Improved webODV tool and integration in central portal	WP4	M18	Delivered	April 2025	
D4.8 Monitoring data about visits and usage	WP4	Continuously	Delivered		

D5.1 Operate Help-desk via Jira tickets	WP5	Continuously	Delivered		
D5.2 Meetings of Board of MSFD experts	WP5	M16, M18,M22	M16 Delivered (contaminants, 04/02/2025) M18 Delivered (marine litter 24/03/2025) M22 Delivered (29/09/2025)		
D5.3 International cooperation and interoperability	WP5	Continuously	Delivered		
D5.4 Promotional material and up-to-date thematic space at central portal	WP5	Continuously	Delivered		
D5.5 Presentations at relevant conferences	WP5	Regularly	Delivered		

2. Identified issues: status and actions taken

[Provide an **overview of issues** identified by CINEA/ DG MARE/ Secretariat (Table A) in the past quarter - new as well as pending ones, the status of those issues, and actions taken to address them and/or roadmap with remaining actions planned to resolve the issues. In Table B, provide information about any issues and challenges identified by yourself.]

A. Priority issue(s) identified and communicated by CINEA/ DG MARE/ SECRETARIAT				
Priority issue	Status (Pending/ Resolved)	Action(s) taken/ remaining actions planned	Date due	Date resolved
Subset and download tool is not working for Chemistry "measurement count" layers - WFS link are misconfigured (EM-165)	Resolved		11/08/2025	
Change WFS URL from ERDDAP to GeoServer (eutrophication data collections) (EM-1180)	Resolved	OGS and ULiege explained that 1. converting tabledap into griddap makes no sense as we are talking about vectorial/point data; Chemistry is already providing an interoperable service for the data collections through ERDDAP. 3. Creating multiple databases to host the different data types requires a significant effort that has to be agreed internally in Chemistry.	01/10/2025	
The Transcopyright url used in the Access and use constraints leads to a gambling website (EM-168)	Resolved	Wrong URLs of data products were corrected	08/08/2025	
webODV branding (EM-1175)	Pending			
Chemistry to provide deadline by when metadata records can be adapted to meet the guidelines (EM-1073)	Pending	Waiting for discussion at the TWG		
Chemistry Quality of Service Monitoring (EM140>EM-144)	Resolved		12/08/2025	
Chemistry videos (EMODCOM-231)	Pending	Chemistry asked for existing guidelines or references that define the		

A. Priority issue(s) identified and communicated by CINEA/ DG MARE/ SECRETARIAT				
Priority issue	Status (Pending/ Resolved)	Action(s) taken/ remaining actions planned	Date due	Date resolved
		requirements for using the EMODnet branding		
Chemistry - Web Services MetadataUrl and DataUrl fields (EM-84)	Resolved	21/09/2025		
V2024 contaminants layers updates (EM-1049)	Resolved	01/10/2025		

B. Issues / challenges identified by the thematic assembly group itself				
Priority issue / challenge	Status (Pending/ Resolved)	Action(s) taken / remaining actions planned	Date due	Date resolved
Improvements in the map viewer (EM-1088)	Pending			
No possibility to change the color scale in the climatologies (EM-743)	Pending	CP team will possibly add this as a new development to the viewer (in 2025), if it follows an OGC standard (STYLE or COLORSCALERANGE)		
Products download in the Map Viewer (EM-962)	Pending	CP team will discuss it and come back to Chemistry on this		
New EMODnet Chemistry product (EM-1152)	Pending			
Request to CP Team to change the naming of some map layers for Chemistry because of changes in P36 vocabulary (EM- 1164)	Resolved		06/08/202 5	

3. Communication assets

[In Table A, list peer reviewed publications directly (co-)authored by consortium and project partners in the reporting period. In Table B, list all non-peer reviewed publications (co-)authored. In all cases, indicate the type of publication, provide the full reference incl. title, volume and issue etc., and whether the publication is open or closed access.]

A. (Co-)Authored peer-reviewed publications in the quarter					
Date of publication	Type of publication	Full reference	ISBN	DOI	Is it open access? Yes/No
June 2025 (online) December 2025 (paper version)	Paper	Hanke, G., Canals, M., Nakajima, R., Bergmann, M., Galgani, F., Li, D., ... & Zhang, S. (2025). Out of sight, but not out of mind: Key issues regarding seafloor macrolitter monitoring: Issued by the expert community "International Seafloor Macrolitter Imaging and Quantification". <i>Marine pollution bulletin</i> , 221, 118500.			

B. Other/non-peer reviewed types of publications (co-)authored in the quarter					
Date of publication	Type of publication	Full reference	ISBN	DOI	Is it open access? Yes/No
	e.g. paper; conference proceedings; book chapter; ...				

For a comprehensive overview of publications referring to/making use of EMODnet data and/or data products, please consult Google Scholar.

4. Monitoring indicators

[Refer to the standardised monitoring tool, i.e. Europa Analytics, to complete the indicators excel template, and provide a short explanation in the table below on the numbers and trends for each indicator when possible/applicable. Indicate clearly if monitoring was carried out using tools other than Europa Analytics.]

Comments on the progress indicators in the indicators spreadsheet		
Progress indicator	Means of collecting figures	Comment
1. Current status and coverage of total available thematic data A) Volume and coverage of available data	CDI catalogue service	Several new data sets have been entered. Also a few data sets were de-activated because of identified errors.
What is your opinion on the data coverage within EMODnet for your thematic? B) Usage of data in this quarter	CDI catalogue service CDI RSM shopping ledger service and personal requests	The data coverage is very good for all European seas and there is a limited increase for most regions. The number of CDI downloads is lower (-92%) than in the previous quarter.
2. Current status and coverage of total number of data products A) Volume and coverage of available data products	Sextant Product Catalogue	In the referring period the increased number of products on subtheme associated to eutrophication, ocean acidification is due to the production of the 2025 climatologies.
B) Usage of data products in this quarter	Download Tracking service for data products	In this quarter the decreased number of downloads and visualisations can be due to the summer break
3. Internal and external organisations supplying/approached to supply data and data products within this quarter	CDI catalogue service	New data have been supplied by 14 regular data providers, while 1 data provider deprecated data sets because of identified errors.
5.1 Daily number of page views of EMODnet Thematic entry page	Europa Analytics	The Chemistry section is visited every day with a maximum of around 30 visitors per day. In this respect there is not much difference between the current and previous quarter.

Comments on the progress indicators in the indicators spreadsheet		
Progress indicator	Means of collecting figures	Comment
5.2 Quarterly total number of visitors, page views, unique page views and percentage of returning visitors	Europa Analytics	The numbers in the last quarter are almost the same or just a little bit higher than in the previous quarter, so quite steady. These numbers only concern the static narrative section, while it would be interesting to know how many maps and products are viewed and downloaded from the CP central services for chemistry.

The monitoring numbers reported as part of the progress monitoring of EMODnet performance are collected through Europa Analytics, unless reported otherwise.

5. Annex: Other documentation attached

[List in Annex if you wish to provide any additional information.]