



# **EMODnet ingestion and safe-keeping of marine data**

**CINEA/EMFAF/2021/3.4.10/02/SI2.868290**

**Start date of the project: 30/03/2022 (48 months)**

**Operational Phase**

**Quarterly Progress Report 16**

**Reporting Period: 01/01/2026 – 31/03/2026**



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## Disclaimer

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## 1. Highlights in this quarter

### Task 1: Maintain, further develop and migrate a web-portal

The Data Submission Service continued its production operation. The service is accessed exclusively via the Central Portal, while the machine-to-machine (M2M) communication and data-exchange mechanisms were also operational. Service operation was continuously monitored and overseen by system administrators. Overall checks and submission curation were performed to ensure minimum outstanding submission issues.

The Helpdesk Service has remained actively engaged, providing ongoing support -with even fewer cases- to returning Data Submitters as they create EU Login (ECAS) accounts and link them to their existing identifiers (MarineID), ensuring a smooth transition and uninterrupted user experience.

The current consortium will finalise its contract for running the EMODnet Ingestion operation and will be succeeded in due time by a new consortium. Therefore, preparations are underway for producing the hand-over package which should contain metadata, data, documentation, software sources, and instructions.

### Task 2: Implement pathways for delivering data to final repositories

The total number of received submissions increased from 2045 to 2116, while the number of processed and published data submissions increased from 1826 to 1970, and of which, the number of fully elaborated data submissions went from 846 to 920 data. The KPI excel sheet provides more details. The Viewing Service is synced every time with the Products Catalogue service at the EMODnet Portal. This implicates that all 1970 submissions at the end of Q1 2026 were also present in the EMODnet Products Catalogue.

### Task 3: Facilitate machine-to-machine transfers

During the reporting period the team involved in the operational oceanography ingestion expanded the datasets available across all interfaces and services supporting the EMODnet Ingestion operational data flow management. The ingestion ERDDAP service (<https://ingestion-erddap.emodnet-physics.eu/erddap>), which provides users with an easy and unified way to access the latest ingested real-time (RT) collections, reached a total of 2983 datasets (261 added during the reporting period).

Although it does not capture the specific actions of the reporting period, the amount of new operational platform data available in EMODnet Physics (since 1/1/2026) provides the reader with an indication of the value of past ingestion efforts, which now result in the continuous, automatic delivery of new data into the EMODnet system.

platformtypedescription	Total # of new Platforms in EMODnet Physics	Delivery based on action initiated by WP3	days of recordings
Argo	20	20	938
Argo/Profiler	284	284	3811
Drifting	13623	32	4800026
Ferrybox/Ship	6	0	9682
Fishing	711	711	894

Gliders	44	36	1426
Mini	28	0	567
Mooring	18	3	865
Sea	36	0	1496
Thermosalinographs	129	0	1912
Tide	2	1	111

Table 1. new data sets added to EMODnet Physics

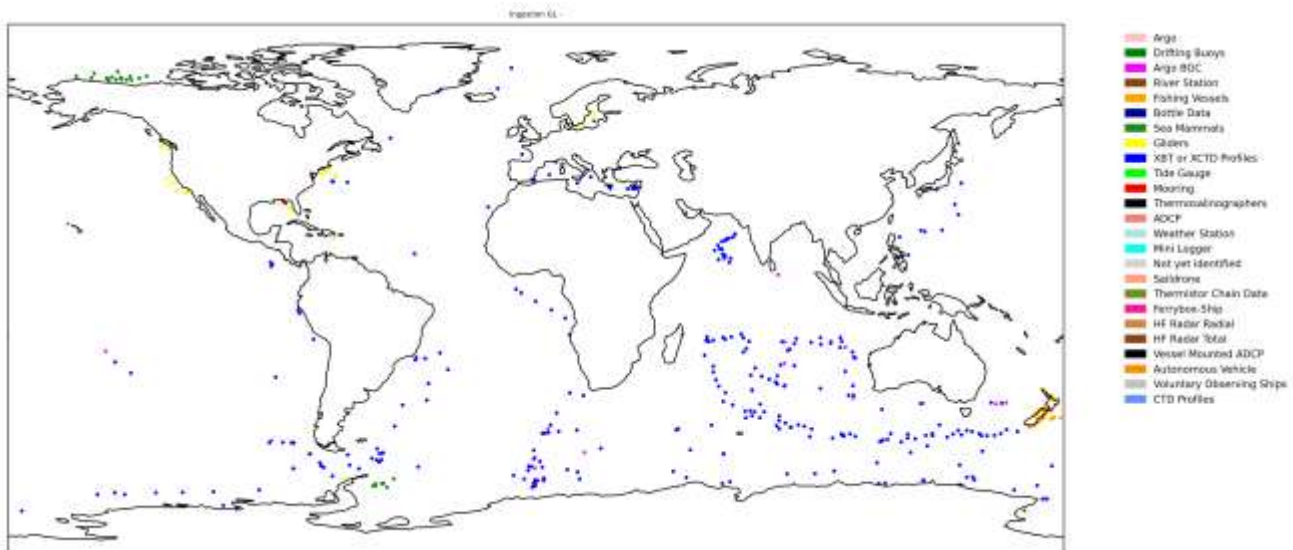


Figure 1: new operational data sets added to EMODnet Physics Db for Global waters

During the period the team also supported CNR to set up the service for offering gliders and drifters:

- <https://erddap.cnrgliders.eu/erddap/index.html>
- <https://erddap.jericodrifters.eu/erddap/index.html>

Importantly WP3 team is an active actor in the dialogue between EMODnet and the AMRIT project to work towards a more unified metadatamodel that can serve both the European RI and EMODnet stakeholders

#### Task 4: Operate a help-service for users to provide their data in the most appropriate format

Since the migration, use is now made of forms, which users can complete on the EMODnet Portal. These are registered in JIRA tickets and are assigned to Thematics / Ingestion by the EMODnet Secretariat. Responses will then also be given through JIRA tickets. In the reporting period 5 JIRA helpdesk requests (EMODNET-2260, 2306, 2311, 2316, and 2335) were received and these have been processed. For two tickets (2260 and 2311) there will be a bilateral follow-up outside JIRA. While EMODNET-2306 will be handed over to the new consortium for action.

#### Task 5: Allow providers of data to track the progress of their data from submission through to their storage in a repository

Data providers can follow the processing of their data submissions in the Submission Service, which is done in several steps each indicated by a status field. Data providers are contacted by assigned data centres, in case there are additional questions about the ingested data sets.

### **Task 6: Participate in discussions with EMODnet partners in order to improve the efficiency of the whole collection, assembly and dissemination process**

All coordinators of EMODnet Thematic projects are partners in EMODnet Ingestion which guarantees a mutual tuning with EMODnet Ingestion. Moreover, EMODnet Ingestion coordinators are involved in the communication of the EMODnet Steering Committee and Technical Working Group.

### **Task 7: Maintain a summary record of data delivered**

This function is offered by the EMODnet Products Catalogue service. Each completed submission is harvested by the GeoNetwork service and then published. Before submitting new completed submissions for harvesting, editing activities take place aimed at replacing so-called orphan data for organizations from free text into controlled EDMO terms, orphan data for projects into controlled EDMERP terms, and orphan terms for Cruises into controlled Cruise Summary Reports (CSR) terms in order to improve the integrity and richness of the metadata.

### **Task 8: Engage in outreach activities towards significant holders of marine data whose data are not yet available.**

A comprehensive overview of the central document compiling all outreach activities and events conducted by partners to promote the project will be included in the final project report. The current version of the document is available here: [EMODnet-Ingestion3 2024-2026-Outreach InputFINALreport - Google Docs](#).

During the reporting period from January to March 2026, EMODnet Ingestion partners participated in 15 events, including 6 self-organised events. These covered a range of international and national meetings, conferences, and workshops.

Across these 15 events, a total of 16 talks and 2 posters were presented. Notable events included the EMODnet Ingestion Workshop on Harmonisation of Data Management in Offshore Licensing, organised by project partner Deltares; the Ocean Sciences Meeting 2026 held in Glasgow (Scotland); Oceanology International 2026 held in London; lectures on EMODnet co-organised by the University of Malta; and the final meeting of EMODnet Ingestion III, that was held online on the 26<sup>th</sup> and 27<sup>th</sup> of March 2026.

A series of communication products was also produced during this period. These included social media posts sharing EMODnet newsletters, as well as the creation of visuals, uploaded to the EMODnet Annual Report 2025. These visuals included “visit card”-style graphics for the EMODnet success stories (<https://emodnet.ec.europa.eu/en/data-sharing-success-stories>) and a visual summarising peer-reviewed publications by EMODnet Ingestion partners.

Finally, this period saw the release of publications by project partners: Sanz-Pinilla et al. (2026) in *Earth Science Informatics*, Machitadze et al. (2026) in *Journal of Solid Waste Technology and Management*, and Elena Partescano and collaborators published *EMODnet Ingestion for Open Science: Unlocking the Potential of Data in European Research*.



Figure 2: new operational Visuals for success stories (left) and for partners publications (right).

### Task 9: Improve and document the availability of data provided for coastal and offshore licensing.

During this period, Deltares continued to advance and finalize the development of the Roadmap for the Harmonization of Data Management within Offshore Licensing Procedures, building on insights gained from previous activities.

#### Pilot Case Workshop

On January 20 2026, the EMODnet Ingestion project hosted a workshop on Harmonizing Data Management in Offshore Licensing. The objective of this workshop was to present and discuss the draft roadmap with relevant representatives at both national and EU levels. Based on this feedback, the final Roadmap was updated and improved to ensure that it matches the stakeholder's needs in the best way possible. The workshop was attended by national government representatives from Estonia, Ireland, The Netherlands and Malta.

Feedback from this workshop highlighted the need for several important adjustments:

- **Refined Thematic Scope**
  - o Participants agreed to refine the thematic scope of the Roadmap and focus on:
    - Data management and interoperability
    - Governance, regulatory frameworks and institutional barriers.
- **Format and Structure**
  - o Participants indicated that a interactive PDF document would be the best format to present the Roadmap. Based on this refinements were also made to the visualization and structure.
- **Additional Inputs**
  - o Participants also suggested other relevant inputs on best practices
  - o Feedback from the EU and Consortium Partners recommended placing greater emphasis on EMODnet projects and services

#### Final Webinar

On 18 March 2026, nearly 60 stakeholders from public authorities, research institutes, industry and non-profit organisations gathered for the EMODnet webinar “**Roadmap for the Harmonisation of Data Management in Offshore Licensing Procedures**”. The event was promoted via a dedicated EMODnet event page and social-media channels, attracting just under 100 registrations.

The webinar included:

- An introduction to EMODnet Ingestion by Dick Schaap, coordinator of EMODnet Ingestion
- A regulatory perspective presented by Francesco Lombardo (Ministry for Agriculture, Fisheries and Animal Rights, Malta) outlining key challenges and needs.

- Best practice presentation from Jochem Boersma (Witteveen+Bos), who shared insights from the Dutch WOZEP programme, illustrating how coordinated data practices can significantly enhance environmental assessments for offshore wind and ensure that valuable marine data is accessible to all.
- A full presentation of the Roadmap delivered by Deltares.

### **Key Outcomes and Reflections of the Webinar**

The discussion during the webinar revealed several central themes:

- Harmonisation Must Accelerate
  - o Participants argued that next steps should focus on greater harmonisation of data and regulatory processes, stressing that this is essential for efficient data management and transparent licensing procedures across Europe.
- The EU Should Play a Central Role
  - o Many expressed the desire that the European Union should lead the alignment of standards and processes, ensuring coherence between Member States.
- EMODnet Is Well Positioned to Support the Harmonization of Data Management in Licensing Procedures.
  - o Attendees underlined that EMODnet can strengthen harmonisation by:
    - Offering webinars and knowledge-sharing events
    - Supporting the adoption of common standards
    - Expanding submission services and data storage options,
    - Helping build stakeholder capacity through training and guidance.

The outcomes of the webinar are shared as part of the [EMODnet Newsletter](#). In this article, also a link is given for downloading the final '**Roadmap for the Harmonisation of Data Management in Offshore Licensing Procedures**'. This Roadmap offers a structured overview of guidance and best practices designed to support authorities and developers in streamlining offshore licensing procedures. It focuses on two thematic areas: 1) governance and regulatory framework, including institutional barriers, and 2) data management and interoperability. Participants broadly agreed that the roadmap provides a clear, accessible guide and represents a meaningful step towards shared practices across Europe.



Figure 3: Cover of the Roadmap

The Roadmap is attached to this progress report as Annex. .

**Task 10: Service continuity during operation and for transition**

Coordination of the consortium is undertaken by MARIS and HCMR to ensure the continuity of the EMODnet Ingestion portal and its array of services. The Q4-2025 report has been prepared and submitted which was accepted by the EU. The present Q1-2026 report is the final quarterly report of the Contract between CINEA and the current consortium. Remaining is the preparation and delivery of the Final Report and the Hand-Over protocol which both are under preparation. As part of this, recently the final EMODnet Ingestion III project meeting was held online, 26-27 March 2026. During the meeting all partners gave an update on their activities and the finalisation of the contract was discussed.

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
D0.1: Quarterly concise progress reports	0.1	M4, M7, M10, M13, M16, M19, M22, M25	D0.1-a,b,c,d, e,f,h Delivered	M4, M7, M10, M13, M16, M19, M22, M25	
D0.2: Interim report	0.1	M12	Delivered and accepted	M14	
D0.3: Final report	0.1	M24	Underway		M26
D0.4: Transition and hand over protocol	0.1	M24	Underway		M25
<i>D0.5i: Consortium Agreement and subcontracts</i>	0.1	M1	Subcontracts done		
<i>D0.6i: Short minutes - action lists of internal coordination meetings</i>	0.1	Regularly			
D1.1: Migrated Ingestion site maintained at Central Portal	1.1	M6 – M24	Delivered: new site opened and operational	M14 and further	
D1.2: Users migrated from Marine-ID to ECAS (EU Login)	1.2	M6	Delivered: arranged for consortium members; for users it will be part of the operations	M14 and further	
D1.3: Migrated Data Submission Service operational	1.3	M6 – M24	Delivered	M14 and further	

D1.4: Data tracking service operational	1.3	M1 – M24	Delivered	Operational since M0	
D1.5: Migrated View Submissions service operational	1.4	M1 – M24	Delivered	Operational since M0	
D2.1: Pathways operational	2.1	M1 – M24	Delivered	Operational since M0	
D2.2: Many submissions processed and published at phase 1 and phase 2	2.1	M12, M24	Delivered	See KPI – Q1-2026	
D2.3: Help service operational	2.2	M1 – M24	Delivered	Operational since M0	
D3.1: Updated documentation, standards, tools, and procedure for NRT and RT data published	3.1	M12, M24	Delivered: integrated in Interim Report	M14, M24	Updated version will be integrated in final report
D3.2: Connections with new NRT and RT monitoring stations operational	3.1	M12, M24	Delivered		Will be integrated in final report
D3.3: Upgraded Viewing service for NRT and RT stations operational	3.2	M6 – M24	Done	M4 and further	
D4.1: Inventory of data providers and use cases engaged in EMODnet Ingestion	4.1	M12, M24	Delivered: integrated in Interim Report	M14, M24	Updated version will be integrated in final report
D4.2: Updated promotion material	4.3	M12, M24	First set detailed in Interim Report	M13, M23	Second set will be detailed in final report
D4.3: Pilot cases selected for interviews about licensing data	4.2	M9	Delivered	M12	
D4.4: Interviews done with selected pilot case stakeholders	4.2	M16	Delivered	M15	
D4.5: Pilot case Workshop hosted	4.2	M22	Done	M23	

D4.6: Final Webinar hosted	4.2	M23	Done	M24	
D4.7: Roadmap for harmonisation of Data Management within Offshore Licensing Procedures	4.2	M24	Delivered	M24	Annex to this report

## 2. Identified issues: status and actions taken

### 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

### 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
<b>EM-1189 Query to Product Catalogue does not provide full answer</b>	<b>Pending</b>	Action required by CP Team	April 2026	

### 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

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

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	Submission Viewing service	The total number of new phase 1 + phase 2 submissions in the current quarter is 144 and of this 74 were elaborated to phase 2. The overall number of published submissions went from 1826 to 1970.
What is your opinion on the data coverage within EMODnet for your thematic?		Overall, EMODnet Ingestion brings together an excellent data collection, covering data from all over the world and many disciplines, compiled by many data providers from academic/research, government, industry, and NGOs.
B) Usage of data in this quarter	Cloud storage of Submission Viewing service	The total number of download transactions is circa 49% higher with 1500 downloaded data files than in the previous quarter.
3. Internal and external organisations supplying/approached to supply data and data products within this quarter	Submission Viewing service	144 new data submissions were received and published from 66 organisations, mostly academic and research, and from 25 countries.
5.1 Daily number of page views of EMODnet Thematic entry page	Europa Analytics	The Ingestion website has been migrated in April 2025 to the EMODnet Portal. Initially, it reaches circa 80 visitors per day, but later it stabilizes to circa 20 visitors per day. This was continued also in Q1-2026, except for the last 2 weeks where we see a substantial increase. The numbers of visitors and pageviews in the previous quarters were quite comparable and low. But this quarter there was a substantial increase. Most probably this has to do with Ingestion being involved in 2 webinars which attracted quite some users. From these they might have become interested to check out the Ingestion narrative.
5.2 Quarterly total number of visitors, page views, unique page views and percentage of returning visitors	Europa Analytics	The numbers of visitors and pageviews in the previous quarters were quite comparable and low. But this quarter there was a substantial increase. This can also be seen in the graph under 5.1. Most probably it has to do with Ingestion being involved in 2 webinars

Comments on the progress indicators in the indicators spreadsheet		
Progress indicator	Means of collecting figures	Comment
		which attracted quite some users. From these they might have become interested to check out the Ingestion narrative.
7.1) Visibility & Analytics (Portal overview)	Matomo / grafana	EMODnet Ingestion has migrated to the EMODnet portal per end of April 2025. After that the grafana stats have halted.
7.2) SEO assessment - Acquisitions	Matomo / grafana	EMODnet Ingestion has migrated to the EMODnet portal per end of April 2025. After that the grafana stats have halted.
9. Visibility & Analytics for web pages	Matomo / grafana	EMODnet Ingestion has migrated to the EMODnet portal per end of April 2025. After that the grafana stats have halted.
10. Visibility & Analytics for web sections	Matomo / grafana	EMODnet Ingestion has migrated to the EMODnet portal per end of April 2025. After that the grafana stats have halted.
11. Average visit duration for web pages	Matomo / grafana	EMODnet Ingestion has migrated to the EMODnet portal per end of April 2025. After that the grafana stats have halted.

*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

### D4.7 - Roadmap for the Harmonisation of Data Management in Offshore Licensing Procedures