



# EMODnet Thematic Lot n°3 – Physics

CINEA/EMFAF/2024-25/3.6/4500085078

Start date of the project: 23/08/2025 (24 months)

**Operational Phase**

## Quarterly Progress Report (Q1.2026)

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



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# 1. Highlights in this quarter

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

Task 1 focuses on improving the data flow towards the central portal interface. This consists of maintenance and update of the back-end interfaces to serve the central portal requirements. Data must be made interoperable, such that all data of a particular type collected within a defined time and space window can be found, visualized and downloaded in a way that makes the physical location of the data invisible to the user and that allows data from different sources to be assembled without further processing and this process should ensure acknowledgment of the data providers.

Physics manages the following data categories: 1) data is a series of values sampled by an in-situ platform, 2) data collection is a grouping of similar in situ data, 3) product is the outcome of a reprocessing method. Data and data collections can be provided in near-real-time or fast delivery (NRT-FD) modes. The in-situ data are harmonized and normalized in terms of metadata, and only basic or automatic quality control (QC) is applied—primarily targeting large level shifts and obvious outliers. These new data sources may contribute to one or more data collections. Whenever research-quality-controlled data (RQD) for a given source become available, Physics integrates them into the relevant data and data collections. It is important to note that rigorous quality control (QC) requires significant effort and time from expert centers; the process can take from several months to years. Consequently, time series produced by continuous monitoring platforms may exhibit varying data quality depending on the age of the recordings, the data quality is reported back to back to data (quality procedure and quality check/quality flag information)

The focus of this task is to keep updating the organization of metadata and in situ data in the Physics backend, while data collections and products are managed under Task 2 and their integration towards the CP in Task 3.

To mirror the three categories EMODnet Physics runs more services:

- 1) <https://platform-erddap.emodnet-physics.eu/erddap>
- 2) <https://data-erddap.emodnet-physics.eu/erddap>
- 3) <https://prod-erddap.emodnet-physics.eu/erddap>

While services (2) and (3) are stable systems, the team is currently facing a bottleneck in ERDDAP when managing more than 120,000 datasets. Tests and internal analyses suggest that this may be due to limitations in the allocable memory for the ERDDAP configuration XML. There is ongoing discussion with the CP to migrate part of the system directly to the CP backend infrastructure, which can already provide improved performance.

Regarding in-situ data provision, EMODnet Physics now provides access to data from thousands of platforms. Some platforms continuously record data, while others collect single measurements. The days of recordings gives a better view of the amount of available data. To better capture the progresses from this report we introduce the following table:

Table 1. In situ data provision

Platform Type	Q4.2025			Q1.2026			Trend	
	# of plat	Days of Rec	Years of Rec per Platform	# of plat	Days of Rec	Years of Rec per Platform	# of plat	Days of Rec
Argo/Profiler	19785	28085867	3,94	20057	28468202	3,94	1%	1%
River Station	4246	13336542	8,72	4306	13442655	8,67	1%	1%
Tide Gauge	3470	13337762	10,68	3493	13566097	10,79	1%	2%
Mooring	4300	9462892	6,11	4355	9612009	6,13	1%	2%
Drifting Buoy	28658	4990421	0,48	43007	17936750	1,16	50%	259%
CTD	4599446	4660630	0	4626699	4688330	0	1%	1%
Argo BGC	2643	2395295	2,52	2663	2405277	2,51	1%	0%
Thermosalinographers	3871	1252868	0,9	4178	1571820	1,05	8%	25%
Weather Station	439	943942	5,97	439	944600	5,98	0%	0%
Mini Log	959	654979	1,9	997	662498	1,85	4%	1%
Sea Mammals	15859	451322	0,08	15895	453820	0,08	0%	1%

Gliders	2970	460400	0,43	2973	509959	0,48	0%	11%
Bottle Data	5287	152287	0,08	5286	151942	0,08	0%	0%
Ferrybox/Ship	75	130169	4,82	84	178987	5,92	12%	38%
Fishing Vessels	11200	77831	0,02	11884	79069	0,02	6%	2%
HF Radar Radials	303	29746	0,27	308	29746	0,27	2%	0%
HF Radar Totals	43	29746	1,92	43	29746	1,92	0%	0%
Saildrone	49	16962	0,96	45	14817	0,91	-8%	-13%

Notably, the number of CTD datasets keeps increasing, driven by contributions from Fishing Vessels, which now account almost 12000 datasets (79000 dor), etc. During the period there was a specific action to unlock meteorological data from drifting buys.

This task also includes the collaboration with Ingestion in operating and updating the ingestion workflow for the NRT-FD data: the ingestion of a new operational source is a step-wise process which interconnects data by different machine-to-machine technologies (ERDDAP, FTP file access to web APIs for real-time exchange, Data Access Broker – DAB, etc.), harmonizes the metadata, makes these new sources discoverable into the Central Portal (under Ingestion), initiates further data qualification and validation to expand EMODnet Physics data collections and ensure long term stewardship of these data under official national and thematic data repositories.

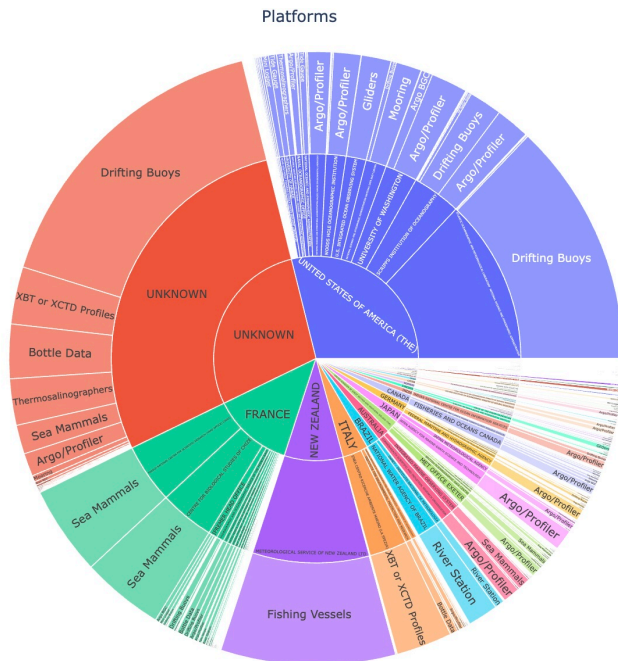


Figure 1. distribution of platforms and providers

This step-wise approach is fully integrated with the CP resources, allowing providers to easily monitor the progress of their data integration. After a dataset checkup—to verify the required actions and effort to include the source—the dataset is initially made available “as-is” in the ingestion area. More specifically, the dataset is first integrated into the ingestion-ERDDAP system, after which metadata harmonization and clearance are applied to ensure the dataset can be properly viewed and discovered under the CP → Ingestion → As-Is layers.

In parallel, this process triggers a deeper analysis to include the source under the NRT-FD categories and collections, which may require additional time depending on the type of data. Once fully integrated into a collection, the provider and platform are listed in the Physics metadata datasets. To avoid any limitation in the experience, for Physics all data is CC-BY (or equivalent) and are immediately available from the CP (and CP APIs).

To discover the list of in-situ platforms Physics provides the users with the following metadata-datasets (Table 2):

Table 2. dataset of the platforms metadata

Dataset	link	Description
EP_PLATFORMS_METADATA_V2	<a href="https://data-erddap.emodnet-physics.eu/erddap/tabledap/EP_PLATFORMS_METADATA_V2.html">https://data-erddap.emodnet-physics.eu/erddap/tabledap/EP_PLATFORMS_METADATA_V2.html</a>	EMODnet Physics - Collection of platforms metadata
EP_PLATFORMS_METADATA_CTD_V2	<a href="https://data-erddap.emodnet-physics.eu/erddap/tabledap/EP_PLATFORMS_METADATA_CTD_V2.html">https://data-erddap.emodnet-physics.eu/erddap/tabledap/EP_PLATFORMS_METADATA_CTD_V2.html</a>	EMODnet Physics - Collection of platforms metadata ctd

Connected sources keeps providing new data on operational base.

**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**

This task manages both data collections and data products. The harmonized data collections are produced and maintained by the team (see also Task 1), published under a CC-BY license, and owned by the European Commission (EC). For data products, the task makes optimal use of existing resources from the EMODnet Physics network—including the Copernicus Marine Service, ICES, SONEL, and others—which can be integrated into the Central Portal (CP) under a CC-BY license, while ownership remains with the original producers.

The harmonized data collections are organized according to Physics themes (e.g., temperature, salinity, currents, etc.), and these themes are defined using a dedicated controlled vocabulary, P33<sup>1</sup>, hosted in NVS-BODC service. The P33 vocabulary groups one or more parameters (defined according to the P01 vocabulary) and dataset typologies (e.g., one for time series, another for profiles). Each P33 collection represents a metadata dataset that lists the grouped resources and parameters under that theme. For each P01 parameter, users can access a corresponding P01 metadata dataset, as well as P01 datasets for both time series and profile data<sup>2</sup>.

The figure (Figure 2) shows the variation in the platforms collecting these parameters. For Task 2, we also introduce “days of recordings” as an indicator to better track the evolution of the data collections. In this report, we can only present the trend for one month (since the indicator was defined), which shows a general increase in data, mainly due to operational stations

<sup>1</sup> <https://vocab.nerc.ac.uk/collection/P33/current/>.

<sup>2</sup> example: the Water Salinity and Conductivity theme (NVS::P33::WARERSALINITY) includes: sea water salinity (NVS::01::PSAL), sea water electrical conductivity (NVS::01::CNDC), sea water density (NVS::01::DENS), and sound velocity in sea water (NVS::01::SVEL).

	Q4.2025	Q1.2026	Trends		Days of recording	years of rec/platform	Collections	Products*	Days of recording monthly trends
	Platforms	Platforms							
WATERTEMPERATURE	4694321	4737109	1%		66612397	0,04	2	4	0,3%
WATERSALINITY	4639477	4667326	1%		38502487	0,02	3	6	0,2%
CURRENTS	10225	10343	1%		5474694	1,46	4		0,5%
OPTICAL	9330	9457	1%		3308014	0,97	20	3	0,0%
SEALEVEL	4819	4878	1%		19938073	11,33	4	6	0,2%
METEOROLOGICAL	16115	19375	20%	20%	17589013	2,51	10		0,3%
BIOCHEMICAL	9253	9410	2%		3958636	1,17			0,1%
CARBONSYSTEM	4689	4767	2%		3215179	1,87	5	1	0,2%
DISSOLVEDOXYGEN	22662	22812	1%		4168523	0,51	10		0,2%
WAVES	3963	4086	3%		8614207	5,84	24	1	0,3%
WINDS	3440	3518	2%		9275858	7,30	6	1	0,3%
RIVER	1488	1547	4%		12872374	23,08	1	1	0,2%
UNDERWATERSOUNDS								9	

Figure 2. Stats for task 2

As already reported, under Task 2 there is an ongoing collaboration with OBPS (and the CINEA2023OP0015 – EC\_OBPSS CINEA project) teams to improve the linkage between data and the methodologies (practices and best practices) applied for data collection and publication. Preliminary results from this collaboration have enabled the identification of approximately 50 best practices, which can now be linked to the EMODnet Physics metadata (ongoing action).

### **Task 3. Develop and improve procedures for machine-to-machine connections to data and data products, in a common manner across the EMODnet service**

Task 3 focuses on developing and improving machine-to-machine connections for data and data products across the EMODnet service. It involves maintaining and enhancing APIs and web services to allow metadata, data, and products to be discovered, accessed, and downloaded seamlessly by applications on any device, without any log-in. The solutions follow a unified EMODnet approach aligned with EMODnet Central Portal guidelines.

As described in the previous sections, the integration of data, data collections, and products into the CP is managed according to Physics themes (e.g., temperature, salinity, currents, etc.). Table 8 lists the collections (P33 and their linked P01 entries) that are also available in the Central Portal. Table 9 and Table 10 provide an overview of the published products, along with their updated status reports and planning details.

### **Task 4. Fulfil the EMODnet Central Portal requirements that ensure all data and data products can be found, viewed and downloaded with ease (from the Central Portal)**

Task 4 focuses on the user experience for downloading in situ data from EMODnet Physics layers. This task ensures that all data and data products are easily discoverable, viewable, and downloadable through the EMODnet Central Portal, with metadata fully compatible with cataloguing standards and INSPIRE services. It aims to provide straightforward access within the portal, minimizing the number of steps required for users, while maintaining coherence with other thematic groups through active participation in EMODnet Technical Working Group (TWG) meetings.

The EMODnet Task Force was officially activated during the reporting period, and the 19th EMODnet TWG took place in March 2026. The TWG continues to serve as a key coordination forum for ensuring interoperability, harmonisation, and consistent user experience across EMODnet services. Recent discussions placed strong emphasis on improving metadata

harmonisation (including distribution information, temporal references, and provenance), enhancing catalogue functionality, and strengthening service monitoring across the Portal. A dedicated Task Force was also launched to further advance metadata standardisation and alignment across thematic components, including improved integration with the European Digital Twin Ocean infrastructure (EDITO).

As anticipated, the team is also working on extending catalogue entries to include each of the available data collections and platform datasets listed under Task 1, improving granularity and discoverability of EMODnet Physics resources within the Central Portal.

Activities are tracked through JIRA tickets (see Section 2). This task also includes and reports on the activities of the Central Portal Task Team, which is responsible for ongoing developments in portal usability, catalogue enhancements, and technical coordination across EMODnet services.

### **Task 5 Provide content for the reserved space for each thematic group within the EMODnet Central Portal, following any necessary requirements**

Contents on EMODnet Physics consolidated and published: <https://emodnet.ec.europa.eu/en/physics>

Other means of supporting the central space include contributing news, posting on social media, organizing events, and providing materials (documents, presentations, feedback) when necessary.

Importantly, during the period two main events took place: the Ocean Science Meeting in Glasgow and the Ocean Days in Brussels. Both events provided key opportunities to showcase EMODnet activities, strengthen engagement with the wider marine science and policy community, and foster exchanges with stakeholders across research, operational oceanography, and data infrastructure domains. They also supported visibility of EMODnet services within the broader context of European and international ocean data initiatives, while highlighting ongoing developments in interoperability, digital ocean infrastructure, and user-driven improvements of data access services.

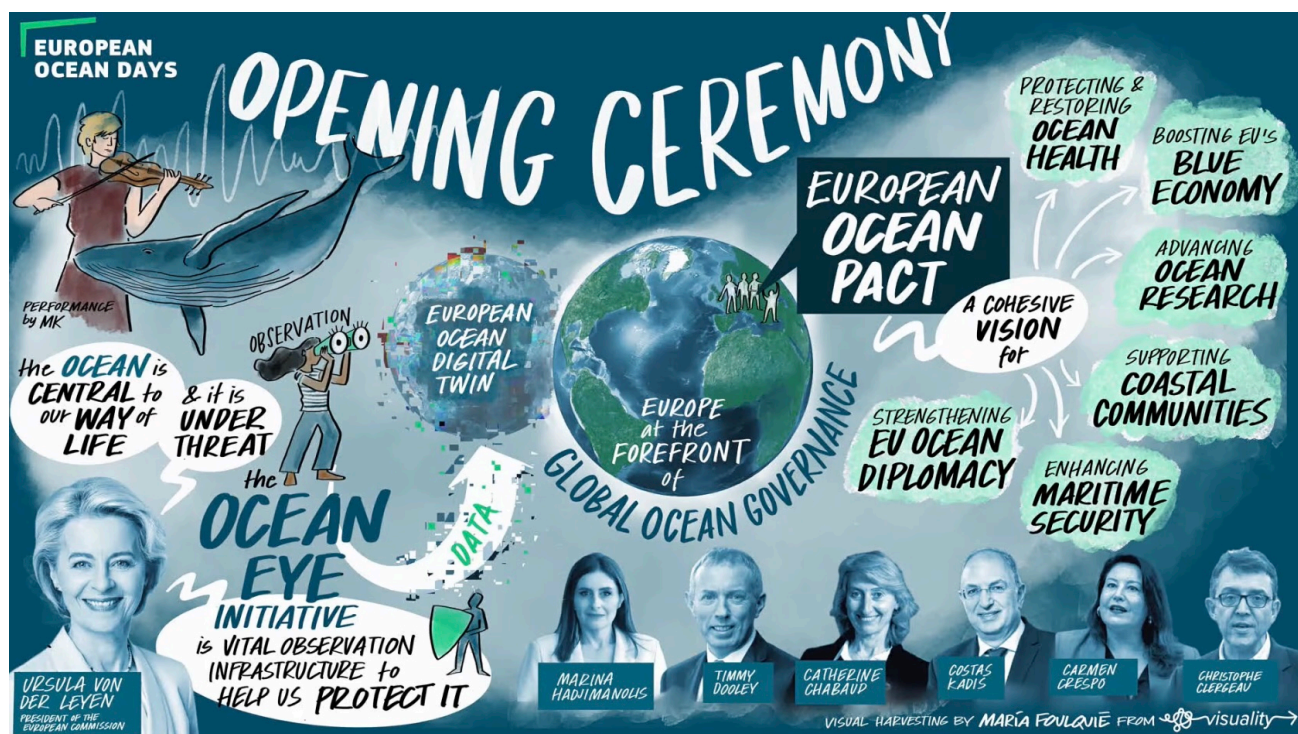


Figure 3A. Graphic arts from EOD- part 1



Figure 4B. Graphic arts from EOD – part B

The European Ocean Days opened with a call to place the ocean at the heart of EU policy through the European Ocean Pact, which promotes a holistic approach combining stronger environmental policies, research & innovation (fed by the European Ocean Digital Twin/EMODnet), and diverse economic activities — from fisheries and shipping to renewable energy and sustainable tourism — under an inclusive, coherent framework of shared governance (Figure 4).

### Task 6. Ensure coherence with the efforts of the Regional Sea Conventions (RSC) and other relevant actors

Task 6 focuses on ensuring coherence with the efforts of the Regional Sea Conventions (RSC) and other relevant actors. Particular attention is given to aligning data delivery to and from the RSCs and the International Council for the Exploration of the Sea (ICES), promoting harmonized data sharing and collaboration across these entities. With ICES being an EMODnet Physics partner, this task is largely covered by ICES itself. Moreover, in continuity with previous contracts, Physics continues to support the activities of TG NOISE. The subgroups made ready the final drafts of the new guidelines on implementing Articles 10 and 13 of the MSFD regarding D11. The current draft establishes a clear framework linking Threshold Values to Targets and Measures, recommending that all targets be realistic, quantifiable, time-bound, and directly tied to the agreed noise thresholds (DL2 and DL4) to ensure coherence and comparability across regions and Member States. For impulsive noise, the report calls for the establishment of a new TG Noise sub-group dedicated to forecasting future noise activities (such as offshore wind piling and seismic surveys) and setting forward-looking targets to prevent deterioration of GES. For continuous noise from shipping, it recommends that Member States compile ship traffic statistics using AIS data for every Marine Reporting Unit, with data processing harmonised at the regional level and made available on EMODnet (Human Activities/Physics).

**Task 7. Contribute to the implementation of the EU legislation and broader initiatives for open data, particularly on issues of standardisation, interoperability and availability of reporting data, including by non-EU organisations, when relevant**

Task 7 focuses on supporting the implementation of EU legislation and broader open-data initiatives by ensuring standardization, interoperability, and availability of reporting data, including from non-EU organizations when relevant. It involves fostering collaborations with EU initiatives, Research Infrastructures, and other stakeholders to enable seamless data provision across coast, land, and sea, ensuring compliance with the INSPIRE Directive and facilitating Member States' reporting obligations. The task also promotes integration with European-wide platforms such as the European Open Data Portal, EU Digital Twin Ocean (EU DTO), and the European Open Science Cloud, while extending EMODnet data accessibility beyond European seas. This task ensures effective promotion, transparent data flows, and avoiding duplication or fragmentation of services.

The main ongoing action is the work (together with the Ingestion and Chemistry teams and the AMIRT project) on defining a minimum set of metadata within a unified metadata model (current version provided in the annex). Other ongoing actions include supporting new stakeholders and data providers, such as Van Oord, which is developing automated workflows to supply EMODnet Physics with CC-BY licensed data, as well as the Cousteau Foundation and additional partners. Moreover there is an ongoing dialogue (thanks to OBSSEA4CLIM project) to use EMODnet (Physics) data for GCOS report.

**Task 8. Monitor quality/performance and deal with user feedback**

This task covers performance monitoring (reported quarterly through the indicators annex) and the handling of user feedback. Support requests coming from the Central Portal (CP) are tracked and managed through the JIRA system (see Section 2 for details).

Analytics indicate that the static page of EMODnet Physics on the CP received about 1.200 views. Internal monitoring of interactions between the CP GeoViewer and EMODnet Physics services publishing data through this interface shows approximately 25.000 callback requests from ERDDAP services and about 9.900 platform page views. This suggests that Physics stakeholders are particularly active on the CP GeoViewer, which in total recorded approximately 34.000 views.

**Task 9. Dedicate specific resources to the EMODnet Central Portal Task Force**

This task is designed to guarantee resources to support the CP team and dealing with tasks. Besides the already reported results (task 1- task 8) there is nothing to report.

Table 3. Deliverables

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 - kick off meeting (KOM)	WP1	30/09/25		24/11/2025	we decided to have the KOM back to back to the Digital Ocean Forum to stimulate proactive participation to both the events
<b>D1.2 - minute of KOM</b>	WP1	05/10/25			These will be part of the next quarterly report
<b>D1.3 - Quarterly report Q3.2025</b>	WP1	15/10/25		15/10/2025	Delivered
<b>D1.4 - Quarterly report Q4.2025</b>	WP1	15/01/26		15/01/2026	Delivered
<b>D1.5 - Quarterly report Q1.2025</b>	WP1	15/04/26		15/04/2026	This document
<b>D1.6 - Quarterly report Q2.2025</b>	WP1	15/07/26			
<b>D1.7 - Quarterly report Q3.2025</b>	WP1	13/10/26			
<b>D1.8 - Quarterly report Q4.2025</b>	WP1	13/01/27			
<b>D1.9 - Quarterly report Q1.2026</b>	WP1	14/04/27			
<b>D1.10 - Quarterly report Q2.2026</b>	WP1	15/07/27			
<b>D1.11 - Annual progress report</b>	WP1	22/08/26			
<b>D1.12 - Final progress report</b>	WP1	22/08/27			
<b>D1.13 - Handover note</b>	WP1	22/08/27			
<b>D1.14 - central catalogue updates - v.2025</b>	WP1	15/01/26		Annex to this report	
<b>D1.15 - central catalogue updates - v1.2026</b>	WP1	15/09/26			
<b>D1.16 - Guidelines on data ingestion procedures for operational oceanography data streams. V.2026</b>	WP1	22/08/26			
<b>D1.17 - Guidelines on data ingestion procedures for operational oceanography data streams. V.2027</b>	WP1	22/08/27			
<b>D1.18 - TGs - RSCs events attendance</b>	WP1				
<b>D1.19 - Annual meeting</b>	WP1	22/08/26			
<b>D1.20 - Annual meeting</b>	WP1	22/08/27			
<b>D2.1 - Data sources &amp; gap analysis v.2026</b>	WP2	22/08/26			
<b>D2.2 - Data sources &amp; gap analysis v.2027</b>	WP2	22/08/27			
<b>D2.3 - Guidelines for data managers to facilitate data flow towards EMODnet Physics and the EMODnet Central Portal v.2026</b>	WP2	22/08/26			
<b>D2.4 - Guidelines for data managers to facilitate data flow towards EMODnet Physics and the EMODnet Central Portal v.2027</b>	WP2	22/08/27			
<b>D2.5 - EMODnet Physics report on metadata and metadata governance v.2026</b>	WP2	22/08/26			
<b>D2.6 - EMODnet Physics report on metadata and metadata governance v.2027</b>	WP2	22/08/27			
<b>D2.7 - Sea Level Data collection v.2026</b>	WP2	22/08/26			

D2.8 - Sea Level Data collection v.2027	WP2	22/08/27			
D2.9 - Temperature Data collection v.2026	WP2	22/08/26			
D2.10 - Temperature Data collection v.2027	WP2	22/08/27			
D2.11 - Salinity Data collection v.2026	WP2	22/08/26			
D2.12 - Salinity Data collection v.2027	WP2	22/08/27			
D2.13 - Sea Currents Data collection v.2026	WP2	22/08/26			
D2.14 - Sea Currents Data collection v.2027	WP2	22/08/27			
D2.15 - Optical properties of Water Data collection v.2026	WP2	22/08/26			
D2.16 - Optical properties of Water Data collection v.2027	WP2	22/08/27			
D2.17 - Wave Data collection v.2026	WP2	22/08/26			
D2.18 - Wave Data collection v.2027	WP2	22/08/27			
D2.19 - Wind Data collection v.2026	WP2	22/08/26			
D2.20 - Wind Data collection v.2027	WP2	22/08/27			
D2.21 - River inflow Data collection v.2026	WP2	22/08/26			
D2.22 - River Inflow Data collection v.2027	WP2	22/08/27			
D2.23 - Global Climatology Temperature & Salinity v.2026	WP2	22/08/26			
D2.24 - Global Climatology Temperature & Salinity v.2027	WP2	22/08/27			
D2.25 - Sea Level Data collection v.2026	WP2	22/08/26			
D2.26 - Sea Level Data collection v.2027	WP2	22/08/27			
D2.27 - Monthly/annual river inflow into sea basin v.2026	WP2	22/08/26			
D2.28 - Monthly/annual river inflow into sea basin v.2027	WP2	22/08/27			
D2.29 - Register of impulsive noise events v.2026	WP2	22/08/26			
D2.30 - Register of impulsive noise events v.2027	WP2	22/08/27			
D2.31 - Map of situ continuous noise monitoring stations v.2026	WP2	22/08/26			
D2.32 - Map of situ continuous noise monitoring stations v.2027	WP2	22/08/27			
D2.33 - Map of Ice Cover v.2026	WP2	22/08/26			
D2.34 - Map of Ice Cover v.2027	WP2	22/08/27			
D2.35 - Report on EMODnet Physics activities to support the EDITO data lake	WP2	22/08/27			
D2.36 - Participation/organization of workshops/meetings to promote and show the use of EMODnet	WP2	-			This is reported continuously as part of the quarterly reports
D3.1 - central catalogue updates - v2.2026	WP3	15/01/26			
D3.2 - central catalogue updates - v1.2027	WP3	22/08/27			

<b>D3.3 - report on implemented actions on data formatting and data access</b>	WP3	-			This is reported continuously as part of the quarterly reports
<b>D3.4 - Report on implemented actions on interoperability and machine-to-machine deployments and updates</b>	WP3	-			This is reported continuously as part of the quarterly reports
<b>D3.5 - report on monitoring indicators and feedback</b>	WP3	-			This is reported continuously as part of the quarterly reports

## 2. Identified issues: status and actions taken

Table 4. Issue table A

A. Priority issue(s) identified and communicated by CINEA/ DG MARE/ SECRETARIAT				
Priority issue <sup>3</sup>	Status (Pending/ Resolved)	Action(s) taken/ remaining actions planned	Date due	Date resolved
EM-1166 Self signed certificate in chain (prod-erddap.emodnet-physics.eu/ncWMS)	Resolved	Fixed		Aug 4, 2025
EM-1157 Physics rename ".in situ data" layer	Resolved	Completed		Sep 16, 2025
EM-1150 Create a new map of data collected by Scuba Schools International and German Ocean Foundation in the Atlas	Pending	Layer ready, waiting for CP/Atlas finalization		
EM-1115 Atlas WMS layer on River Gauging Stations returns empty images	Resolved	Fixed		Oct 23, 2025
EM-1114 Atlas WMS layers derived from the platforms database return incomplete images	Pending	Issue related to broken links, nearing completion		
EM-1069 Physics to provide deadline by when metadata records can be adapted to meet the guidelines	Pending (In Review)	Completed, waiting for final approval		
EM-1048 Broken metadata and download links in the EMODnet viewer	Resolved	Fixed		Jul 24, 2025
EM-1044 JIRA users and ETT emails domain update	Pending (In Review)			Oct 23, 2025
EMODCOM-230 update of the Central Portal - Physics page	Pending (In Review)	Waiting for CP approval		
EMODNET-2252 Data issue	Pending	Following up on the request		
EMODNET-2237 Customized buoy solutions for different monitoring scenarios	Resolved	Completed		Jan 7, 2026
EMODNET-2204 Help downloading EMODnet data	Resolved	User supported, no further actions needed		Jan 5, 2026
EMODNET-2166 Watts Unknown - Emodnet: Volunteering	Pending	User contacted, no further actions currently needed		Nov 7, 2025

<sup>3</sup> [https://emodnet.atlassian.net/jira/core/projects/EM/list?sortBy=key&direction=ASC&filter=assignee%20%3D%20currentUser\(\)](https://emodnet.atlassian.net/jira/core/projects/EM/list?sortBy=key&direction=ASC&filter=assignee%20%3D%20currentUser())  
[https://emodnet.atlassian.net/sr/jira.issueviews:searchrequest-printable/temp/SearchRequest.html?jqlQuery=textfields+%7E+%22physics\\*%22&tempMax=1000](https://emodnet.atlassian.net/sr/jira.issueviews:searchrequest-printable/temp/SearchRequest.html?jqlQuery=textfields+%7E+%22physics*%22&tempMax=1000)

EMODNET-2163 EMODNET - AXYS: Introduction	Resolved	Completed		
EMODNET-2072 RHE-MEDIation: follow up regarding legacy of Ingestion Service	Pending	Data available, follow-up ongoing for viewer integration		
EM-1172 Physics platforms doesn't always display the correct graphs	Pending	Issue under investigation (viewer-related)		

Table 5. Issue table B

<b>B. Issues / challenges identified by the thematic assembly group itself</b>				
<b>Priority issue / challenge</b>	<b>Status (Pending/ Resolved)</b>	<b>Action(s) taken / remaining actions planned</b>	<b>Date due</b>	<b>Date resolved</b>

### 3. Communication assets

Table 6. Communication asset table A

A. (Co-)Authoried peer-reviewed publications in the quarter					
Date of publication	Type of publication	Full reference	ISBN	DOI	Is it open access? Yes/No

Table 7. Communication asset table B

B. Other/non-peer reviewed types of publications (co-)authoried 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

Comments on the progress indicators in the indicators spreadsheet		
Progress indicator	Means of collecting figures	Comment
<p>1. Current status and coverage of total available thematic data</p> <p>A) Volume and coverage of available data</p>	<i>Number of platforms</i>	EMODnet Physics input data is sparse, and for this indicator, we consider the "platform" as the "unit" for monitoring assessment. A platform is a logical system that hosts data, where the data may consist of a single dataset (e.g., a profile in the case of CTD), a time series (e.g., a sea-level station), or a series of profiles (e.g., ARGO). For Indicator 1.A, we report the percentage variation in the number of platforms for the given basin. It's worth noting that some platforms may move from one basin to another. Since we report figures based on the latest position, the percentages are significantly influenced by this movement. EMODnet Physics integrates data from several sources, which can result in duplicates in the system. Cleaning duplicates is an ongoing activity and also affects the percentage of available platforms. When a duplicate is identified, the two sources are linked to the same dataset to show full provenance. This process is ongoing and continuous, forming a major activity for the team. The volume (column E) is in GB. We introduced the days of recording as a new indicator that better tracks the evolution of the system. This is reported in the narrative part (task 1 and task 2).
<p>What is your opinion on the data coverage within EMODnet for your thematic?</p>		TDuring the periodo there was a focussed action on meterorological data collected by drifting buoys which largely expanded the DB. In situ underwater noise is still very limited. We are collaborating with the LandSeaLot, FOCCUS and CS-MACH1 projects to facilitate ingesiton of possible new coastal data. Actions to link in some complementary sources (e.g. industry) have already started. We are keeping working on synchronization of complementary source already available in Copernicus Marine Service INS TAC (which together with ARGO GDAC and Coriolis GDAC are the primary nodes for operational data.
<p>B) Usage of data in this quarter</p>	<i>Server logs</i>	The Physics team can only report on the overall volume of downloaded data when it is mediated by the EMODnet Physics backend (as some products are cached centrally, EMODnet Physics cannot track this volume). EMODnet Physics reports on the number

		of available platforms (units - col C) and the overall volume of downloaded gigabytes (col D) from ERDDAP, which is hosting the in-situ data.
2. Current status and coverage of total number of data products A) Volume and coverage of available data products	<i>Number of platforms</i>	Table 2A lists the products available in the Central Portal Geoviewer. These products are made available by the backend infrastructure were gridded and externally produced datasets are organized under the prod-erddap.emodnet-physics.eu, and operational data collections are organized under the data-erddap.emodnet-physics.eu. To better track the evolution of the data-collections we introduced the use of days of recording as an indicator and this is reported in the narrative part of task 2.
B) Usage of data products in this quarter		Indicator 2A reports on the products available in the Central Portal. Some products are organized under the EMODnet Physics ERDDAP, some under ERDDAP/ncWMS, and others under GeoServer. Indicator 2B captures the interaction with those services. GeoServer is monitored in terms of WMS/WFS use. Interaction with the EMODnet Physics platform pages is monitored with the number of visualizations (clicks) and an average of 9800 views in 3 months. ERDDAP keeps to be the most used service to access data. We are still experiencing issues with the monitoring of the ncWMS.
3. Internal and external organisations supplying/approached to supply data and data products within this quarter	<i>Please specify</i>	There are a number of new sources integrated (some are old providers that included new sources in the package) this activity goes back to back with metadata normalization and data cleaning (duplicates removal).
5.1 Daily number of page views of EMODnet Thematic entry page	Europa Analytics	We monitor the typical working hours' usage of the portal. We have 2 peaks in January that are not associated to specific events. If we look at the interaction on the ERDDAP or platform pages that populates the in situ Physics layers, we recorded about ten times more interactions. The current version of the Europe Analytics report monitors the geoviewer, which is the most visited page, but it does not give details on specific themes
5.2 Quarterly total number of visitors, page views, unique page views and percentage of returning visitors	Europa Analytics	We recorded interactions similar to the previous period (bit higher). Indicator 1 gives a better clue of the use of EMODnet Physics.

*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

Table 8. P33 and related P01 collection in EMODnet Physics

Physics theme (P33 category)	Description	Parameter (P01 parameter)	Description
<a href="#">ERD_EP_CARBONSYSITM_INSITU_ME TADATA</a>	EMODnet Physics - Collection of Carbon System (SDN:P33::CARBONSYSITM) variables - MultiPointsObservation - METADATA	ERD_EP_PR_ALKY_NRT	EMODnet Physics - Collection of ALK - MultiPointObservation - PR
		ERD_EP_TS_PCO2_NRT	EMODnet Physics - Collection of PCO - MultiPointObservation - TS
		ERD_EP_PR_ALKW_NRT	EMODnet Physics - Collection of ALK - MultiPointObservation - PR
		ERD_EP_PR_PHPH_NRT	EMODnet Physics - Collection of PHP - MultiPointObservation - PR
		ERD_EP_TS_PHPH_NRT	EMODnet Physics - Collection of PHP - MultiPointObservation - TS
		ERD_EP_PR_ALKY_NRT_METADATA	EMODnet Physics - Collection of ALK - MultiPointObservation - PR - Metadata
		ERD_EP_TS_PCO2_NRT_METADATA	EMODnet Physics - Collection of PCO - MultiPointObservation - TS - Metadata
		ERD_EP_PR_ALKW_NRT_METADATA	EMODnet Physics - Collection of ALK - MultiPointObservation - PR - Metadata
		ERD_EP_PR_PHPH_NRT_METADATA	EMODnet Physics - Collection of PHP - MultiPointObservation - PR - Metadata
		ERD_EP_TS_PHPH_NRT_METADATA	EMODnet Physics - Collection of PHP - MultiPointObservation - TS - Metadata
<a href="#">ERD_EP_CURRENTS_INSITU_METADA TA</a>	EMODnet Physics - Collection of Currents (SDN:P33::CURRENTS) variables - MultiPointsObservation - METADATA		
		ERD_EP_TS_HCDT_HCSP_NRT	EMODnet Physics - Collection of HCDT_HCSP - MultiPointObservation - TS
		ERD_EP_TS_VCSP_NRT	EMODnet Physics - Collection of VCS - MultiPointObservation - TS
		ERD_EP_PR_EWCT_NSCT_NRT	EMODnet Physics - Collection of EWCT_NSCT - MultiPointObservation - PR
		ERD_EP_TS_EWCT_NSCT_NRT	EMODnet Physics - Collection of EWCT_NSCT - MultiPointObservation - TS

Physics theme (P33 category)	Description	Parameter (P01 parameter)	Description
		ERD_EP_TS_HCDT_HCSP_NRT_METADATA	EMODnet Physics - Collection of HCDT_HCSP - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VCSP_NRT_METADATA	EMODnet Physics - Collection of VCS - MultiPointObservation - TS - Metadata
		ERD_EP_PR_EWCT_NSCT_NRT_METADATA	EMODnet Physics - Collection of EWCT_NSCT - MultiPointObservation - PR - Metadata
		ERD_EP_TS_EWCT_NSCT_NRT_METADATA	EMODnet Physics - Collection of EWCT_NSCT - MultiPointObservation - TS - Metadata
<a href="#">ERD_EP DISSOLVEDOXYGEN INSITU METADATA</a>	EMODnet Physics - Collection of Dissolved Oxygen (SDN:P33::DISSOLVEDOXYGEN) variables - MultiPointsObservation - METADATA	ERD_EP_PR_DOX2_NRT	EMODnet Physics - Collection of DOX - MultiPointObservation - PR
		ERD_EP_TS_DOX2_NRT	EMODnet Physics - Collection of DOX - MultiPointObservation - TS
		ERD_EP_PR_DOX1_NRT	EMODnet Physics - Collection of DOX - MultiPointObservation - PR
		ERD_EP_TS_DOX1_NRT	EMODnet Physics - Collection of DOX - MultiPointObservation - TS
		ERD_EP_PR_DOXY_NRT	EMODnet Physics - Collection of DOX - MultiPointObservation - PR
		ERD_EP_TS_DOXY_NRT	EMODnet Physics - Collection of DOX - MultiPointObservation - TS
		ERD_EP_PR_TEMP_DOXY_NRT	EMODnet Physics - Collection of TEMP_DOXY - MultiPointObservation - PR
		ERD_EP_TS_TEMP_DOXY_NRT	EMODnet Physics - Collection of TEMP_DOXY - MultiPointObservation - TS
		ERD_EP_PR_OSAT_NRT	EMODnet Physics - Collection of OSA - MultiPointObservation - PR
		ERD_EP_TS_OSAT_NRT	EMODnet Physics - Collection of OSA - MultiPointObservation - TS
		ERD_EP_PR_DOX2_NRT_METADATA	EMODnet Physics - Collection of DOX - MultiPointObservation - PR - Metadata
		ERD_EP_TS_DOX2_NRT_METADATA	EMODnet Physics - Collection of DOX - MultiPointObservation - TS - Metadata
		ERD_EP_PR_DOX1_NRT_METADATA	EMODnet Physics - Collection of DOX - MultiPointObservation - PR - Metadata
		ERD_EP_TS_DOX1_NRT_METADATA	EMODnet Physics - Collection of DOX - MultiPointObservation - TS - Metadata

Physics theme (P33 category)	Description	Parameter (P01 parameter)	Description
		ERD_EP_PR_DOXY_NRT_METADATA	EMODnet Physics - Collection of DOX - MultiPointObservation - PR - Metadata
		ERD_EP_TS_DOXY_NRT_METADATA	EMODnet Physics - Collection of DOX - MultiPointObservation - TS - Metadata
		ERD_EP_PR_TEMP_DOXY_NRT_METADATA	EMODnet Physics - Collection of TEMP_DOXY - MultiPointObservation - PR - Metadata
		ERD_EP_TS_TEMP_DOXY_NRT_METADATA	EMODnet Physics - Collection of TEMP_DOXY - MultiPointObservation - TS - Metadata
		ERD_EP_PR_OSAT_NRT_METADATA	EMODnet Physics - Collection of OSA - MultiPointObservation - PR - Metadata
		ERD_EP_TS_OSAT_NRT_METADATA	EMODnet Physics - Collection of OSA - MultiPointObservation - TS - Metadata
<a href="#">ERD_EP_METEOROLOGICAL_INSITU_METADATA</a>	EMODnet Physics - Collection of Meteorological (SDN:P33::METEOROLOGICAL) variables - MultiPointsObservation - METADATA	ERD_EP_PR_DRYT_NRT	EMODnet Physics - Collection of DRY - MultiPointObservation - PR
		ERD_EP_TS_DRYT_NRT	EMODnet Physics - Collection of DRY - MultiPointObservation - TS
		ERD_EP_TS_PRRD_NRT	EMODnet Physics - Collection of PRR - MultiPointObservation - TS
		ERD_EP_TS_PRRT_NRT	EMODnet Physics - Collection of PRR - MultiPointObservation - TS
		ERD_EP_TS_NRAD_NRT	EMODnet Physics - Collection of NRA - MultiPointObservation - TS
		ERD_EP_TS_SINC_NRT	EMODnet Physics - Collection of SIN - MultiPointObservation - TS
		ERD_EP_TS_ATMP_NRT	EMODnet Physics - Collection of ATM - MultiPointObservation - TS
		ERD_EP_TS_ATMS_NRT	EMODnet Physics - Collection of ATM - MultiPointObservation - TS
		ERD_EP_TS_RELH_NRT	EMODnet Physics - Collection of REL - MultiPointObservation - TS
		ERD_EP_TS_ATPT_NRT	EMODnet Physics - Collection of ATP - MultiPointObservation - TS
		ERD_EP_PR_DRYT_NRT_METADATA	EMODnet Physics - Collection of DRY - MultiPointObservation - PR - Metadata
		ERD_EP_TS_DRYT_NRT_METADATA	EMODnet Physics - Collection of DRY - MultiPointObservation - TS - Metadata
		ERD_EP_TS_PRRD_NRT_METADATA	EMODnet Physics - Collection of PRR - MultiPointObservation - TS - Metadata

Physics theme (P33 category)	Description	Parameter (P01 parameter)	Description
		ERD_EP_TS_PRRR_NRT_METADATA	EMODnet Physics - Collection of PRR - MultiPointObservation - TS - Metadata
		ERD_EP_TS_NRAD_NRT_METADATA	EMODnet Physics - Collection of NRA - MultiPointObservation - TS - Metadata
		ERD_EP_TS_SINC_NRT_METADATA	EMODnet Physics - Collection of SIN - MultiPointObservation - TS - Metadata
		ERD_EP_TS_ATMP_NRT_METADATA	EMODnet Physics - Collection of ATM - MultiPointObservation - TS - Metadata
		ERD_EP_TS_ATMS_NRT_METADATA	EMODnet Physics - Collection of ATM - MultiPointObservation - TS - Metadata
		ERD_EP_TS_RELH_NRT_METADATA	EMODnet Physics - Collection of REL - MultiPointObservation - TS - Metadata
		ERD_EP_TS_ATPT_NRT_METADATA	EMODnet Physics - Collection of ATP - MultiPointObservation - TS - Metadata
<a href="#">ERD_EP_OPTICAL_INSITU_METADATA</a>	EMODnet Physics - Collection of Optical Properties (SDN:P33::OPTICAL) variables - MultiPointsObservation - METADATA	ERD_EP_PR_CHLT_NRT	EMODnet Physics - Collection of total chlorophyll (CHLT) Profiles - MultiPointProfilesObservation
		ERD_EP_PR_CHLT_NRT_METADATA	EMODnet Physics - Collection of total chlorophyll (CHLT) Profiles - MultiPointProfilesObservation - METADATA
		ERD_EP_TS_CHLT_NRT	EMODnet Physics - Collection of total chlorophyll (CHLT) TimeSeries - MultiPointTimeSeriesObservation
		ERD_EP_TS_CHLT_NRT_METADATA	EMODnet Physics - Collection of total chlorophyll (CHLT) TimeSeries - MultiPointTimeSeriesObservation - METADATA
		ERD_EP_PR_BATH_NRT	EMODnet Physics - Collection of BAT - MultiPointObservation - PR
		ERD_EP_TS_BATH_NRT	EMODnet Physics - Collection of BAT - MultiPointObservation - TS
		ERD_EP_TS_LINC_NRT	EMODnet Physics - Collection of LIN - MultiPointObservation - TS
		ERD_EP_PR_TUR2_NRT	EMODnet Physics - Collection of TUR - MultiPointObservation - PR
		ERD_EP_TS_TUR2_NRT	EMODnet Physics - Collection of TUR - MultiPointObservation - TS
		ERD_EP_TS_TUR6_NRT	EMODnet Physics - Collection of TUR - MultiPointObservation - TS
		ERD_EP_PR_CDOM_NRT	EMODnet Physics - Collection of CDO - MultiPointObservation - PR

Physics theme (P33 category)	Description	Parameter (P01 parameter)	Description
		ERD_EP_TS_CDOM_NRT	EMODnet Physics - Collection of CDO - MultiPointObservation - TS
		ERD_EP_PR_LGH4_NRT	EMODnet Physics - Collection of LGH - MultiPointObservation - PR
		ERD_EP_TS_LGH4_NRT	EMODnet Physics - Collection of LGH - MultiPointObservation - TS
		ERD_EP_TS_RDIN_NRT	EMODnet Physics - Collection of RDI - MultiPointObservation - TS
		ERD_EP_PR_LGHT_NRT	EMODnet Physics - Collection of LGH - MultiPointObservation - PR
		ERD_EP_TS_LGHT_NRT	EMODnet Physics - Collection of LGH - MultiPointObservation - TS
		ERD_EP_PR_TUR4_NRT	EMODnet Physics - Collection of TUR - MultiPointObservation - PR
		ERD_EP_TS_TUR4_NRT	EMODnet Physics - Collection of TUR - MultiPointObservation - TS
		ERD_EP_PR_TSMP_NRT	EMODnet Physics - Collection of TSM - MultiPointObservation - PR
		ERD_EP_PR_BATH_NRT_METADATA	EMODnet Physics - Collection of BAT - MultiPointObservation - PR - Metadata
		ERD_EP_TS_BATH_NRT_METADATA	EMODnet Physics - Collection of BAT - MultiPointObservation - TS - Metadata
		ERD_EP_TS_LINC_NRT_METADATA	EMODnet Physics - Collection of LIN - MultiPointObservation - TS - Metadata
		ERD_EP_PR_TUR2_NRT_METADATA	EMODnet Physics - Collection of TUR - MultiPointObservation - PR - Metadata
		ERD_EP_TS_TUR2_NRT_METADATA	EMODnet Physics - Collection of TUR - MultiPointObservation - TS - Metadata
		ERD_EP_TS_TUR6_NRT_METADATA	EMODnet Physics - Collection of TUR - MultiPointObservation - TS - Metadata
		ERD_EP_PR_CDOM_NRT_METADATA	EMODnet Physics - Collection of CDO - MultiPointObservation - PR - Metadata
		ERD_EP_TS_CDOM_NRT_METADATA	EMODnet Physics - Collection of CDO - MultiPointObservation - TS - Metadata
		ERD_EP_PR_LGH4_NRT_METADATA	EMODnet Physics - Collection of LGH - MultiPointObservation - PR - Metadata
		ERD_EP_TS_LGH4_NRT_METADATA	EMODnet Physics - Collection of LGH - MultiPointObservation - TS - Metadata
		ERD_EP_TS_RDIN_NRT_METADATA	EMODnet Physics - Collection of RDI - MultiPointObservation - TS - Metadata

Physics theme (P33 category)	Description	Parameter (P01 parameter)	Description
		ERD_EP_PR_LGHT_NRT_METADATA	EMODnet Physics - Collection of LGH - MultiPointObservation - PR - Metadata
		ERD_EP_TS_LGHT_NRT_METADATA	EMODnet Physics - Collection of LGH - MultiPointObservation - TS - Metadata
		ERD_EP_PR_TUR4_NRT_METADATA	EMODnet Physics - Collection of TUR - MultiPointObservation - PR - Metadata
		ERD_EP_TS_TUR4_NRT_METADATA	EMODnet Physics - Collection of TUR - MultiPointObservation - TS - Metadata
		ERD_EP_PR_TSMP_NRT_METADATA	EMODnet Physics - Collection of TSM - MultiPointObservation - PR - Metadata
<a href="#">ERD_EP_WATERSALINITY_INSITU_METADATA</a>	EMODnet Physics - Collection of Water Salinity and conductivity (SDN:P33::WATERSALINITY) variables - MultiPointsObservation - METADATA	ERD_EP_PR_PSAI_NRT	EMODnet Physics - Collection of practical salinity (PSAL) Profiles - MultiPointProfilesObservation
		ERD_EP_PR_PSAI_NRT_METADATA	EMODnet Physics - Collection of practical salinity (PSAL) Profiles - MultiPointProfilesObservation - METADATA
		ERD_EP_TS_PSAI_NRT	EMODnet Physics - Collection of practical salinity (PSAL) TimeSeries - MultiPointTimeSeriesObservation
		ERD_EP_TS_PSAI_NRT_METADATA	EMODnet Physics - Collection of practical salinity (PSAL) TimeSeries - MultiPointTimeSeriesObservation - METADATA
		ERD_EP_PR_DENS_NRT	EMODnet Physics - Collection of sea density (sigma-theta) (DENS) Profiles - MultiPointProfilesObservation
		ERD_EP_PR_DENS_NRT_METADATA	EMODnet Physics - Collection of sea density (sigma-theta) (DENS) Profiles - MultiPointProfilesObservation - METADATA
		ERD_EP_TS_DENS_NRT	EMODnet Physics - Collection of sea density (sigma-theta) (DENS) TimeSeries - MultiPointTimeSeriesObservation
		ERD_EP_TS_DENS_NRT_METADATA	EMODnet Physics - Collection of sea density (sigma-theta) (DENS) TimeSeries - MultiPointTimeSeriesObservation - METADATA
<a href="#">ERD_EP_RIVER_INSITU_METADATA</a>	EMODnet Physics - Collection of River (SDN:P33::RIVER) variables - MultiPointsObservation - METADATA	ERD_EP_TS_RVFL_NRT	EMODnet Physics - Collection of river flow rate (RVFL) TimeSeries - MultiPointTimeSeriesObservation
		ERD_EP_TS_RVFL_NRT_METADATA	EMODnet Physics - Collection of river flow rate (RVFL) TimeSeries -

Physics theme (P33 category)	Description	Parameter (P01 parameter)	Description
			MultiPointTimeSeriesObservation - METADATA
<a href="#">ERD_EP_SEALEVEL INSITU METADAT A</a>	EMODnet Physics - Collection of Sea Level (SDN:P33::SEALEVEL) variables - MultiPointsObservation - METADATA	ERD_EP_TS_SLEV_NRT_5m_METADATA	EMODnet Physics, Collection of Water Surface Height Above a Specific Datum (SLEV) TimeSeries, MultiPointTimeSeriesObservation - 5 minutes frequency - METADATA
		ERD_EP_TS_SLEV_NRT_5m	EMODnet Physics, Collection of Water Surface Height Above a Specific Datum (SLEV) TimeSeries, MultiPointTimeSeriesObservation - 5 minutes frequency
		ERD_EP_TS_SLEV_NRT_60m_METADATA	EMODnet Physics, Collection of Water Surface Height Above a Specific Datum (SLEV) TimeSeries, MultiPointTimeSeriesObservation - 60 minutes frequency - METADATA
		ERD_EP_TS_SLEV_NRT_60m	EMODnet Physics, Collection of Water Surface Height Above a Specific Datum (SLEV) TimeSeries, MultiPointTimeSeriesObservation - 60 minutes frequency
		ERD_EP_TS_SLEV_ METADATA	EMODnet Physics - Collection of SLEV - MultiPointObservation - TS - Metadata
		ERD_EP_TS_SLEV	EMODnet Physics - Collection of water surface height above a specific datum (SLEV) TimeSeries - MultiPointTimeSeriesObservation
		ERD_EP_TS_ALTS_NRT	EMODnet Physics - Collection of ALT - MultiPointObservation - TS
		ERD_EP_TS_ALTS_NRT_METADATA	EMODnet Physics - Collection of ALT - MultiPointObservation - TS - Metadata
<a href="#">ERD_EP_WATERTEMPERATURE INSITU METADATA</a>	EMODnet Physics - Collection of Water Temperature (SDN:P33::WATERTEMPERATURE) variables - MultiPointsObservation - METADATA	ERD_EP_PR_TEMP_NRT	EMODnet Physics - Collection of sea temperature (TEMP) Profiles - MultiPointProfilesObservation
		ERD_EP_PR_TEMP_NRT_METADATA	EMODnet Physics - Collection of sea temperature (TEMP) Profiles - MultiPointProfilesObservation - METADATA
		ERD_EP_TS_TEMP_NRT	EMODnet Physics - Collection of sea temperature (TEMP) TimeSeries - MultiPointTimeSeriesObservation
		ERD_EP_TS_TEMP_NRT_METADATA	EMODnet Physics - Collection of sea temperature (TEMP) TimeSeries - MultiPointTimeSeriesObservation - METADATA
<a href="#">ERD_EP WAVES INSITU METADAT A</a>	EMODnet Physics - Collection of Waves (SDN:P33::WAVES) variables -	ERD_EP_TS_VDIR_NRT	EMODnet Physics - Collection of VDI - MultiPointObservation - TS

Physics theme (P33 category)	Description	Parameter (P01 parameter)	Description
	MultiPointsObservation - METADATA		
		ERD_EP_TS_VH110_NRT	EMODnet Physics - Collection of H11 - MultiPointObservation - S_
		ERD_EP_TS_VTM02_NRT	EMODnet Physics - Collection of TM0 - MultiPointObservation - S_
		ERD_EP_TS_VAVH_NRT	EMODnet Physics - Collection of VAV - MultiPointObservation - TS
		ERD_EP_TS_VEPK_NRT	EMODnet Physics - Collection of VEP - MultiPointObservation - TS
		ERD_EP_TS_VAVT_NRT	EMODnet Physics - Collection of VAV - MultiPointObservation - TS
		ERD_EP_TS_VTDH_NRT	EMODnet Physics - Collection of VTD - MultiPointObservation - TS
		ERD_EP_TS_VPED_NRT	EMODnet Physics - Collection of VPE - MultiPointObservation - TS
		ERD_EP_TS_VTMX_NRT	EMODnet Physics - Collection of VTM - MultiPointObservation - TS
		ERD_EP_TS_VTPK_NRT	EMODnet Physics - Collection of VTP - MultiPointObservation - TS
		ERD_EP_TS_VT110_NRT	EMODnet Physics - Collection of T11 - MultiPointObservation - S_
		ERD_EP_TS_VPSP_NRT	EMODnet Physics - Collection of VPS - MultiPointObservation - TS
		ERD_EP_TS_VTZA_NRT	EMODnet Physics - Collection of VTZ - MultiPointObservation - TS
		ERD_EP_TS_VZMX_NRT	EMODnet Physics - Collection of VZM - MultiPointObservation - TS
		ERD_EP_TS_SWHT_NRT	EMODnet Physics - Collection of SWH - MultiPointObservation - TS
		ERD_EP_TS_VGTA_NRT	EMODnet Physics - Collection of VGT - MultiPointObservation - TS
		ERD_EP_TS_VTM10_NRT	EMODnet Physics - Collection of TM1 - MultiPointObservation - S_
		ERD_EP_TS_VEMH_NRT	EMODnet Physics - Collection of VEM - MultiPointObservation - TS
		ERD_EP_TS_VTZM_NRT	EMODnet Physics - Collection of VTZ - MultiPointObservation - TS
		ERD_EP_TS_VMDR_NRT	EMODnet Physics - Collection of VMD - MultiPointObservation - TS
		ERD_EP_TS_VCMX_NRT	EMODnet Physics - Collection of VCM - MultiPointObservation - TS

Physics theme (P33 category)	Description	Parameter (P01 parameter)	Description
		ERD_EP_TS_VHMO_NRT	EMODnet Physics - Collection of VHM - MultiPointObservation - TS
		ERD_EP_TS_VHZA_NRT	EMODnet Physics - Collection of VHZ - MultiPointObservation - TS
		ERD_EP_TS_VGHS_NRT	EMODnet Physics - Collection of VGH - MultiPointObservation - TS
		ERD_EP_TS_VDIR_NRT_METADATA	EMODnet Physics - Collection of VDI - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VH110_NRT_METADATA	EMODnet Physics - Collection of H11 - MultiPointObservation - S_ - Metadata
		ERD_EP_TS_VTM02_NRT_METADATA	EMODnet Physics - Collection of TM0 - MultiPointObservation - S_ - Metadata
		ERD_EP_TS_VAVH_NRT_METADATA	EMODnet Physics - Collection of VAV - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VEPK_NRT_METADATA	EMODnet Physics - Collection of VEP - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VAVT_NRT_METADATA	EMODnet Physics - Collection of VAV - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VTDH_NRT_METADATA	EMODnet Physics - Collection of VTD - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VPED_NRT_METADATA	EMODnet Physics - Collection of VPE - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VTMX_NRT_METADATA	EMODnet Physics - Collection of VTM - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VTPK_NRT_METADATA	EMODnet Physics - Collection of VTP - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VT110_NRT_METADATA	EMODnet Physics - Collection of T11 - MultiPointObservation - S_ - Metadata
		ERD_EP_TS_VPSP_NRT_METADATA	EMODnet Physics - Collection of VPS - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VTZA_NRT_METADATA	EMODnet Physics - Collection of VTZ - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VZMX_NRT_METADATA	EMODnet Physics - Collection of VZM - MultiPointObservation - TS - Metadata
		ERD_EP_TS_SWHT_NRT_METADATA	EMODnet Physics - Collection of SWH - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VGTA_NRT_METADATA	EMODnet Physics - Collection of VGT - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VTM10_NRT_METADATA	EMODnet Physics - Collection of TM1 - MultiPointObservation - S_ - Metadata

Physics theme (P33 category)	Description	Parameter (P01 parameter)	Description
		ERD_EP_TS_VEMH_NRT_METADATA	EMODnet Physics - Collection of VEM - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VTSM_NRT_METADATA	EMODnet Physics - Collection of VTZ - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VMDR_NRT_METADATA	EMODnet Physics - Collection of VMD - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VCMX_NRT_METADATA	EMODnet Physics - Collection of VCM - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VHMO_NRT_METADATA	EMODnet Physics - Collection of VHM - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VHZA_NRT_METADATA	EMODnet Physics - Collection of VHZ - MultiPointObservation - TS - Metadata
		ERD_EP_TS_VGHS_NRT_METADATA	EMODnet Physics - Collection of VGH - MultiPointObservation - TS - Metadata
<a href="#">ERD_EP_WINDS_INSITU_METADATA</a>	EMODnet Physics - Collection of Winds (SDN:P33::WINDS) variables - MultiPointsObservation - METADATA	ERD_EP_TS_GSPD_NRT	EMODnet Physics - Collection of GSP - MultiPointObservation - TS
		ERD_EP_TS_WETT_NRT	EMODnet Physics - Collection of WET - MultiPointObservation - TS
		ERD_EP_TS_GDIR_NRT	EMODnet Physics - Collection of GDI - MultiPointObservation - TS
		ERD_EP_TS_WSPN_NRT	EMODnet Physics - Collection of WSP - MultiPointObservation - TS
		ERD_EP_TS_WDIR_WSPD_NRT	EMODnet Physics - Collection of WDIR_WSPD - MultiPointObservation - TS
		ERD_EP_TS_WSPE_NRT	EMODnet Physics - Collection of WSP - MultiPointObservation - TS
		ERD_EP_TS_WTODIR_NRT	EMODnet Physics - Collection of ODI - MultiPointObservation - _W
		ERD_EP_TS_GSPD_NRT_METADATA	EMODnet Physics - Collection of GSP - MultiPointObservation - TS - Metadata
		ERD_EP_TS_WETT_NRT_METADATA	EMODnet Physics - Collection of WET - MultiPointObservation - TS - Metadata
		ERD_EP_TS_GDIR_NRT_METADATA	EMODnet Physics - Collection of GDI - MultiPointObservation - TS - Metadata
		ERD_EP_TS_WSPN_NRT_METADATA	EMODnet Physics - Collection of WSP - MultiPointObservation - TS - Metadata
		ERD_EP_TS_WDIR_WSPD_NRT_METADATA	EMODnet Physics - Collection of WDIR_WSPD - MultiPointObservation - TS - Metadata

Physics theme (P33 category)	Description	Parameter (P01 parameter)	Description
		ERD_EP_TS_WSPE_NRT_METADATA	EMODnet Physics - Collection of WSP - MultiPointObservation - TS - Metadata
		ERD_EP_TS_WTODIR_NRT_METADATA	EMODnet Physics - Collection of WTODIR - MultiPointObservation - Metadata
<a href="#">EP_UWN_INER</a>	EMODnet Physics - European Impulsive Noise Events Registry	EP_UWN_INER	EMODnet Physics - European Impulsive Noise Events Registry

Table 9. EMODnet Physics data and products (on CP geoviewer) status and planning:

Theme	Product name	Description	Planned actions/next delivery
Carbon Cycle	Seawater alkalinity - GLODAPv2_2016b (micro-mol kg-1)	This product is presenting the Alkalinity. GLODAP Data is gridded by DIVA.	None.
River outflow	River outflow	This product layer groups all the platforms collecting river outflow. The layer shows the position of the recording station and on clicking the platform page (presenting station metadata and latest data) is popped up. The product layer offers filtering options.	None.
Sea level	In situ platform	This product layer groups all the platforms collecting sea level (frequency 5m). The layer shows the position of the recording station and on clicking the platform page (presenting station metadata and latest data) is popped up. The product layer offers filtering options.	None
Sea level	In situ platform	This product layer groups all the platforms collecting sea level (frequency 60m). The layer shows the position of the recording station and on clicking the platform page (presenting station metadata and latest data) is popped up. The product layer offers filtering options.	None
Sea level	Absolute Sea Level Trend (GLORYS12V) (m)		None.
Sea level	Absolute Sea Level Trend (DUACS) (mm/yr)		None.
Sea level	SONEL - In situ Absolute Sea Level Trends		None
Sea level	Monthly maps of Absolute Sea Level data (DUACS) (m)		None.
Sea Optical Properties	In situ platform	This product layer groups all the platforms collecting sea optical properties. The layer shows the position of the recording station and on clicking the platform page (presenting station metadata and latest data) is popped up. The product layer offers filtering options.	None.
Sea Optical Properties	TSM Baltic Sea (%)		None.
Sea Optical Properties	TSM Mediterranean Sea (%)		None.
Sea Optical Properties	TSM North Sea (%)		None.
Salinity and Conductivity	In situ platforms	This product layer groups all the platforms collecting sea surface salinity and salinity in the water column. The layer shows the position of	None

Theme	Product name	Description	Planned actions/next delivery
		the recording station and on clicking the platform page (presenting station metadata and latest data) is popped up. The product layer offers filtering options.	
Salinity and Conductivity	Monthly climatology (SDN.V2)	Updated the product (now global instead of many regionals). Template changed: the user can select the specific month to be loaded.	None
Salinity and Conductivity	Climatology (CORA)	Made available in two versions, one to be visualized in the geoviewer and one to be offered for download.	
Salinity and Conductivity	Sea surface Salinity annual anomaly [base line 1990-2020] (PSU)		None.
Salinity and Conductivity	Seawater Practical Salinity from GLODAPv2_2016b (PSU)		None.
Salinity and Conductivity	SMOS BEC global SSS product v2 L4 (Psu)		None.
Temperature	In situ platforms	This product layer groups all the platforms collecting sea surface temperature and temperature in the water column. The layer shows the position of the recording station and on clicking the platform page (presenting station metadata and latest data) is popped up. The product layer offers filtering options.	None
Temperature	Monthly climatology (SDN.V2)	Updated the product (now global instead of many regionals). Template changed: the user can select the specific month to be loaded.	None.
Temperature	Climatology (CORA)	Made available in two versions, one to be visualized in the geoviewer and one to be offered for download.	None.
Temperature	Sea Temperature Anomaly 30 Years (°C)		None.
Temperature	Seawater Temperature from GLODAPv2_2016b (°C)		None.
Underwater Noise	EMODnet Physics Continuous Noise fix platforms		None.
Underwater Noise	EMODnet Physics European Impulsive		To be updated with the latest data.

Theme	Product name	Description	Planned actions/next delivery
	Noise Events Registry		
Waves	In situ platform	This product layer groups all the platforms collecting waves. The layer shows the position of the recording station and on clicking the platform page (presenting station metadata and latest data) is popped up. The product layer offers filtering options.	None.
Wind	In situ platform	This product layer groups all the platforms collecting waves. The layer shows the position of the recording station and on clicking the platform page (presenting station metadata and latest data) is popped up. The product layer offers filtering options.  This product should replace the current available one (In situ wind speed and direction)	None.

Table 10. ECOSS products

Theme	Product name	Description	Planned actions/next delivery
Underwater Noise	ECOSS - DB of annotated sounds - DATA	Product developed by ECOSS project, hosted by EMODnet (Physics)	None
Underwater Noise	ECOSS - DB of annotated sounds - METADATA	Product developed by ECOSS project, hosted by EMODnet (Physics)	None
Underwater Noise	ECOSS - DB of enhanced4AI sounds - DATA	Product developed by ECOSS project, hosted by EMODnet (Physics)	None
Underwater Noise	ECOSS - DB of enhanced4AI sounds - METADATA	Product developed by ECOSS project, hosted by EMODnet (Physics)	None
Underwater Noise	ECOSS - DB of sound signatures - DATA	Product developed by ECOSS project, hosted by EMODnet (Physics)	None
Underwater Noise	ECOSS - DB of sounds for testing - DATA	Product developed by ECOSS project, hosted by EMODnet (Physics)	None

Meeting and events organised and attended in the reference period and planned for next months

Table 11. Meetings

B. Meetings/events planned							
From	To	Location	Type event (internal or external meeting, training/ workshop)	PPT given	A/O	Link ppt doi/ web	Short description and main results (# participants, agreements made, etc.)
03/02/26	04/02/26	Oostende, Belgium	external	no	A		CS MACH1 workshop
18/02/26	20/02/26	Taranto, Italy	External	No	A		AIVP - Cruises & Port Cities Working Group (AIVP–MedCruise)
23/02/26		Genova - Bilbao	External	No	A		Tavolo High Tech & Innovation Bridge – Regata Culturale Bilbao   23 febbraio 2026
22/02/26	27/02/26	Glasgow, UK	external	no	A		Ocean Science Meeting
02/03/26	05/03/26	Sterling, UK	external	no	A		LandSeaLot AM
02/03/26	06/03/26	Brussels, Belgium	external	no	A		Ocean Days
03/03/26	05/03/26	Palma, Spain	external	yes	A		OBSSEE4CLIM AM
13/03/26		web	internal	yes	A		EMODnet Chemistry GA and SA
19/03/26	20/03/26	web	internal	yes	A		EMODnet TWG
26/03/26	27/03/26	web	internal	yes	A		EMODnet Ingestion AM

Table 12. Planned Meetings

A. Meetings/events planned in the future				
Date	Location	Type event (meeting, training (workshop), etc.)	Meeting to be attended (A) / organised (O)	Short description and main expected outcomes
April	Bologna, Italy	POLARIN workshop		
May	Cyprus,	European Marine Days		
May	Cyprus,	EuroGOOS conference		

Current Model of minimum metadata for EMODnet Physics

Table 13. Meetings

<b>Mandatory, Recommended, or Optional</b>	<b>Metadata Element</b>	<b>Description</b>	<b>Notes</b>
Mandatory	Dataset Title	Concise, descriptive title; max 250 characters (including spaces); no unexplained acronyms.	Free text
Mandatory	Contact / Responsible Party and Role	Individuals and/or organisations responsible for creating and/or submitting the data (and their role – creator, submitter, publisher).	Free text
Recommended	PI_ORCID		ORCID for individual researchers ( <a href="https://orcid.org">https://orcid.org</a> );
Mandatory	Data owner Name		Research Organisation Registry id ( <a href="https://ror.org/">https://ror.org/</a> ); European Directory of Marine Organisations id ( <a href="https://edmo.seadatanet.org/">https://edmo.seadatanet.org/</a> );
Mandatory	Data owner Code		Research Organisation Registry id ( <a href="https://ror.org/">https://ror.org/</a> ); European Directory of Marine Organisations id ( <a href="https://edmo.seadatanet.org/">https://edmo.seadatanet.org/</a> );
Mandatory	Data owner Country Code		ISO3166
Recommended	Data Center /Integration Center		Controlled Voc or Free text
Mandatory	Abstract / Narrative Summary	Summary of the dataset content, reason for collecting the data, geographic area of collection, key attributes, processing steps and quality control methods used and limitations of the dataset. May also include a description of the overall data quality for the dataset.	Free text
Recommended	Metadata update date	Date metadata record was last updated.	ISO 8601 format

Mandatory	Data Licence	Licence governing reuse of the data. (Creative Commons licences are recommended where possible).	· SPDX registry id ( <a href="https://spdx.org/licenses/">https://spdx.org/licenses/</a> ); · or URL (web link / web address) to the license being used; · or Free text
Mandatory	Temporal Extent	Start and end date of the data collection (and time if possible).	ISO 8601 format ( <a href="https://www.iso.org/iso-8601-date-and-time-format.html">https://www.iso.org/iso-8601-date-and-time-format.html</a> )
	first date observation (UTC)		
	last date observation (UTC)		
Recommended	Temporal Resolution	Frequency of observations or sampling interval.	SeaDataNet Measurement Period Categories (NVS L03); · Or Free text
Mandatory	Geographic Bounding Box	North/South/East/West geographic extent of the dataset in decimal degrees (to a minimum of 3 decimal places).	Use EPSG:4326 (WGS84) coordinate reference system (CRS), or specify the CRS used. Use EPSG codes when specifying the CRS ( <a href="https://epsg.io">https://epsg.io</a> )
	Latitude		latitude (degrees_north)
	Longitude		longitude (degrees_east)
Recommended	Platform Name / Identifier	Name or ID of the specific platform or vessel from which the measurement or observation was made.	WIGOS-ID; WMO; ICES Platform Code (NVS C17); or Free text
Recommended	Cruise / Survey / Deployment ID	Identifier linking data to a specific research vessel cruise/survey or platform deployment.	· ID from a register of surveys or deployments such as SeaDataNet’s Cruise Summary Report (CSR); · or Free text
	PLATFORMCODE		
	call_name (PlatformName)		
Recommended	Instrument	Specific instrument make and model used to make the measurement or observation.	· SeaDataNet Device Catalogue (NVS L22); · or Free text
	feature Type	Specific the feature (trajectory, timeseries, profile)	
Recommended	Vertical Extent	Minimum and maximum depth/pressure with units.	Units of measure:· QUDT term; · or British Oceanographic Data Centre data storage units
	vertical_max (Vertical MAX Depth, m)		
	vertical_min (Vertical MIN Depth, m)		
Recommended	Project / Programme	Project or observing programme associated with the collection or creation of the data.	· ID from a register of projects such as the European Directory of Marine Environmental Research Projects (EDMERP); · or Persistent

			Identifier such as a Digital Object Identifier for the project; · or URL to project website; · or Free text
Mandatory	Measured Variables	Named parameters with units; ideally one term per variable in the associated data file(s).	Measured Variables:· CF Standard Name ; · or SeaDataNet Parameter Discovery Vocabulary term (NVS P02, P03) Units of Measure:· QUDT term ( <a href="https://www.qudt.org/catalog/qudt-catalog.html">https://www.qudt.org/catalog/qudt-catalog.html</a> ); · or British Oceanographic Data Centre data storage units (NVS P06)
Recommended	QC Flags	Quality flag scheme used in the data file(s).	doi/Free text
Recommended	Uncertainty / Calibration	Instrument calibration dates, drift corrections, or measurement uncertainty estimates.	Free text
Mandatory	Data Format	Format(s) of the associated data file(s).	· IANA Media Type ( <a href="https://www.iana.org/assignments/media-types/media-types.xhtml">https://www.iana.org/assignments/media-types/media-types.xhtml</a> ); · SeaDataNet Data Transport Format code (NVS); · or Free text
Recommended	Persistent Identifier (e.g. Digital Object Identifier, or doi)	A citable, resolvable identifier for the dataset.	doi
Recommended	Supporting Documentation	Links to any supporting documentation, such as papers describing the processing methodology used; survey reports; dataset quality descriptions etc...	· URLs to supporting documents
Recommended	Good/Best Practice		doi to OBPS; doi to publication
Recommended	Citation text	The text to be used in reports or journal articles which cite this dataset.	Free text

