EMODnet

European Marine Observation and Data Network

EMODnet Thematic Lot n°3 - Physics

EASME/EMFF/2018/1.3.1.8/Lot3/SI2.810790

Start date of the project: 26/08/2019 - (24 months)

EMODnet Phase III – Quarterly Progress Report (8)

Reporting Period: 01/04/2021 – 30/06/2021

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Contents

Disclaimer

1. Highlights in this quarter

Table 1. Milestones and Deliverables

Status of the Milestones and Deliverables listed in the workplan				
Milestone/Deliverable	WP	Date due	Status (Delivered/Delayed)	If Delayed: reason for delay and expected delivery date
D1.1 - Event - Kick-off meeting (Required)	WP1	30/09/19	Delivered - KOM took place 07-08/11/2019	
D3.1 - Portal - Portal on line (Required)	WP3	30/09/19	Delivered - Portal on line from day 1	
D3.2 - service - Monitoring tools (Required)	WP3	15/10/19	Delivered – Monitoring tools active from day 1	
D4.1 - Service - Help desk service (Required)	WP4	15/10/19	Delivered – HD on line from day 1	
D4.2 - Service - User feedback monitoring service (Required)	WP4	15/10/19	Delivered – user feedback monitoring and management active from day 1	
D1.2 - Document - quarterly Progress Reports (Required)	WP1	15/10/19	Delivered	
D4.3.1 - Report - Statistics from HD service and user satisfaction (Required)	WP4	15/10/19	Delivered – as section of D1.2	
D4.4.1 - Report - Progress and actions about the Involvement of RSCs (Required)	WP4	15/10/19	Delivered – as section of D1.2	
D4.5.1 - Report - Progress update on promotion activities (Required)	WP4	15/10/19	Delivered – as section of D1.2	
D1.3 - Document - quarterly Progress Reports (Required)	WP1	15/01/20	Delivered	
D4.3.2 - Report - Statistics from HD service and user satisfaction (Required)	WP4	15/01/20	Delivered – as section of D1.3	
D4.4.2 - Report - Progress and actions about the Involvement of RSCs (Required)	WP4	15/01/20	Delivered – as section of D1.3	
D4.5.2 - Report - Progress update on promotion activities (Required)	WP4	15/01/20	Delivered – as section of D1.3	
D2.3 - Document - 1st report on data products specifications, sources and methods of integration into the portal (Internal)	WP2	28/02/20	Delivered	
D3.3 - Service - EMODnet Physics catalogue v.1 (internal)	WP3	28/02/20	Delivered - update and review of the entries in EMODnet Physics GeoNetwork instance	
D1.4 - Document - quarterly Progress Reports (Required)	WP1	15/04/20	Delivered	

D4.3.3 - Report - Statistics from HD service and user satisfaction (Required)	WP4	15/04/20	Delivered – as section of D1.4	
D4.4.3 - Report - Progress and actions about the Involvement of RSCs (Required)	WP4	15/04/20	Delivered – as section of D1.4	
D4.5.3 - Report - Progress update on promotion activities (Required)	WP4	15/04/20	Delivered – as section of D1.4	
D1.5 - Document - quarterly Progress Reports (Required)	WP1	15/07/20	Delivered	
D4.3.4 - Report - Statistics from HD service and user satisfaction (Required)	WP4	15/07/20	Delivered – as section of D1.5	
D4.4.4 - Report - Progress and actions about the Involvement of RSCs (Required)	WP4	15/07/20	Delivered – as section of D1.5	
D4.5.4 - Report - Progress update on promotion activities (Required)	WP4	15/07/20	Delivered – as section of D1.5	
D1.6 - Document - Interim Report (Required)	WP1	26/08/20	Delivered	
D2.1 - Document - Documentation and guidance on data flow harmonization (including machine to machine connections specs) (Required)	WP2	26/08/20	Delivered	
D2.2 - Document - Report on data sources evaluation and methods of integration into the portal (Internal)	WP2	26/08/20	Delivered	
D2.6 - Document - Report on M2M services (internal)	WP2	26/08/20	Delivered	
D3.3 - Service - EMODnet Physics catalogue v.2 (internal)	WP3	26/08/20	Delivered - new/updated EMODnet Physics GeoNetwork instance	
D1.7 - Document - quarterly Progress Reports (Required)	WP1	15/10/20	Delivered	
D4.3.5 - Report - Statistics from HD service and user satisfaction (Required)	WP4	15/10/20	Delivered – as section of D1.7	
D4.4.5 - Report - Progress and actions about the Involvement of RSCs (Required)	WP4	15/10/20	Delivered – as section of D1.7	
D4.5.5 - Report - Progress update on promotion activities (Required)	WP4	15/10/20	Delivered – as section of D1.7	
D1.8 - Document - quarterly Progress Reports (Required)	WP1	15/01/21	Delivered	

D4.3.6 - Report - Statistics from HD service and user satisfaction (Required)	WP4	15/01/21	Delivered – as section of D1.8	
D4.4.6 - Report - Progress and actions about the Involvement of RSCs (Required)	WP4	15/01/21	Delivered – as section of D1.8	
D4.5.6 - Report - Progress update on promotion activities (Required)	WP4	15/01/21	Delivered – as section of D1.8	
D2.5 - Document - 3rd report on data products specifications, sources and methods of integration into the portal (Internal)	WP2	28/02/21	Delivered	
D3.3 - Service - EMODnet Physics catalogue v.3 (internal)	WP3	28/02/21	Delivered	
D1.9 - Document - quarterly Progress Reports (Required)	WP1	15/04/21	Delivered	
D4.3.7 - Report - Statistics from HD service and user satisfaction (Required)	WP4	15/04/21	Delivered – as section of D1.9	
D4.4.7 - Report - Progress and actions about the Involvement of RSCs (Required)	WP4	15/04/21	Delivered – as section of D1.9	
D4.5.7 - Report - Progress update on promotion activities (Required)	WP4	15/04/21	Delivered – as section of D1.9	
D1.10 - Document - quarterly Progress Reports (Required)	*WP1*	*15/07/21*	*This document*	
D4.3.8 - Report - Statistics from HD service and user satisfaction (Required)	*WP4*	*15/07/21*	*This document – as section of D1.10*	
D4.4.8 - Report - Progress and actions about the Involvement of RSCs (Required)	*WP4*	*15/07/21*	*This document – as section of D1.10*	
D4.5.8 - Report - Progress update on promotion activities (Required)	*WP4*	*15/07/21*	*This document – as section of D1.10*	
D1.11 - Document - Final Report (Required)	*WP1*	*26/08/21*		
D2.4 - Document - 2nd report on data products specifications, sources and methods of integration into the portal (Internal)	*WP2*	*26/08/21*		
D2.6 - Document - Update on M2M services (internal)	*WP2*	*26/08/21*		
D3.3 - Service - EMODnet Physics catalogue v.4 (internal)	*WP3*	*26/08/21*		

Task 1. Develop a common method of access to data held in repositories

During the reporting period, we continued working on the system backend. We started cleaning and updating some previously added/linked datasets and data packages to avoid duplicates. More specifically, once a new source is identified, the first step is the inclusion/link of the dataset as it is and, for instance, the EMODnet Physics ERDDAP is updated with an item which description/id reports details like SourceName, Parameter, PlatformType, Granularity/Aggregation level, and other relevant details. Then the collection is integrated into one or more of the EMODnet Physics data collections and a third level is the use of these data in one or more of the products.

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

The following products are now available on the system and ready to be promoted by Secretariat:

- **Salinity:**

EP_MAP_PSAL_001: Monthly gridded analysis fields of salinity throughout the water column from the reprocessed (ISAS software) in-situ data collections (1990 to present). The product is based on the Coriolis Ocean database for ReAnalysis (CORA) v.5.2., developed by IFREMER for CMEMS.
EP_MAP_SAOD_001: This product provides the number of days in a calendar year in which salinty data record activity occurred within a 1° x 1° cell grid.
This product is based on the record days of all fixed and moving platforms aggregated by EMODnet Physics and provides information from 1900 to the last completed year. This product is updated every year.

- **Sea level:**

EP_MAP_SLEV_001: Relative Sea Level Trends since 1900. This product is based on the Permanent Service for Mean Sea Level (PSMSL) aggregated dataset. http://www.psmsl.org/data/obtaining
EP_MAP_SLEV_004: Relative sea level variation over recent baselines. This product is based on revised local reference (RLR) dataset by the Permanent Service for Mean Sea Level (PSMSL), and provides sea level monthly means calculated over three baseline periods: 2000-2019, 2005-2019, and 2010-2019.
EP_MAP_SLEV_005: Reanalysis of sea level variation over recent baseline data. This product is based on the revised local reference (RLR) dataset by the Permanent Service for Mean Sea Level (PSMSL), and provides sea level trends calculated over three baseline periods: 2000-2019, 2005-2019, and 2010-2019.

- **Total suspended matter:**

EP_MAP_TSMA_001: This product is based on the CoastColour MERIS Level 2W (L2W) dataset, obtained from the OC4 algorithm for clear and moderately turbid waters, and from the CoastColour v1 neural network. The L2W product is remapped on a regular grid, maintaining the 300 m full resolution, and obtaining L3 products over the European seas. Developed by EMODnet Physics.

- **Temperature:**

EP_MAP_TAOD_001: Temperature observation-days per year. This product provides the number of days in a calendar year in which temperature data record activity occurred within a 1° x 1° cell grid. This product is based on the record days of all fixed and moving platforms aggregated by EMODnet Physics and provides information from 1900 to the last completed year. This product is updated every year.

- **River flow:**

EP_MAP_RVFL_001: This product is 1D MOHID model that represent estuaries (i.e. proxy) schematically. The estuary is represented in the model by 10 grid cells in only one direction; 12x3 cells domain including the ocean open boundary and the land limits. In the open boundary, the model receives tides and water properties such as salinity and temperature.
During the reporting period we have been working on the backend of a series of new products, including temperature and salinity anomalies calculated over 10, 20 and 30 years baselines, and observation-days

for salinity, currents, wind, waves, sea level and river flows. These products will be released during the coming quarter.

Moreover the development of high-resolution coastal climatologies of the northern Adriatic (EMODNET_NADR_CLIM_TS_V1) was completed (https://progetti.ingv.it/index.php/it/contratto-ett-ingv#datasets). This product cosists of high-resolution coastal salinity and temperature fields of an area featured by strong river influence. This product integrates open-source datasets from various data sources and provides monthly and seasonal averages and depth profiles, with a resolution of 3 km.
The dataset is available on ERDDAP (https://erddap.emodnet-physics.eu/erddap/search/index.html?page=1&itemsPerPage=1000&searchFor=orth+Adriatic+Temperature+and+Salinity+Climatology+V1) and is going to be accessible through a dedicated product page in the third quarter.

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

As part of the M2M connection task, there are a number of on-going activities:

- Collaboration with ARICE project (https://www.arice.eu/) – EMODnet Ingestion and Physics and connection between the ARICE project and EMODnet were officially presented to the ARICE board, we are now studying and mapping the available data and defining the M2M channel to harvest ARICE metadata (first step) and data (second step); importantly the ARICE consortium has been awarded with a new project grant (Arctic PASSION) that represents the basis for an important middle-term collaboration.
- Ocean Race Europe: we have made contacts with the organising committee of the Ocean Race Europe, a major offshore sailing competition. The Volvo Ocean 65 boats are equipped with sensors to collect ocean data during competitions and we are discussing how to implement an operational data exchange.
- EuroFleets+ project – further progress is made with the configuration of the underway data dashboard, using SWE, and with roll-out of the system towards multiple research vessels.
- SBM Offshore - In the light of progressing on their long term Sustainable Development Goals 14 targets, SBM Offshore explores the possibility of using their offshore installations in Guyana, Brazil, Angola, Equatorial Guinea and Malaysia as metocean data collecting points. This is a project yet to be developed. Anyhow, as SBM already collects some data on their platforms such as wind, wave and current data amongst others, a dialogue has been started to make connection between SBM and Ingestion.
- LAMMA (Tuscany, Italy) – LAMMA is planning to update its infrastructure and install new M2M services. As follow up of meetings (previous reporting period), exchanges, and further brainstorming, LAMMA decided to go for ERDDAP and they are now configuring their services. As soon as the new infrastructure will be deployed and validated, (new) data will be immediately linked and made available in EMODnet.

Moreover, in collaboration with EMODnet Physics, the following datasets were added/linked and are available under the EMODnet Physics ERDDAP catalogue:

- Underwater noise: CTN Marine Technology Centre dataset https://erddap.emodnet-physics.eu/erddap/search/index.html?page=1&itemsPerPage=1000&searchFor=CTN_UWN_CABODEPALOS_TS_HOURLY
- Rivers: the following providers were linked DEFRA UK, Arpa Veneto Italy, US Geological Survey and data operational data are available from more than 350 river stations.

Task 4. Maintain and further develop a thematic web portal allowing users to find, visualise and download data and promote the data and data products of the portal

We continued the development and update of the thematic web portal, including the regular uploading of reports, updates of data protection notices, and a banner directing visitors to the EMODnet User Survey 2021.

Task 5. Ensure the involvement of regional sea conventions

During the period we completed the feasibility study to connect EMODnet Physics and the noise data that will be managed by CTN as coordinator of the QUITESEAS project. See also Task 3.

Task 6. Install a process to monitor performance and deal with user feedback

The subtask "deal with user feedback" goes together with task 7. Concerning the process to monitor performances, EMODnet Physics is implementing *matomo* for collecting views on the landing and map page. It uses logs to extract the traffic/requests/manual downloads/interaction with services. For manual downloads from the Mapviewer (www.emodnet-physics.eu/map) authentication is requested for downloading data (older than 60 days) from coastal fixed stations and data products coming from CMEMS INSTAC. Moreover the new products and service monitoring service (graylog) is up and running.

Concerning the interaction with the end users, it is important to mention that the EMODnet Jamboree was an excellent opportunity to collect feedback and new ideas. During the sessions it was highlighted the good and proactive collaboration and interaction with e.g. CMEMS, the importance of EMODnet Physics as first includer and opener on new data types and data networks, and the role on emerging citizen science data. More specifically, the "EMODnet dialogue: Citizen Science" indicated that EMODnet (and in particular EMODnet Physics, Chemistry and EMODnet Ingestion which already have a very high potential on the topic) could develop a target action to start incorporating and connecting citizen science projects to improve data resolution in time and space in relevant areas (e.g. coastal zone where citizens scientists are more active).

Task 7. Operate a help desk offering support to users

EMODnet Physics is providing an online help desk feature to deal with users. Any request gets an ID to track and manage the feedback time. Table 4 lists the collected interactions.

2. Identified issues: status and actions taken

The following tables report pending actions from the previous report and newly-identified priority issues.

Table 2. Priority issues identified by CINEA/ DG MARE/ Secretariat

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
EM-14/EM-87	Physics - Web Services MetadataUrl and DataUrl fields	In progress	Service check and update – continuous dialogue with secretariat/central portal tech team.	asap	
EM-138	Add MATOMO script to GeoNetwork	Pending	It needs a specific development to be planned yet.	asap	
EM-140	INSPIRE quality Service requirements	In progress	TWG is working on this issue.	asap	
EM-145	The WMS service exceeds the 10-seconds response time required by INSPIRE	In progress	To run the final tests and close the issue	asap	
EM-170	Physics catalogue page is broken	Resolved	fixed		25/03/2021
EM-189	Bug in Physics GeoNetwork CSW service	Resolved	fixed		13/04/2021
EM-210	LegendGraphics for HFR WMS	Pending	Mapproxy does not support the legend graphics as requested. A custom development is needed	asap	
EM-214	Banner – Online Survey 2021	Resolved	Page updated		27/05/2021
EM-237	Update data protection notice	Resolved	Portal updated		03/06/2021
EM-243	WMS is failing to via the website	Resolved	fixed		22/06/2021
EM-249	Online Survey - Bunner update deadline extended	Resolved	Page updated		01/07/2021

Table 3. Priority issues identified by Physics group

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
EP2	We use the WMO as platform id. Lately some of the platforms with old 5-digit WMO codes are also delivered with the new 7-digit code. This impacts the name of the NetCDF files that are distributed and the user may find duplicates in the system	Pending	Cross check and cleaning/declaring of duplicates. More specifically we are updating the system to be able and present when data is avaialble from more EMODnet Physics sources.	We cannot set a deadline because the update of the WMO is not depending on EMODnet Physics. We can only check and correct when an issue is identified.	
EP3	Updates to the Norwegian tide gauge network	pending	In 2019 the Norwegian Hydrographic Service corrected a set of known errors in the tide gauge records. These updated refer to data back to 2007. New data have to be overwritten on previous ones.	As soon as possible. This task also involves the support/collaboration of CMEMS INSTAC	
EP7	Update the platforms page with the same technology and responsiveness implement for the mapviewer		We need to complete this development to improve end user experience and usability of the data	August 2021	

3. User feedback (Contact Us form, online chat & other communication means)

Table 4. User feedback

Overview of user feedback and/or requests received in this quarter							
Date	Organisation	Type of user feedback (e.g. technical, case study, etc.) and short description of the feedback received	Means of contact	Response time	Status of user query: resolved/pending	Measures taken to resolve the query	Status: if not (yet) resolved/pending, explain reason why and expected timeline
7th April 2021	CMCC	Problem with data download from ERDDAP	email	0 days	Resolved	Feedback and instructions by email	
11th April 2021	NIVA	Dataset enquiry	HD	1 day	Resolved	Information provided by email	
12th April 2021	University of Algarve	CDI and historical Datasets Problem with download	HD	0 days	Resolved	Feedback and instructions by email. The datasets of interest were sent by email	
13th April 2021	DHI	Request for help with downloading data	HD	0 days	Resolved	Feedback and instructions by email.	
13th April 2021	Stazione Zoologica Anton Dohrn	Enquiry about SST anomaly data	EMODnet Assistance	1 day	Resolved	Feedback and instructions by email.	
11th May 2021	Kartvertek Norway	Bug in tide gauges platform providers	email	1 day	Resolved	Feedback provided and problem fixed	

3rd June 2021	HydroFix	Bug in temperature and salinity products	HD	0 day	Resolved	Feedback provided and problem fixed	
3rd June 2021	Leibniz-Institut für Ostseeforschung Warnemünde	Help with sea level data download	email	1 day	Resolved	Feedback and instructions by email.	
16th June 2021	AZTI	Metadata request for Gascogne buoy	HD	1 day	Resolved	Feedback by email.	
29th June 2021	DTU	Bug in tide gauges platform providers	HD	0 day	Resolved	Feedback by email.	

4. Meetings/events held/attended & planned

Table 5. Meetings/events held/attended

A. Meetings/events Organized and attended					
Date	Location	Type event (internal or external meeting, training/workshop)	Indicate if a ppt was given (yes/no + short description)	Meeting attended (A) / organised (O)	Short description and main results (# participants, agreements made, etc.)
7th April 2021	online	JERICO-S3 progress meeting	no	A	EMODnet Physics is stakeholder in the project with a role related to data interoperability and exchange
12th-14th April 2021	online	IMDIS Conference	Yes, 1 ppt and 2 posters	A	This year IMDIS recorded its highest number of attenders (more than 500 participants - https://imdis.seadatanet.org/Conference-Information/Participants) and EMODnet Ingestion and lots were presented and discussed.
13th – 14th April 2021	online	NAUTILOS 2nd Consortium Meeting	yes. A presentation of the progress made so far was given	A	The NAUTILOS project is developing new sensors (https://nautilos-h2020.eu/) and EMODnet (Ingestion) will receive/be linked to the new data (once validated).
16th April 2021	online	EMODnet PACE WP2 Plenary meeting	No	A	Presentation of approaches and proofs of concept, followed by a discussion over schedules and deadlines for follow-up activities as part of Task 2.3 - Development and Implementation – Interoperability on Physics discipline

19th – 2st April 2021	online	EMODnet Technical Working Group and Steering Committee	Yes	A	periodic EMODnet SC and TWG progress meeting
3rd -5th May 2021	online	EuroGOOS International conference	Yes	A	The conference provides a forum for a broad range of implementers and users of operational oceanography services, including marine scientists and technologists, private companies, and policymakers, with both European and international partners and stakeholders. https://eurogoos.ifremer.fr/
6th May 2021	online	GOOS – OcenaOPS – HFR meeting	No	A	Technical meeting on data integration and interoperability – HFR platform network
10th May 2021	online	EMODnet-PACE WP2	Yes	A	Follow up meeting on Physics discipline data interoperability
31st May 2021	Online	Tech meeting with CNR ISP (Institute for Polar Science)	No	O	CNR ISP is the contact point for the ARICE project and the meeting was organized to discuss about data flow and related tech issues.
8th June 2021	online	SeaRICA Underwater Noise	No	A	Webinar on sea noise organised by SeaRICA and Seas at Risk. EP attended and shared insights and outcomes with the Secretariat
14th -18th June 2021	Oostende, Belgium and online	EMODnet Open Conference and Jamboree	Yes	A/O	Event bringing together EMODnet partners, data providers and users
30th June 2021	On line	EuroGOOS Tide Gauge Task Team meeting	No	A	Periodic meeting of the Task Team to discuss on actions and progresses on sea level data management.
SUM				**O**	**Total # of meetings organised = 2**
SUM				**A**	**Total # of meetings attended = 11**

Table 6. Meetings/events planned

B. 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
6th July 2021	On line	Meeting – CNR ISP	O	Follow up on linking ARICE project data
7th-10th September 2021	On line	EMODnet SC and TWG	A	EMODnet Steering Committee and Technical Working Group meetings
22nd-24th September 2021	On line	Workshop – Polar Data Forum	A	https://polar-data-forum.org/ - it is a place where polar data holders get together and improve data usage.

5. Communication assets

[List all the relevant communication and dissemination products and assets you have developed since the start of the project phase (provide date) (e.g. brochures, videos, press releases, newsletters, blogs) and are planning to do. At the bottom of the table, provide a total number for every type of communication product you have developed (e.g. total # of press releases, etc.) or provide a summary from the actions on Twitter from (e.g. Twitter Analytics: number of Tweets and followers of Twitter account).]

Table 7. Comminunication products

A. Communication products				
Date	Communication material	Short description (of the material, title, ...) of the asset	Main results	Name of event at which material was disseminated (if applicable)
7th June 2021	COPERNICUS MARINE & EMODNET DATA CATALOGUE FOR THE MARINE STRATEGY FRAMEWORK DIRECTIVE Baltic Sea Case Study	Catalogue developed in collaboration with Mercator Ocean, designed to support various measurement and implementation needs outlined in the EU Marine Strategy Framework Directive (MSFD)		*
8th June 2021	TED – Ocean Data Management	We were invited to give a 5 min TED to present the importance and value of marine data acquisition and processing		**

*) https://marine.copernicus.eu/sites/default/files/media/pdf/2021-06/EMODnet_CMEMS_productPortfolio_MSFD.pdf

**) https://www.youtube.com/watch?time_continue=1&v=K1CdWLu4YKY&feature=emb_logo

Morever there are the presentations that we made for the events listed in section 4.

Table 8. Planned communication

B. Planned communication products			
Date	Communication material	Short description (of the material, title, ...) and/or link to the asset	Main results expected
	video	How to - Discover data in EMODnet Physics - Find M2M services - Play with widgets - Query on ERDDAP	Engage more users
	Short paper	BIG – Italian Cluster on Blue Innovation and Growth newsletter	Present EMODnet to the BIG associates

[For the reporting period, please list all publications, e.g. peer-reviewed journals, book chapters, conference papers, etc.) of which you are aware, within the reporting period, including a reference to the EMODnet data or data products which is being discussed.]

Table 9. Publications

List of known publications using EMODnet data or data products				
Date	Type and name of journal, conference, …	Publication title including DOI (if known)	Author(s)	Organisation(s)

Giuseppe Manzella and Antonio Novellino are editing a Elsevier book on Ocean Science. EMODnet program and the progress from many of the thematic lots are central in the proposed book chapters. The book is planned to be published in October 2021.

https://www.elsevier.com/books/ocean-science-data/manzella/978-0-12-823427-3

Moreover, a simple search in google scholar shows more than hundreds documents between papers and projects deliverables using/citing EMODnet Physics. https://scholar.google.com/scholar?hl=it&as_sdt=0%2C5&q=EMODnet+Physics&btnG=

6. Monitoring indicators

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

Comments on the progress indicators in the excel template		
Progress indicator	Means of collecting figures	Comment
1. Current status and coverage of total available thematic data A) Volume and coverage of available data **If you don't use the provided sea-basin figures, please indicate why you do not use them, as from when, and what do you use instead and why?**	Matomo/ other (Please state which monitoring tool was used to collate the information in each case)	EMODnet Physics input data is sparse and for this indicator we consider the "platform" as the "unit" of monitoring assessment. A platform is a logical entity that hosts data, where data maybe a single dataset (e.g. a profile in case of CTD), a timeseries (e.g. sea level station), a series of profiles (e.g. ARGO). For indicator 1.A we report on the % variation of the number of platforms for the given basin. During the period we competed the update from platforms providing currents (U, V and U+V). For this indicator we are not using proposed figures (i.e. areas in Km^2 - line 45): are we are dealing with georeferred data and we need to use to bounding box shapes (to note data Atlantic is covering from north to south from Europe-Africa to America). For indicator 1.B the unit of download is measured in platforms (in coherence with indicator 1.A) while the number of downloads are measured in "requests". A request may be for a single dataset (e.g. 1 CTD) as well as a full time series (e.g. daily data for past XX years). For ice data, EMODnet Physics is integrating a satellite derived product covering the whole Arctic and Antarctic areas. This product can be only downloaded via WMS. The template was slightly modified to facilitate the computation of the %variation for the reporting period
B) Usage of data in this quarter		As anticipated in the preiovious report, we set up a new system to monitor and report the volume of downloaded data. The system is monitoring all the EMODnet Physics delivery channels but the mapviewer which, for the download, rely on the ERDDAP. As reported in 2B the overall amount of downloaded data from ERDDAP is 708 GB. At the moment it is not possible to have the real amount of downloaded data per theme from the

		mapviewer. Anyhow, if we consider that the map manual download is 1% of the ERDDAP+map manual download (2B col F), if we assign to the map download 1% of the downloaded volume of data (from ERDDAP), we can estimate the total volume downloaded per themes (1B col D). Concerning the figures, in this quarter we recorded a general decrease in the use of the system. The use of WMS/WFS layers (GeoServer) is tracked and (only) reported under 2B.
2. Current status and coverage of total number of data products A) Volume and coverage of available data products **If you don't use the provided sea-basin figures, please indicate why you do not use them, as from when, and what do you use instead and why?**		EMODnet Physics organizes data and products together threfore the volume of data for theme is the same as 1A (but the them ice). Apart from the European Under Water Noise Register and the TSM that only covering Europe (100% of the availble information) the other products offer global coverage. EP_MAP_WAVE_001 is covering only MED for the moment. Trends are negative because we decided not to count the various data collections that are availble @ "map.emodnet-physics.eu" because there is not yet a direct entry to the given data collection (e.g. all the ARGO data), while we are now counting only the products or collection with a given queriable url (e.g. the products on the map viewer).
B) Usage of data products in this quarter		The mapviewer and the products pages accessible under the "Products" section are monitored in terms of visits (by matomo). This makes also possible to understand the interactions of the users and the products theme. For the reporting period we recorded a particular interest ifor the just released update of the EP_MAP_TEMP_001 and for Sea Level products. ERDDAP is monitored both in terms of visit to the erddap landing page (matomo) and in terms of transactions (downloads - by logs). THREDDS and GeoSERVER are both monitored in terms of logs.
3. Organisations supplying/approached to supply data and data products within this quarter		During the period we approached several river providers and it was possible to link and include many new data. The JRC TAD inclusion was completed.
4. Online 'Web' interfaces to access or view data		Web Services are organized per item-interface to facilitate the tracking of their use. ERDDAP, THREDDS, web APIs, Widgets, GeoServer are providing data and products without any authentication or restriction. Some of the data that are presented on the mapviewer require authentication (e.g. coastal data from European istitution - data older than 60 days). All linked datasets are unrestricted.

5. Statistics on information volunteered through download forms		During the period we collected data on 74 new users. It is important to remember that the number of users here reported is only a limited number of the EMODnet Physics users and the form is asked to be filled only to users accessing for the first time to data that requires authentication (i.e. coastal data older than 60 days). The majority of EMODnet Physics data are downloadable without any authentication. Academia represents the majority about 64% in the period, the users from business/private is stable (around 20%), then Gov (about 10%) and NGO and others the remaining part.
6. Published use cases		Use cases are providing examples of how EMODnet Physics data can be used for both private and public downstream applications. The one about Wave Model (DHI) is by far the most read. We also recorded hits of use cases that have been mentioned during the EMODnet Jamboree.
8.1. Technical monitoring		System is stable (uptime) we are keeping working to improve the average response time.
8.2. Portal user-friendliness (Visual harmonization score)		There is not any major update on the landing page for the period, but the inclusion of the news about the EMODnet Jamboree call for posters. There are still 2 minor fixes to be done on the page footer.
9. Visibility & Analytics for web pages		EMODnet Physics mapviewer is by far the most used interface with an steady trend.
10. Visibility & Analytics for web sections		After the peak recorded in the 4th quarter 2021, the analytics for the web section shows an average quarterly interaction from circa 2.5K users.
11. Average visit duration for web pages		The metrics are in line with the users use of the EMODnet Physics sections: while they spend a limited time on the landing (background, news...) they interact with the mapviewer and platform pages - these are the key emodnet Physics products confirming the importance of the EMODnet Physics team in keeping developing and updating them. It is worth noting that the use of the system increased when we organized major events (e.g. in December there was the launch of the Arctic Data Portal)

The monitoring numbers reported as part of the progress monitoring of EMODnet performance are collected through Matomo. In some cases, numbers from other monitoring systems may also be reported (e.g. Awstats, Google Analytics), and if so, must be reported in the table above. Each system uses different technical approaches and therefore has its strengths and shortcomings. Therefore, results are indicative and care should be taken when interpreting absolute numbers or comparing results from different tools. It is often more sensible to consider trends over time collected by the same monitoring tool.

7. Annex: Other documentation attached