EMODnet

European Marine Observation and Data Network

EMODnet Thematic Lot n° 3 -Physics

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Start date of the project: 29/03/2017 - (24 months)

EMODnet Phase III – Quarterly Progress Report (8)

Reporting Period: 01/01/2019 – 29/03/2019

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Contents

Disclaimer

1 Highlights during the reporting period

Provide a short summary of the key achievements and/or events of interest to a wider audience within this reporting period you wish to highlight. ***Please make sure that progress in each of the tasks specified in Section 1.4.1 of the Tender Specifications is covered. For those tasks not experiencing significant progress, please state so.*** *You can also consider the indicators or any other of the reporting sections.*

- EMODnet Physics, in collaboration with SOOS, has re-initiated a collaboration with PANGAEA in order to integrate some of these data into the EMODnet Physics Portal. In this preliminary activity 15767 (global) metadata records have been harvested from PANGAEA and EMODnet is displaying 21548 CTD platforms (some records were split) in the Southern Hemisphere.
- Preparation of the final report.
- Participation to ESA, European Space Agency, Atlantic from Space Workshop (23-25/01) - Southampton; participation to Joint Meeting of the Expert Team on WIS Centres (ET WISC) and Task Team on Data Centres (TT DC) (12-15/03) – Beijing; participation to WMO, IPET-MOIS, Inter-Programme Expert Team on Integrated Marine Meteorological and Oceanographic Services within WMO and IOC Information Systems (20-22/03) – Geneve.

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

The acquisition of physical parameters is largely an automated process that integrates operational data source and key marine data integrators e.g. the Copernicus Marine Environment Monitoring Service In Situ Thematic Assembly Centre and/or Global Data Assembly Centres. EMODnet Physics is operationally processing this data flow to generate map layers and extract in situ (monthly) trends, averages, peak values of the physical parameters. Historical validated datasets are organised in collaboration with SeaDataNet and its network of National Oceanographic Data Centres, which are supplying EMODnet Physics with products (climatology) on temperature and salinity of the water column. EMODnet Physics is also acting as the in situ historical data collections broker between users and the NODCs. This "federative" approach facilitates interaction with other established databases for data preservation at both European (e.g. Global Runoff Data Centre, ICES databases, etc.) and international (e.g. GOOS, SOOS, NOAA, IMOS, etc.) levels.

EMODnet Physics is also leading the process of data flow chain design and the development of "younger" parameters/platforms/technologies such as river outflow, water noise, sea surface currents as recorded by HF radars, marine data from gliders, etc. The international relevance of these actions led to a stronger and highly proactive collaboration with JCOMMOPS and the GOOS project office (representing not only GOOS but also the JCOMM Observations Coordination Group (OCG)).

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 inclusion of data in the EMODnet Physics Portal is normally done with ad-hoc interfaces that are different for each provider. Interoperability is achieved, however, through the use of common vocabularies and the adoption of INSPIRE compliant services. All data collected within a defined time and space window can be found, visualised and downloaded in a way that makes the physical location of the data source invisible to the user, allowing data from various sources to be assembled without further processing (also see section 6). As well as these data, EMODnet Physics is providing viewing and download features for both in situ data, in situ products and data product maps. Each available dataset or product is presented together with its metadata and information about its temporal and spatial coverage. The web interface also offers filter tools for data age, depth, geographical coverage, physical parameters, etc.

Data products for currents (radar), temperature (in situ NRT, in situ MEOP, gridded monthly men, climatologies), salinity (in situ NRT, in situ MEOP, gridded monthly men, climatologies), sea level (relative sea level trends from PSMSL, absolute sea level trends from SONEL), river input – total suspended matter, underwater noise, and sea ice are available for users.

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

EMODnet Physics GeoNetwork, THREDDS, ERDDAP catalogues were added/updated, with new and more layers being added to the GeoServer interface, and new widgets and APIs were developed. Whenever possible, SeaDataNet-controlled vocabulary (e.g. P02), to map the metadata, were used. The catalogues are making links to collections of similar datasets available (e.g. collection of sea mammal based profiles, collections of CTDs, etc.). In collaboration with EMODnet Data Ingestion, a real-time SOS SWE based data ingestion methodology was demonstrated (www.emodnet-physics.eu/RealTime).

Task 4. Develop a web portal allowing users to find, visualise and download data

EMODnet Physics portal is kept up-to-date. To facilitate the user experience, service responsiveness and performances, EMODnet Physics portal and back-office infrastructure went through many major developments and updates. The EMODnet Physics landing and data portal was restyled and they are now offering customised pages and services for each typology of recording platform. GeoNetwork, THREDDS, ERDDAP catalogues were added, new and more layers were added to GeoServer interface, new widgets and APIs were developed. New physical parameter data flows were designed and developed to make available data such as river runoff, underwater continuous and impulsive noise, suspended matter, etc.

Task 5. Ensure the involvement of regional sea conventions

The Underwater Noise theme was identified as the topic for engagement by the Regional Sea Conventions. EMODnet Physics participated in TG NOISE (and it is now an official permanent invited member on the board), and had specific meetings with HELCOM (Baltic area) and OSPAR (North West Shelf area). For the Mediterranean area, EMODnet Physics is interacting with the QuiteMed[1] project (EMODnet Physics coordinator joined the project advisory board). The outcome from these interactions defined the key activities to be implemented under EMODnet Physics: to make more operational data available (in terms of parameters and format that are close to MSFD I.11 requirements), to offer a single harmonised European entry point to impulsive noise registries (MSFD I.11.1) and to work on (regional) sound maps. A number of operational underwater noise data (i.e. Sound Pressure Level – SPL), sound maps, and the impulsive noise events registry are available in the portal, proofing the methodological approach to be further developed in collaboration with key partners (e.g. ICES, QuiteOcean, University Politecnica of Catalunia).

Task 6. Facilitate interoperability with data distributed by non-EU organisations

EMODnet Physics has created relationships to provide data access to – and preview for – coastal data in non-European areas, e.g. NOAA platforms for the US, IAPB platforms for the Arctic area, IMOS for Australia and the South Ocean Observing System (EMODnet Physics is also hosting the SOOSmap data portal). EMODnet Physics is contributing to joint WMO/IOC working teams ET-WISC, Task Team on Data Centres and IPET-MOIS, Inter-Programme Expert Team on Integrated Marine Meteorological and Oceanographic Services within WMO and IOC Information Systems. EMODnet Physics is contributing to the IOC Ocean Data and Information System, ODIS (https://odis.iode.org/search). Further, EMODnet Physics is collaborating with JCOMMOPS in enabling the flow of new platforms, e.g. Glider and HFR, metadata and data and to promote European standards among the global platform communities. In collaboration with EMODnet Data Ingestion, EMODnet Physics made a connection with Russian National Oceanographic Data Centre, and in collaboration with the ODYSSEA project, it is going to make links with North African countries. Interactions for data sharing were started with South Eastern Mediterranean countries (Egypt, Israel) and the Red Sea, leading to fruitful discussions on Red Sea – Mediterranean interactions and future collaboration opportunities.

[1] www.quietmed-project.eu. Co-funded under the DG ENV/MSFD Second Cycle/2016 programme, the QuiteMed project objective is to enhance cooperation among Member States (MS) in the Mediterranean Sea to implement the Second Cycle of the Marine Directive and in particular to assist them in the preparation of their MSFD I.11 reports.

Task 7. Install a process to monitor performance and deal with user feedback

Progress indicators and a monitoring service have been developed and EMODnet Physics is monitoring the portal use. It also includes matomo scripts to let the EMODnet secretariat extract common and harmonised indicators. Based on this tracking tool, EMODnet Physics is now offering a monthly report (reserved for subscribers) with stats on the use of platforms and downloads. The report reaches the providers by email and gives information about the use (number of hits, most viewed datasets etc.) of their platforms/datasets via EMODnet Physics. This developed tool is one of the most appreciated and since it was published, EMODnet Physics is recording an increasing number of interested users. It is serving most European data providers linked to EMODnet Physics (e.g. AZTI, SOCIB, IFREMER, etc.) as well as European supported marine research projects (e.g. AtlantOS, JERICO-NEXT, SeaDataCloud).

Task 8. Operate a help desk offering support to users

As planned, the services were developed and EMODnet Physics is operating a help-desk to deal with user feedback and their support needs. The help-desk is based on an automatic e-mail/ticketing system working 24/7. Help-desk operators are informed about new requests and provide feedback during working hours (from 9:00 to 17:00 - Brussels time - Monday to Friday). Preliminary feedback is provided within 24h. In case of need, help-desk operators can forward/request help from the EMODnet Physics network of experts (and its pillars).

Since the help-desk entered service, EMODnet Physics collected 97 requests for help (**Errore. L'origine riferimento non è stata trovata.**). The requests were mainly asking for correction of metadata and helping to find and download specific datasets.

2 Challenges encountered during the reporting period

Provide an overview of the main challenges encountered during the reporting period and the measures taken to address them, including those related to technical and data provision issues.

Nothing to report.

3 User Feedback

List any useful feedback you received on your portal, your activities or those of other EMODnet projects/activities. Also provide any suggestions you have received for EMODnet case studies and/or future products/activities/events.

Date	Organization	Type of user feedback (e.g. technical, case study etc.)	Response time
27/03/2019	Letterkenny Institute of Technology	Tech – support to find and download depth contours for the territorial waters of Ireland in a format that i can use with QGIS	1 day
21/03/2019	University College Cork	Tech – Support to identify and download data	1 day
18/03/2019	Mercator Ocean	Tech – HFR data missing	1 day
27/2/2019	Fisheries and Oceans Canada, Government of Canada	Tech – wrong metadata	1 day
19/2/2019	EMSA - Portugal	Tech – support to link the EMODnet Physics WMS	1 day
14/2/2019	University of Plymouth - UK	Tech – support to download a specific dataset	1 day
13/2/2019	Jacobs - Coastal Engineer Buildings Infrastructure and Advanced Facilities	Tech - support to use some datasets (parameters)	1 day
5/2/2019	AquaBioTech Group	Tech – support to find and download datasets	1 day
4/2/2019	Mercator Ocean – Toulouse - FR	Tech – MATROOS HFR data files empty	1 day
30/1/2019	EMODnet Secretariat	Tech – WMS server down	Some hours
23/1/2019	Mercator Ocean – Toulouse - FR	Tech – Ligurian HFR data grid error (September data)	1 day to answer – CNR that is in charge of the HFR in Liguria is going to republish the full-time series in April 2019
21/1/2019	Technical University of Denmark – Copenhagen	Tech – support to understand file naming	1 day
18/1/2019	RIVM (Dutch National Institute for Public Health and the Environment) - Netherland	Tech – support to download sea-basin layer	1 day
17/1/2019	Laboratoire EPHE Biogeographie et Ecologie des Vertebres Campus CNRS - Montpellier	Tech – support to download a salinity data collection	1 day
4/1/2019	UNIversity of Lisboa - Portugal	Tech – empty files when downloaded river data	1 day

Table 1.User Feedback

4 Meetings held/attended since last report

List here the internal and external meetings held/participated by the contractant (e.g. meeting, conference, training (workshop), etc.) since the last quarterly report. Please add a short description on the meeting as well as the nature and volume of the audience. At the bottom of the table, provide the total number of events organised and events participated.

Date	Location	Type[2]	A/O	Title	Short description and main results (# participants, agreements made, etc.)
11/01/2019	call	meeting	O	Swiss Arctic Polar Expedition - meeting to discuss the services EMODnet Physics can offer to the project - external 1to1 meeting	Possible use of EMODnet Physics to host and disseminate SAPE data
23-25/01/2019	Southampton	workshop	A	External - ESA, European Space Agency, Atlantic from Space Workshop, Southampton. - approximately 40 people	Dissemination activities
11/02/2019	Genova	meeting	O	ARPAL Genova - meeting to present the EMODnet Physics features and link new and more in situ Ligurian Data - external 10 people	Interoperability and use of EMODnet Physics
12-15/03/2019	Bijing, China	meeting	A	Joint Meeting of the Expert Team on WIS Centres (ET WISC) and Task Team on Data Centres (TT DC)	Meterological – marine communities tech. coordination meeting
20-22/03/2019	Geneve, Switzerland	meeting	A	WMO, IPET-MOIS, Inter-Programme Expert Team on Integrated Marine Meteorological and Oceanographic Services within WMO and IOC Information Systems	
SUM of O			2		(Total # of meetings organised)
SUM of A			3		(Total # of meetings attended)

Table 2. Meetings

[2] meeting, training (workshop), etc.

5 Outreach and communication activities

Please list all the relevant communication/outreach activities or products you have developed/executed during this period (including presentations, lectures, trainings, demonstrations, workshops, etc., and development of communication materials such as brochures, videos, press releases, newsletters, etc.). At the bottom of the table, provide a total number for every type of communication activity you have developed/executed (e.g. total # of press releases, total # of presentations given, etc.).

Date	Communication action/material	Short description (of the material, title, ...) and/or link to the activity	Main results (# participants, # views, # press clippings, etc.)
23-25/01/2019	Oral presentation	ESA Atlantic from Space Workshop, NOC Southampton, UK	
18-20/02/2019	Oral and poster presentations	5th Session of the IOC Committee on International Oceanographic Data and Information Exchange and Scientific Conference, Tokyo	
4-6/03/2019	Oral presentation	WERA HFR Workshop, Hamburg, Germany.	

Table 3. Outreach

Relevant scientific and/or popular publications (scientific papers, book chapters, conference papers, …) you published or of which you know they have been published using/referring to EMODnet data or data products during this reporting period must also be reported here.

Date	type	Name of journal, conference, …	Publication title	Authors	Other info
2017	Book chapter	Oceanographic and Marine Cross-Domain Data Management for Sustainable edited by P. Diviacco, A. Leadbetter, H. Glaves, IGI Global,	Semantic Search Engine for Data Management and Sustainable Development: Marine Planning Service Platform.	G. Manzella, et al.	
2017	Journal	Renewable Energy, Volume 101, February 2017, Pages 244–264	Assessing the European offshore wind and wave energy resource for combined exploitation	C Kalogeri, et al	
2017	Journal	Marine Sciemce, 20 January 2017	HF Radar Activity in European Coastal Seas: Next Steps toward a Pan-European HF Radar Network	Anna Rubio, et al.	
2017	Conference	EGU General Assembly 2017, held 23-28 April, 2017 in Vienna, Austria. id.7113	EMODnet Physics in the EMODnet program phase 3	Novellino A. Et al	
2017	Book chapter	Submerged Landscapes of the European Continental Shelf. Edited by Nicholas C. Flemming,Jan Harff,Delminda Moura,Anthony Burgess,Geoffrey N. Bailey	Chapter 6: The Northwest Shelf.	Keiran Westley	
2017	Conference	EGU General Assembly 2017, held 23-28 April, 2017 in Vienna, Austria. id.194371S	EMODnet High Resolution Seabed Mapping - further developing a high resolution digital bathymetry for European seas	Schaap, Dick M. A.; Schmitt, Thierry	
2017	Journal	neurocomputing	Ocean wave height prediction using ensemble of Extreme Learning Machine	Kumar et al	http://dx.doi.org/10.1016/j.neucom.2017.03.092
2017	Report	AtlantOS Deliverable, D9.2 . AtlantOS, 73 pp.	Web-based monitoring tool of the Atlantic Ocean observing system (Europe). .	Novellino, A., et al	DOI 10.3289/AtlantOS_D9.2.
2017	Report	CMEMS-INS-SRD	System Requirements Document (updated version of the 2016 report)	Carval T eta l.	DOI:10.13155/40846
2017	Report	AtlantOs meeting report 2017	Data flow and Data Integration - WP7	Harscoat Valerie, Pouliquen Sylvie	DOI: 10.13155/51745
2017	Report	JERICO NEXT D5.9	Report on data management best practice and Generic Data and Metadata models. V. 2.1 [Deliverable 5.9]	G Manzella, A Griffa, LP de la Villéon	https://www.oceanbestpractices.net/handle/11329/354
2017	Journal	GEOMEDIA - Open Journal System, V. 21, N. 5	European Marine Observations and Data Network EMODnet Physics	A. Novellino, P. D'Angelo	http://mediageo.it/ojs/index.php/GEOmedia/article/view/889
2017	Workshop	HELCOM report - - Sopot, Poland, 23-27 October 2017	HELCOM Working Group on the State of the Environment and Nature Conservation (STATE & CONSERVATION 7-2017)	A. Novellino	https://portal.helcom.fi/meetings/STATE%2520-%2520CONSERVATION%25207-2017-470/Documents/Presentation%252018%2520EMODNet%2520Physics.pdf
2017	Conference	OCEANS – Anchorage, 2017	Oceanobs a python package to analyze data from marine observatories	R. Bardaji, et al	http://ieeexplore.ieee.org/document/8232303/
2017	Book chapter	Submerged Landscapes of the European Continental Shelf - John Wiley & Sons, 26 apr 2017 - 552 pages	Ch. 6 The North Western Shelf	K Westley	
2018	Workshop	EUROGOOS Meeting Feb 2018	EuroGOOS and EMODNet Physics Data Workshop	A. Leadbetter, P. Gorringe, A. Novellino	http://eurogoos.eu/events/4595/

2018	Journal	Neurocomputing Volume 277, 14 February 2018, Pages 12-20	Ocean wave height prediction using ensemble of Extreme Learning Machine	N. KrishnaKumar, R.Savitha, AbdullahAl Mamun	https://doi.org/10.1016/j.neucom.2017.03.092
2018	Newsletter	Challenger Society for Marine Science	Challenger Wave		https://www.challenger-society.org.uk/files/pagefiles/Documents/C%20wave/CWave_201805.pdf
2018	Conference	EGU 2018 ESSI1.1	EMODnet Physics: tackling new challenges	Patrick Gorringe and Antonio Novellino	https://meetingorganizer.copernicus.org/EGU2018/EGU2018-7770.pdf
2018	Conference	EGU 2018 ESSI1.1	Best practices in QA/QC	Catia Chiappini and Giuseppe M.R. Manzella	EGU2018-6821
2018	Conference	EGU 2018 ESSI1.1	Effortless Integration of Underwater Noise Measurements into EMODnet data portal through SensorWeb Standards	E. Martinez et al.	EGU2018-13103
2018	Conference	EGU 2018 ESSI1.1	The European common data and metadata model for real-time High Frequency Radar surface current data	L. Corgnati et al.	EGU2018-13317
2018	Conference	EGU 2018 ESSI1.1	Animal-borne instruments in EuroGOOS – EMODnet Physics	L. Boehme et al.	EGU2018-14307
2018	Conference	EGU 2018 ESSI1.1	SOOSmap brings circumpolar Southern Ocean data to a computer near you	P. Bricher et al.	EGU2018-15262
2018	Conference	EGU 2018 ESSI1.1	Multi-Platform Data Distribution Challenges from Observing Systems to Data Distribution	M.V. Charcos-Lloréns et al.	EGU2018-16380-1
2018	Conference	EGU 2018 ESSI1.1	An European initiative to provide operational river observations and forecasts	F. Campustano et al.	EGU2018-19688
2018	Journal	Modern Approaches in Oceanography and Petrochemical Sciences. 1(5)-2018. MAOPS.MS.ID.000124. Lupine Publisher	Emodnet Physics: Benefits from Marine Data Sharing	G.M.R. Manzella, A. Novellino, P. D'Angelo	http://www.lupinepublishers.com/maops/pdf/MAOPS.MS.ID.000124.pdf
2018	Journal	Modern Approaches in Oceanography and Petrochemical Sciences. 1(5)-2018. MAOPS.MS.ID.000124.	Producing Contiguous Data in Marine Environment: A Gaussian-Montecarlo Methodology.	G. M. Manzella, M. Gambetta, A. Novellino	https://juniperpublishers.com/ofoaj/pdf/OFOAJ.MS.ID.555736.pdf
2018	Report	CMEMS-INS-SIVP	System Integration and Verification Plan	T. Carval, et al.	http://dx.doi.org/10.13155/51660
2018	Report	AtlantOS – 633211 D.4.2	South Atlantic tide gauge data management plan	E. Bradshaw, L. Rickards	http://oceanrep.geomar.de/43389/1/AtlantOS_deliverable_D4.2.pdf
2018	Journal	Journal of Coastal Research: Special Issue 85 - Proceedings of the 15th International Coastal Symposium: pp. 1256 – 1260.	Wave Climate Definition on Modeling Morphological Changes in Figueira da Foz Coastal System (W Portugal).	C Ferreira, et al.	
2018	Journal	Marine Policy, Volume 97, November 2018, Pages 130-138	Data challenges and opportunities for environmental management of North Sea oil and gas decommissioning in an era of blue growth	F. Murray, et al.	https://doi.org/10.1016/j.marpol.2018.05.021
2018	Journal	Sensors 2018, 18, 2737.	Integration of Underwater Radioactivity and Acoustic Sensors into an Open Sea Near Real-Time Multi-Parametric Observation System.	S. Pensieri et al.	https://www.mdpi.com/1424-8220/18/8/2737

2018	Journal	Bollettino di Geofisica Teorica ed Applicata Vol. 59	EMODnet Physics: a horizontal platform serving blue growth	Novellino A. et al	https://imdis.seadatanet.org/content/download/121493/file/IMDIS2018_Proceedings.pdf
2018	Journal	Bollettino di Geofisica Teorica ed Applicata Vol. 59	EMODnet Physics and River Runoff data management	Campuzano F. et al.	https://imdis.seadatanet.org/content/download/121493/file/IMDIS2018_Proceedings.pdf
2018	Journal	Bollettino di Geofisica Teorica ed Applicata Vol. 59	EMODnet Central Portal data services	Oset P. et al.	https://imdis.seadatanet.org/content/download/121493/file/IMDIS2018_Proceedings.pdf
2018	Journal	Bollettino di Geofisica Teorica ed Applicata Vol. 59	SOOSmap brings circumpolar Southern Ocean data to a computer near you	Bricher P. et al.	https://imdis.seadatanet.org/content/download/121493/file/IMDIS2018_Proceedings.pdf
2018	Journal	Bollettino di Geofisica Teorica ed Applicata Vol. 59	EMODnet PP: Portugal presence	Almeida S. et al.	https://imdis.seadatanet.org/content/download/121493/file/IMDIS2018_Proceedings.pdf
2018	Journal	Bollettino di Geofisica Teorica ed Applicata Vol. 59	Generating ocean climatologies from in situ observations	Barth A. et al.	https://imdis.seadatanet.org/content/download/121493/file/IMDIS2018_Proceedings.pdf
2018	Journal	Bollettino di Geofisica Teorica ed Applicata Vol. 59	Integration of Underwater Noise Measurements into EMODnet Physics	Del Rio J et al.	https://imdis.seadatanet.org/content/download/121493/file/IMDIS2018_Proceedings.pdf
2018	Journal	Bollettino di Geofisica Teorica ed Applicata Vol. 59	Building strong foundations towards the pan-European High Frequency Radar network	Corgnati L et al.	https://imdis.seadatanet.org/content/download/121493/file/IMDIS2018_Proceedings.pdf
2018	Conference	The 4th Ocean Radar Conference for Asia-Pacific	Present and future of the European HF radar network: outcomes of the INCREASE project	Rubio A. et al	http://orca2018.official.jp/wp-content/uploads/2018/05/ExtendedAbstract_Session4.pdf
2018	Report	Project Atlantos H2020 D4.5	Gap analysis of links between coastal and open ocean networks	Akpinar A, Charria G	https://www.atlantos-h2020.eu/download/deliverables/AtlantOS_D4.5.pdf
2018	Conference	An international conference on glider data management. Connecting glider data flows in Europe and beyond. 18-20 September 2018, Aquario du Genova, Italy	EMODNET: The gateway to marine data	Novellino A. et al	https://www.ego-network.org/dokuwiki/lib/exe/fetch.php?media=public:egodmmeeting:d1s1_06_20180912_emodnetphy_gliderws.pdf

2018	Workshop	MONGOOS: WORKSHOP ON OPERATIONAL OCEANOGRAPHY. DOWNSTREAM SERVICES	European Marine Observation and Data network and River Runoff data management	Novellino A. et al	
2018	Workshop	MONGOOS: WORKSHOP ON OPERATIONAL OCEANOGRAPHY. DOWNSTREAM SERVICES	EMODNET, Approaches for Integrating Underwater Noise, Measurements into ocean observation systems	Novellino A. et al	
2018	Conference	MARTEC - 8th INTERNATIONAL WORKSHOP ON MARINE TECHNOLOGY	EMODNET PHYSICS: TOWARDS AN EUROPEAN IMPULSIVE NOISE REGISTER	Novellino A. et al	https://sarti.webs.upc.edu/martech/usb_2018/paginas/Abstract_Magazine.pdf
2018	Conference	MARTEC - 8th INTERNATIONAL WORKSHOP ON MARINE TECHNOLOGY	DATAFLOW OF UNDERWATER NOISE MEASUREMENTS: FROM OBSEA TO EMODNET	Del Rio J et al.	https://sarti.webs.upc.edu/martech/usb_2018/paginas/Abstract_Magazine.pdf
2018	Conference	MARTEC - 8th INTERNATIONAL WORKSHOP ON MARINE TECHNOLOGY	THE SOUND OF WAVES IN THE MUTRIKU WAVE ENERGY PLANT	Bald J et al.	https://upcommons.upc.edu/bitstream/handle/2117/126596/ID22.pdf
2018	Conference	MARTEC - 8th INTERNATIONAL WORKSHOP ON MARINE TECHNOLOGY	EMODNET INGESTION PORTAL – WAKE UP YOUR DATA! SET THEM FREE FOR BLUE SOCIETY	Schaap D. et al.	https://upcommons.upc.edu/bitstream/handle/2117/126801/ID4.pdf
2018	Report	FixO3 - Work Package 4Data Management and Harmonisation Deliverable 4.3	Agreement to Establish FixO3 Data Dissemination to Marine Infrastructures	Snaith H. et al.	http://www.fixo3.eu/download/Deliverables/FixO3_D4.3_FINAL.pdf
2018	Report	AtlantOs D9.3	Report on assessment of the performance of AtlantOS observing system	Ott M. et al.	http://oceanrep.geomar.de/44762/1/AtlantOS_D9_3.pdf
2018	Conference	OCEANS 2018 MTS/IEEE Charleston	Interoperable Ocean Observing using Archetypes: A use-case based evaluation	Stacey P. Berry D.	https://ieeexplore.ieee.org/abstract/document/8604834
2018	Report	AtlantOS Deliverable, D3.20	Drifter network improvement report	Poli P. et al.	http://oceanrep.geomar.de/44986/

Table 4. List of known publication using EMODnet data or products

6 Annex: Other documentation attached

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

6.1 WP1 – Project Management

The general objectives of WP1 are the project management and the coordination of all project activities ensuring timely delivery and high quality of documentation, tools, results and products. Project management includes the collaboration with the other EMODnet activities and involvement of regional sea conventions. This work package is including Task 5. Ensure the involvement of regional sea conventions.

Description:

During the period, the activity mainly focused on the preparation of the final report.

6.2 WP2 – Data Collection, Metadata Compilation, Data Access and Products

The objectives of WP2 are to identify specific additional data sources that contribute to the EMODnet physical parameters portfolio (Argo, profiling floats, gliders, radar, CTD from ships, river outflow, water noise, etc.), and reduce spatial and temporal gaps in cooperation and collaboration with the underlying EuroGOOS ROOSs, CMEMS INS TAC, and SeaDataNet NODCs infrastructures, as well as EMODnet Data Ingestion. Part of this activity is to develop EMODnet Physics services with user-friendly interfaces for data and metadata uploading, data tracking and provide guidance and documents on preferred data, common data and metadata models. This WP is including Task 1. Develop a common method of access to data held in repositories, Task 2. Construct products from one or more data sources that provide users with information about the distribution of parameters in time and space, and Task 6. Facilitate interoperability with data distributed by non-EU organizations.

Description:

During the period, the key activity was the interaction with SOOS and PANGAEA to start identifying datasets to be integrated into EMODnet Physics DB.

6.3 WP3 – Portal technical Development and operation

The objectives of WP3 are to implement and extend the www.emodnet-physics.eu portal allowing users to find, visualize and download data and data products and their metadata. This includes the development of procedures for machine-to-machine connections to metadata, data and data products and services compatible with INSPIRE, EMODnet and OGS standards and requirements. The portal also has to develop monitoring tools of website performance and usage. This WP is including Task 3. Develop procedures for machine-to-machine connections to data and data products, and Task 4. Develop a web portal allowing users to find, visualise and download data

Description:

Standard maintenance and service monitoring and updates.

6.4 WP4 – Analysis Evaluation and Feedback

WP4 is aimed at reporting effectiveness of the system in meeting the needs of users and other EMODnet portals, assess the robustness of the developed information system and operate a help desk to deal with user feedback and need for support. This WP is including Task 7. Install a process to monitor performance and deal with user feedback, Task 8. Operate a help desk offering support to users.

Description:

The system is collecting usage and traffic (number of hits, amount and type of data used, etc.) to fill and match the required Indicators. Access and use of the Help desk facility: during this period, we registered 15 requests (

27/03/2019	**Letterkenny Institute of Technology**	**Tech – support to find and download depth contours for the territorial waters of Ireland in a format that i can use with QGIS**	**1 day**
21/03/2019	University College Cork	Tech – Support to identify and download data	1 day
18/03/2019	Mercator Ocean	Tech – HFR data missing	1 day
27/2/2019	Fisheries and Oceans Canada, Government of Canada	Tech – wrong metadata	1 day
19/2/2019	EMSA - Portugal	Tech – support to link the EMODnet Physics WMS	1 day
14/2/2019	University of Plymouth - UK	Tech – support to download a specific dataset	1 day
13/2/2019	Jacobs - Coastal Engineer Buildings Infrastructure and Advanced Facilities	Tech - support to use some datasets (parameters)	1 day
5/2/2019	AquaBioTech Group	Tech – support to find and download datasets	1 day
4/2/2019	Mercator Ocean – Toulouse - FR	Tech – MATROOS HFR data files empty	1 day
30/1/2019	EMODnet Secretariat	Tech – WMS server down	Some hours
23/1/2019	Mercator Ocean – Toulouse - FR	Tech – Ligurian HFR data grid error (September data)	1 day to answer – CNR that is in charge of the HFR in Liguria is going to republish the full-time series in April 2019

21/1/2019	Technical University of Denmark – Copenhagen	Tech – support to understand file naming	1 day
18/1/2019	RIVM (Dutch National Institute for Public Health and the Environment) - Netherland	Tech – support to download sea-basin layer	1 day
17/1/2019	Laboratoire EPHE Biogeographie et Ecologie des Vertebres Campus CNRS - Montpellier	Tech – support to download a salinity data collection	1 day
4/1/2019	UNIversity of Lisboa - Portugal	Tech – empty files when downloaded river data	1 day

Table 1).

Information on users:

Academia/Research	68,8%	75	Marine and Coastal - tot: **69** Climate, Seasonal and Weather Forecasting - tot: **40** Marine Resource - tot: **20** Maritime Safety - tot: **14**
Business and private Company	14,7%	16	Marine and Coastal - tot: **12** Climate, Seasonal and Weather Forecasting - tot: **8** Marine Resource - tot: **5** Maritime Safety - tot: **2**
Government/Public Administration	7,3%	8	Marine and Coastal - tot: **6** Climate, Seasonal and Weather Forecasting - tot: **5** Maritime Safety - tot: **2** Marine Resource - tot: **1**
Non profit	2,8%	3	Marine and Coastal - tot: **3** Marine Resource - tot: **1** Climate, Seasonal and Weather Forecasting - tot: **1**
Other	6,4%	7	Climate, Seasonal and Weather Forecasting - tot: **5** Marine Resource - tot: **4** Marine and Coastal - tot: **4** Maritime Safety - tot: **1**

Table **5** presents data collected for the past three months (1/1/2019-31/03/2019) from/about authenticated users. Note this is only a limited subset of the portal traffic.

Organisation type	**% users**	**tot users Organisation type**	**Main use cases and application areas**
Academia/Research	68,8%	75	Marine and Coastal - tot: **69** Climate, Seasonal and Weather Forecasting - tot: **40**

			Marine Resource - tot: **20** Maritime Safety - tot: **14**
Business and private Company	14,7%	16	Marine and Coastal - tot: **12** Climate, Seasonal and Weather Forecasting - tot: **8** Marine Resource - tot: **5** Maritime Safety - tot: **2**
Government/Public Administration	7,3%	8	Marine and Coastal - tot: **6** Climate, Seasonal and Weather Forecasting - tot: **5** Maritime Safety - tot: **2** Marine Resource - tot: **1**
Non profit	2,8%	3	Marine and Coastal - tot: **3** Marine Resource - tot: **1** Climate, Seasonal and Weather Forecasting - tot: **1**
Other	6,4%	7	Climate, Seasonal and Weather Forecasting - tot: **5** Marine Resource - tot: **4** Marine and Coastal - tot: **4** Maritime Safety - tot: **1**

Table 5. Users and their interest (people registered in past 3 months, total # users which updated their profile 90 – the total since the service is in place is 540)

7 New monitoring indicators

Please consult and fill in the designated excel template.

Indicator 1 – Volume and Coverage

Note: the figure for Atlantic Ocean is also including platforms in the South Atlantic Ocean.

Indicator 2 – Organisations supplying data and data products

For Physics is not possible to report according the proposed table, we are using the same table we were using for the past reports in which we list the Organization (provider) the country, the platform and the themes.

Concerning the products the main provider (not exhaustive list) for EMODnet Physics are:

- Mercator Ocean/Copernicus Marine Environment Monitoring Service
- SeaDataCloud (the T&S climatology is a product developed during the project by the joint effort of several SDN partners)
- PSMSL, provided and maintained by NERC BODC (UK)
- SONEL, provided and maintained by the University of La Rochette (France)
- MEOP, provided and maintained by MEOP (the data management is coordinated by University of St. Andrew – Scotland and University of Stockholm)
- Global Runoff Data Center – hosted by the Federal Institute of Hydrology (BfG) Germany
- Impulsive Noise registry – hosted by ICES (Denmark) on behalf of OSPAR and HELCOM, and the ACCOBAMS web portal for the MED

Indicator 3 - Organisations that have been approached to supply data with no result

Nothing to report

Indicator 5 – Number and coverage of built data products

Indicator 5.1
Built data products table is reporting data according the metrics it was applied during the previous report. Now, many of the built in products are not listed in the catalogue yet. The re-organization and update of the catalogue is an on-going activity and once completed (next period) considering that the catalogue is going to list the built in products also, the 5.1 indicator will be re-organized accordingly.

Indicator 5.2.1
The EMODnet Physics catalogue was redesigned and the preliminary version was published in July. It will be updated continuously to list all the available products and datasets

Indicator 6 – Portal & Social Media visibility

See EMODnetPhysics_QuarterlyReport_Q08.xlsx file

Indicator 7 – Technical Monitoring and portal user-friendliness

See EMODnetPhysics_QuarterlyReport_Q08.xlsx file

Indicator 8 - List of web-services made available and organisations connected through these

Service	Description	Examples
PermaURL	All platforms	http://www.emodnet-physics.eu/map/platinfo/piradar.aspx?platformid=10273 http://www.emodnet-physics.eu/map/platinfo/pidashboard.aspx?platformid=10273 Service description @ http://www.emodnet-physics.eu/map/spi.aspx
API REST/SOAP	Latest 60 days of data	www.emodnet-physics.eu/map/Service/WSEmodnet2.aspx www.emodnet-physics.eu/map/service/WSEmodnet2.asmx
OGS WMS, WFS, WCS	Postgresql + Geoserver	geoserver.emodnet-physics.eu/geoserver/web examples and service description @ www.emodnet-physics.eu/map/service/GeoServerDefaultWMS www.emodnet-physics.eu/map/service/GeoServerDefaultWFS
THREDDS (OpenDAP, WMS, WCS)	Latest 60 days + HFR data + Ice	thredds.emodnet-physics.eu/thredds/catalog.html
ERDDAP	Latest 60 days	erddap.emodnet-physics.eu
Widgets	All plots	www.emodnet-physics.eu/Map/Charts/PlotDataTimeSeries.aspx?paramcode=TEMP&platid=8427&timerange=7

Table 6. Interfaces to access or view data

Indicator 8.1.1

The process of reorganization of the services vs product mapping is on going, this re-mapping activity is influencing the table 8.1.1 that will be updated in next report. In this reporting period, we consider Table 6 as a summary of the interfaces to access or view data

Indicator 8.2.1
Volume of downloadable data is the number of platforms with a given parameter. Number of manual downloads is the number of download requests for a given platform/section.

The user can download data from each platform-page. If the user selects one day, or one month or 10 months of data, EMODnet Physics counts this such as one single download. If the user interacts with the map viewer-boxing feature, and selects and download data for a number/list of platforms, EMODnet Physics counts it as one single download request. Either the users downloads one day of data or the full DB, if the user is doing this in one single action, EMODnet Physics counts it as one single download request (it is replicated in case the platform/file contains more than one parameter)

Tracking tools to report Indicator 8.2.1 are going to be updated during next period in order to be able to report on the number of requests on the WMS, WFS, ERDDAP, WIDGET interfaces by using the same unit/metrics it is used for the manual download.

Indicator 8.2.2

External Data Products. It is considered an External data product the one on which EMODnet Physics is not doing any action/processing/optimization and it is only re-distributed. The number of external product is zero.

Indicator 8.2.3

We started using the new tracking system and some trends are available. To note that both the catalogue and the tracking system are going to be fine tuned.

Indicator 10 - Published use cases and number of readings

This indicator has to be reported only if the use-cases are re-published on the thematic lot landing page. It is not the case of EMODnet Physics.