EMODnet Thematic Lot n° 03- Physics

EMODnet Phase III - Trimonthly Report

Reporting Period: 29/03/2017 – 31/03/2017

Date: XX

Contents

1. Highlights in this 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 – this can be based on the indicators or any other of the reporting sections. [Provide a bullet list - maximum 5 bullets]

1. Contract signature
2. Coordination with Mercator
3. update of the landing page to make connection with EMODnet Data Ingestion
4. update of the portal to make available platforms preview data products
5. Planning of KO meeting and technical meetings

2. Meetings held since last report

List here the meetings held/participated since the last trimonthly report, if relevant add short description.

Date	Location	Topic	Short Description
14-15/02/2017	Brussels (Belgium)	EMODnet Steering committee	
21/02/2017	Nantes (France)	Presentation @ Clipper kickoff meeting	
22/02/2017	Toulouse (France)	Coordination meeting @ Mercator	
7-9/03/2017	Madeira (Portugal)	IBI annual	
13-16/03/2017	Helsinki (Finland)	JericoNext annual assembly	
20/03/2017	Call	EMODnet Physics - IFAW	
27-31/03/2017	Kuala Lumpur (Malaysia)	IODE - XXIV	
10-13/04/2017	Limassol (Cyprus)	EMODnet Ingestion	

http://www.iode.org/index.php?option=com_oe&task=viewEventAgenda&eventID=1879

3. Work package updates

The project officially started 29thMarch 2017.

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.

Activities:

During the period, the contract was finalized and signed. The core team organized the kick off meeting in Milan (ETT office), Italy, 19-20 May. ETT started the process to activate subcontractors.

Representatives of EMODnet Physics participated to the EMODnet Data Ingestion assembly in Limassol to follow up and kept coordinated. The team provided EMODnet DI with a list of identified data sets/platforms to work on.

In order to deal with the new required parameters (river data and underwater noise) ad hoc technical meetings are already planned with experts:

- 9 May 2017 – Milan, Italy – tech meeting to discuss river data management approaches
- 22 May 2017 – Madrid, Spain - tech meeting to discuss sea level data and products
- 23 May 2017 – Barcelona, Spain - tech meeting to discuss underwater noise

EMODnet Physics and SeaBed Habitats are planning a tech meeting to discuss about data needs, offer and ad hoc services

EMODnet Physics team was invited to participate to the SOOS DMSC meeting in June (http://www.soos.aq/calendar?view=event&cid=93)

In February, EMODnet Physics had a coordination meeting with Mercator in order to review the status of the cooperation and plan actions in relation to both CMEMS updates and EMODnet Physics designed developments. More specifically it was discussed how to reorganize the metadata presentation for the datasets that are validated according the CMEMS QC/QF and how to link to the technical-methodological documentation.

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.

Activities:

One of the outcome form the EMODnet DI meeting is an extend list of existing measurements and datasets that can be of EMODnet Physics interest, the list is going to be reviewed in order to propose priorities

During the meeting at Mercator, it was agreed EMODnet Physics to make available the in situ reprocessed datasets. The products are designed for reanalysis purposes and integrate the best available version of in situ data for temperature and salinity measurements. The EuroGOOS ROOSs, CMEMS INSTAC and SeaDataNet jointly elaborate the products.

- Arctic- In-situ Observations Yearly Delivery in Delayed Mode (1990-2014) - (CMEMS INSITU_ARC_TS_REP_OBSERVATIONS_013_037)
- Atlantic Iberian Biscay- In-situ Observations Yearly Delivery in Delayed Mode (1990-2014) - (CMEMS INSITU_IBI_TS_REP_OBSERVATIONS_013_040)
- Atlantic-European North West Shelf- In-situ Observations Yearly Delivery in Delayed Mode (1990-2014), - (CMEMS INSITU_NWS_TS_REP_OBSERVATIONS_013_043)
- Baltic- In-situ Observations Yearly Delivery in Delayed Mode (1990-2014) - (CMEMS INSITU_BAL_TS_REP_OBSERVATIONS_013_038)
- Mediterranean- In-situ Observations Yearly Delivery in Delayed Mode (1990-2014) - (CMEMS INSITU_MED_TS_REP_OBSERVATIONS_013_041)
- Black Sea- In-situ Observations Yearly Delivery in Delayed Mode (1990-2014) – (CMEMS INSITU_BS_TS_REP_OBSERVATIONS_013_042)
- Global Ocean- Delayed Mode in-situ observations of ocean surface currents – (CMEMS INSITU_GLO_UV_L2_REP_OBSERVATIONS_013_044)
- Global Ocean- CORA- In-situ Observations Yearly Delivery in Delayed Mode (1950-2014) – (CMEMS INSITU_GLO_TS_REP_OBSERVATIONS_013_001_b). These data are collected from main global networks (Argo, GOSUD, OceanSITES, World Ocean Database) completed by European data provided by EUROGOOS regional systems and national system by the regional INS TAC components. It is updated on a yearly basis. The time coverage has been extended in the past by integration of EN4 data for the period 1950-1990.

During the period, EMODnet Physics also worked on data access to data products. For each of the platform type/network it is possible to load one of the recorded parameters. These products are based on operational data and are managed by a sliding window of 60 days. In general, the user can select two time windows: 7 days and 60 days.

ARGO

http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=RT&type=AR&param=TEMP

http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=RT&type=AR&param=PSAL

Drifting Buoys

http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=RT&type=DB&param=TEMP

http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=RT&type=DB&param=PSAL

http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=RT&type=DB&param=ATMS

http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=RT&type=DB&param=DRYT

Ferrybox and Ships

http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=RT&type=FB&param=TEMP

http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=RT&type=FB&param=PSAL

http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=RT&type=FB&param=CHLT

HF Radar (INCREASE CMEMS SE)

http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=RD

This products is developed in cooperation with the CMEMS INCREASE SE project

Marine Mammals (MEOP + EMODnet DI)

http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=RT&type=MM&param=TEMP

http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=RT&type=MM&param=PSAL

The MEOP product let the user to see animation of the parameter along the animal route for the past 10 years

This product was ingested in cooperation with EMODnet Data Ingestion

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 has also to develop monitoring tools of the website performance and usage.

Activities:

The portal was updated to make clear connection to Data Ingestion and present the same information to support and guide potential new providers

The landing page is now organized as follow:

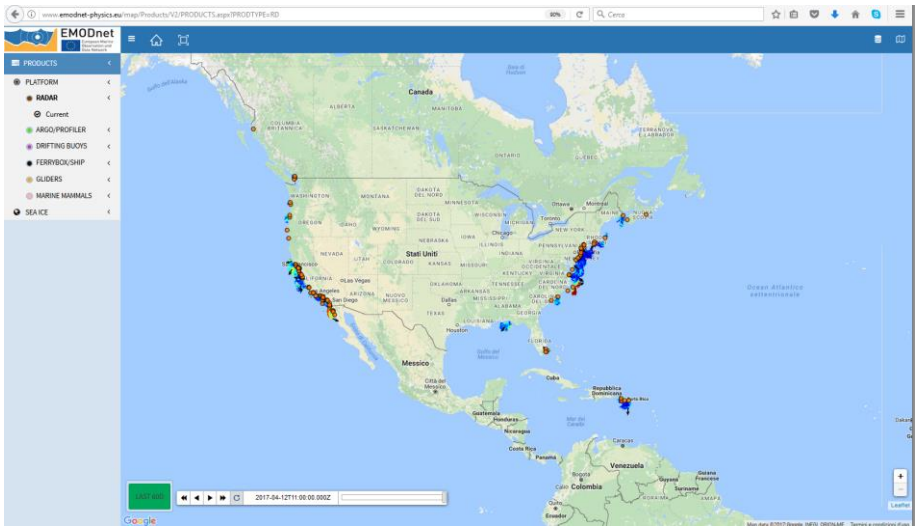
- Home: landing page and brief intro to EMODnet Physics
- Map viewer: link to the dynamic map with datasets (www.emodnet-physics.eu/map)
- Catalogue
    - Products: link to the dynamic map with (plot) products (http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx)
    - Catalogue: sextant catalogue for products released by the EMODnet Physics partners (CMEMS and SeaDataNet)
- Background
- Help
    - term of use
    - QC/QA protocols
    - User guide & legend
    - Documents and services
- Contribute
    - Associate partners (alphabet order of the data contributors)
    - How to contribute (introduction and links to EMODnet Data Ingestion)
    - Near Real Time data exchange

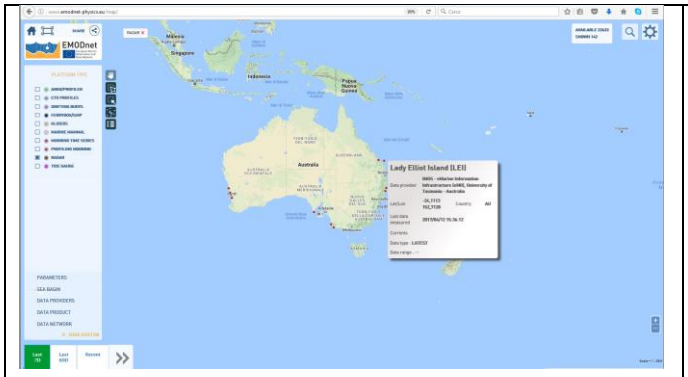
The Map viewer filters are started to be reorganized, e.g. the Platform type was extended to be more exhaustive and easy to be used by communities.

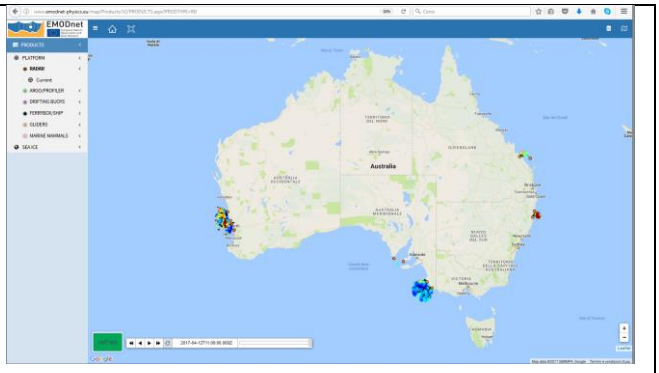
- Platform type
    - ARGO/Profilers
    - CTD Profiles
    - Drifiting buoys
    - Ferrybox/Ship
    - Gliders

- Marine Mammals
- Mooring Time Series
- Profiling Mooring
- Radar
- Tide Gauge

A specific action was done to include and make available data from some not European HF Radars: US and Australian data are available from EMODnet Physics. Datasets are available in the dynamic map as well as contribute to the HF Radar Sea Currents product.







The representative of the surface loads community (in the AtlantOS project) expressed the need to have service offering the daily ICE extent.

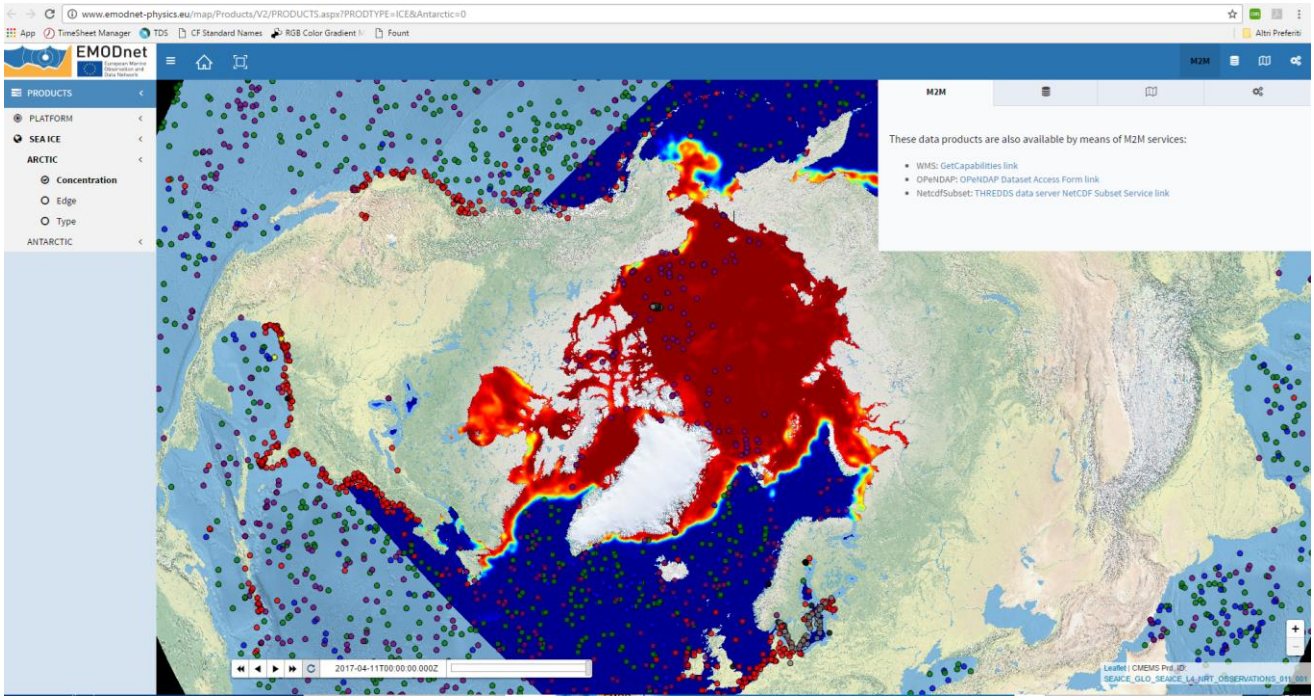
EMODnet Physics was already integrating the CMEMS SEAICE_GLO_SEAICE_L4_NRT_OBSERVATIONS_011_001, to make ice data and information available under the EMODnet Physics products. A specific THREDDS server was set up to offer some M2M services. The “getCapabilities” provides the user instructions on how to link it.

Arctic	Ice concentration	http://thredds.emodnet-physics.eu/thredds/wms/fmrc/ICEConcentration/ICEConcentration_best.ncd?service=WMS&version=1.3.0&request=GetCapabilities
	Edge	http://thredds.emodnet-physics.eu/thredds/wms/fmrc/ICEEdge/ICEEdge_best.ncd?service=WMS&version=1.3.0&request=GetCapabilities
	Type	http://thredds.emodnet-physics.eu/thredds/wms/fmrc/ICEType/ICEType_best.ncd?service=WMS&version=1.3.0&request=GetCapabilities
Antarctic	Ice concentration	http://thredds.emodnet-physics.eu/thredds/wms/fmrc/ICEConcentrationS/ICEConcentrationS_best.ncd?service=WMS&version=1.3.0&request=GetCapabilities
	Edge	http://thredds.emodnet-physics.eu/thredds/wms/fmrc/ICEEdgeS/ICEEdgeS_best.ncd?service=WMS&version=1.3.0&request=GetCapabilities
	Type	http://thredds.emodnet-physics.eu/thredds/wms/fmrc/ICETypeS/ICETypeS_best.ncd?service=WMS&version=1.3.0&request=GetCapabilities

The user can e.g. use OpenLayer to include the Artic Ice Edge as follow:

```
var iceEdgeLayer = new OpenLayers.Layer.WMS("ice_edge",
    "http://thredds.emodnet-physics.eu/thredds/wms/fmrc/ICEEdge/ICEEdge_best.ncd?",
    {
      layers: "ice_edge",
      transparent: true,
      STYLES: 'boxfill/rainbow',
      colorscalerange: '1,3',
      ABOVEMAXCOLOR: 'transparent',
      BELOWMINCOLOR: 'transparent',
      NUMCOLORBANDS:3,
      TIME: '2016-12-10T00:00:00.000Z'
    });
```

The product page is providing the links to the M2M available services.


www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=ICE&Antarctic=0
EMODnet
PRODUCTS
PLATFORM
SEA ICE
ARCTIC
Concentration
Edge
Type
ANTARCTIC
M2M
These data products are also available by means of M2M services:
WMS: GetCapabilities link
OPeNDAP: OPeNDAP Dataset Access Form link
NetcdfSubset: THREDDS data server NetCDF Subset Service link
2017-04-11T00:00:00.000Z

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 help desk to deal with user feedback and need for support

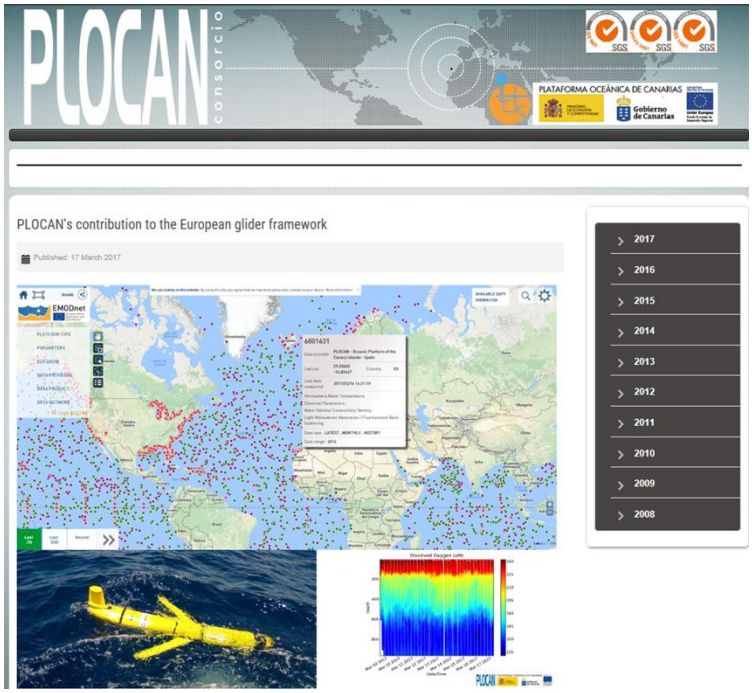
Activities:

In order to monitor performances the EMODnet Physics web portal was updated with some tracking features: each interaction with the portal is now recorded into a DB and these data are going to be used to do analytics and extract indicators.

EMODnet Physics tools, services, widget, etc are started being used into local (regional) operational oceanographic services: e.g. http://www.euskoos.eus/datos/datos-en-tiempo-real/higer-rt/

PLOCAN twitter to inform about the deploy of the platform.

http://www.plocan.eu/index.php/en/newsplocan/2017/march/1673-europe-glider-en



The team was contacted by Parameter Space (leading a ESA project to develop a pathfinder exploitation platform for the Atlantic region) to have EMODnet Physics support for creating a joint show case product based on in situ and satellite (Sentinel data). Cooperation is under going.

EMODnet Physics and JERICONEXT project are collaborating and supporting each other in order to have an open and holistic approach to marine observations and forecasting products for the coastal zone. EMODnet Physics was designed to be the JERICONEXT data portal, meaning that EMODnet Physics has to be connected and make available (physics) datasets.

One JERICONEXT scope is to suggest actions and recommendations that better connect the Virtual Infrastructure (VI) and JERICO-NEXT systems to make data easy accessible and visible and create the basis for building synthetic products based on original data. To this end, one JERICONEXT task (T5.8 WP5 on Data Management - where results are collected in the JERICONEXT Deliverable 5.16) was to designed to evaluate the degree to which the datasets are discoverable, accessible, ready for use, and obtainable (either directly or indirectly) from the JERICONEXT systems. While proofing the very good interoperability and synergy between JERICONEXT and EMODnet Physics, the survey also noticed that EMODnet Physics is missing connection to some datasets and Vis (NIVA NorFerry: MS Oslofjord (OF), MS Norønna (NO); FMI UTO: Uto; SMHI MOS: HFRadar; SYKE Alg@Line: Silja Victoria; NIVA NRS: NRS; IOBAS: Galata, Pomos). Both EMODnet Physics and EMODnet Data Ingestion are working on this outcome.

4. Specific challenges or difficulties encountered during the reporting period

Please list specific problems you have encountered during this period, including related to technical and data provision issues. [Provide a bullet list - maximum 2 pages in total – where more information needs to be provided state 'contact XXX for more information']

Nothing to report

5. 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. [Provide information in table - attach the documentation/full user feedback to the report]

Date	Name	Organization	Type of user feedback (*e.g. technical, case study etc)*	Response time to address user request
29/03/2017	Ivan Kuznetsov	HZG	Technical support – lost CMEMS id	Feedback in one day. Recovery of the id in 1 days.
27/03/2017	Ouellet Mathieu	DFO MPO Canada	Case study (1)	
23/03/2017	Paul Poli	Meteo France DSO/CMM	Technical support for Ice Layer - WMS/WFS	One day
15/03/2017	Jun She	DMI	Technical support – strange data in Kemi Station	Feedback in one day. Bug fix in one week
02/03/2017	Sinead McGlynn	Parameterspace	Technical support (custom M2M) to develop a case study	Feedback in one day, development under going.
28/02/2017	Francisco Hernandez	VLIZ	Wrong metadata in Belgian platfroms	1 week to fix the error. More second level controls are undergoing between BSH that is charge for the NWS area data and the institute
29/12/2016	Ouellet Mathieu	DFO MPO Canada	Technical support – duplication of data (IMEI buoys)	Feedback in one day. 2 months to fix the IMEI buoy data management
18/12/2016	Paul Poli	Meteo France DSO/CMM	Technical support (custom M2M) – to develop custom Ice layers M2M	Feedback in one day, release of the service 1 week
24/11/2016	Vicente Fernandez	EuroGOOS	Technical support – wrong position of 3 gliders	Feedback in one day. Bug fix in one further day
22/11/2016	Hammarklint Thomas	SMHI	Technical support – error to show the correct timezone in some Finninsh sea level stations	Feedback in one day. Bug fix in one week

1) “because of EMODnet Physics, we were able to identify a Canadian drifting buoy which accidentally got beached. It was a matter of chance, but the fact that the EMODnet portal gives easy and quick access to the latest instrument positions was the starting point. In the attached screenshot, you can see the EMODnet tabs open in my browser” Ouellet Mathieu (DFO MPO Canada)

6. Outreach and communication activities

Please list all the relevant communications activities or products you have developed/executed during this period (including presentations, lectures, trainings, demonstrations and development of communication materials such as brochures, videos, etc.). Relevant scientific and/or popular articles you know have been published using/referring to EMODnet should be reported under indicator 11 in Section 7. [Provide information in table - Maximum 1 page]

Date	Media	Title	Short description and/or link to the activity

7. Updates on Progress Indicators

Using the indicator as a header list the metrics collated and the time interval. If there was no activity to report leave the section under the indicator header blank.

Indicator 1 - Volume of data made available through the portal

EMODnet Physics is providing access to both near real time and historical datasets from as recorded by different platform types. Some platforms are delivering data continuously (e.g. fixed stations, radars, ferryboxes), other platforms are delivering data as soon as they can (e.g. ARGO, glider) covering a defined time period, i.e. the mission. Some platforms are not working any longer and so only old data may be available. A platform generally measures one or more parameters and Indicator 1.2 summarises the available datasets by parameters.

Data are organised in files according the data age and more specifically the system is making available:

1. Daily files for the past 60 days. It is a sliding window on the latest 60 days of observations for real-time applications, data go towards automatic quality check/flag procedures and no authentication is required to download these data

2. Monthly files. By the end of the first week the month, for each platform, data for the previous month are organised into a single file. The file contains the best copy of the recent dataset according automatic quality check/flag procedures[1]. Some of these datasets download requires user authentication.

3. Long Term time series data files. Annually the monthly files are reprocessed (together with validated data from NODCs) into a single file creating a single best copy history file for each platform. Some of these datasets download requires user authentication.

4. Validated historical datasets. Organized in CDI - dataset files hosted by NODCs (validated data[2], requires user registration).

[1] http://www.emodnet-physics.eu/map/ARH/QualityCheck/recommendations_for_rtqc_procedures_v1_2.pdf
[2] Validated according the SeaDatanet Quality Check procedure - http://www.seadatanet.org/content/download/18414/119624/file/SeaDataNet_QC_procedures_V2_%28May_2010%29.pdf

Indicator 1.1 - Available datasets[3]

	Temperature	Salinity	Currents	Light Attenuation	SeaLevel	Atmospheric	Waves	Wind	BioChemical	Total
Number of platforms providing operational data for latest 60days	6566	4526	231	183	446	5716	319	234	916	19137
Number of platforms providing operational data	16346	8187	549	96	591	13491	510	459	2227	42456
Number of platforms providing historical data	15014	7849	398	87	380	12538	367	400	1487	38520
Number of platforms providing validated historical data (CDI)	442	133	366	37	398	41	173	38	224	1852

Indicator 1.2 - Number of available platforms and typology[4]

	CTD profiles (CT)	drifting buoys (DB)	ferrybox/ship (FB)	gliders (GL)	mooring time series (MO)	profiling floats (PF)	Argo Floats (AR)	Radar (RD)	Profiling mooring (MOPR)	argo/profiler (AP)	marine mammal (MM)	Tide Gauge (TG)	TOTAL
August 2016	0	1775	60	2	1581	348	3566	13	0	0	0	181	7526
September 2016	0	1808	61	2	1546	356	3554	17	1	0	0	182	7527
October 2016	0	1887	59	5	1534	450	3420	13	1	0	0	182	7551
November 2016	0	1848	47	4	1480	530	3355	13	1	0	0	181	7459
December 2016	0	1808	42	1	1432	633	3323	13	1	0	0	188	7441
January 2017	0	2128	40	2	1381	744	3251	49	0	0	0	188	7783
February 2017	0	2106	20	3	1372	789	3197	47	0	0	0	186	7720
March 2017	0	2169	11	4	1377	818	3136	43	0	0	0	185	7743
April 2017	46	1753	14	2	1389	796	3005	49	0	0	0	227	7281

[3] http://www.emodnet-physics.eu/map/dashboard/Section16.aspx

[4] http://www.emodnet-physics.eu/map/dashboard/Section20.aspx

Indicator 2 - Organisations supplying each type of data

EMODnet Physics is receiving data from all the EuroGOOS and ROOSs members (based on a formal data sharing agreement). EMODnet Physics is also receiving data from providers that have sharing agreements with organisations that are cooperating with EMODnet Physics on the data management infrastructures (i.e. CMEMS INSTAC and ROOS RDACs). For instance, through these agreements EMODnet Physics is receiving data from 24 oil platforms (North Sea).

For details on providers see Annex 1[5]

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

Nothing to report

[5] http://www.emodnet-physics.eu/map/dashboard/Section1.aspx?typeplat=A

Indicator 4 - Volume of each type of data and of each data product downloaded from the portal

EMODnet Physics is tracking the IP address where the request comes from. Internal requests (ETT IPs) and known internet page-indexing/sniffing robots (e.g. Google) are filtered out. If data is requesting authentication (e.g. monthly files) EMODnet forwards the request to the CAS service and if the acknowledgment is positive the user can download data, if it is not the user is requested to fill up the registration form to receive a login and password.

Indicator 4.1 - Data downloads[6] (period 01/07/2016 – 31/03/2017)

Country	Latest	Monthly	History	Download all	Others M2M	WebService	total
Algeria	2	0	0	0	0	0	2
Australia	2	0	0	0	0	0	2
Austria	0	0	0	0	0	1	1
Belgium	22	210	1	0	0	2658	2891
Brazil	0	0	0	0	0	2	2
Bulgaria	5	2	0	0	0	1	8
Canada	18	10	2	0	0	12	42
China	2	0	0	0	0	90	92
Croatia	1	272	270	0	115	0	658
Czech Republic	0	0	0	0	0	42	42
Denmark	2053	707	288	0	0	3	3051
Estonia	2	5	1	0	0	2	10
Faroe Islands	0	0	0	0	0	13	13
Finland	11	7	4	0	0	1	23
France	645	387	528	0	629	966	3155
Germany	36	193	626	0	49	3161	4065
Ghana	0	0	1	0	0	0	1
Greece	39	144	17	0	27	4	231
Hong Kong	0	2	0	0	0	0	2
Hungary	0	0	0	0	0	4	4
India	1	0	17	0	0	2	20
Indonesia	0	0	0	0	0	2	2

[6] http://www.emodnet-physics.eu/map/dashboard/ReservedAreaSection13.aspx

Iran	1	0	1	0	0	0	2
Ireland	1	130	130	0	96	0	357
Italy	35	635	172	0	3	5782	6627
Latvia	0	0	0	0	0	1	1
Malta	0	1	0	0	0	0	1
N.D.	7	2	0	0	0	9	18
Netherlands	48	329	12	0	1	185	575
New Zealand	1	0	0	0	0	0	1
Nigeria	0	0	0	0	0	2	2
Norway	5	7	3	0	0	1	16
Poland	0	0	0	0	0	1	1
Portugal	653	476	48	0	0	6866	8043
Puerto Rico	0	0	0	0	0	3	3
Republic of Korea	35	4	0	0	0	1	40
Romania	12	2	0	0	1	1	16
Russia	4	18	4	0	0	91	117
Saudi Arabia	0	0	0	0	0	6	6
Singapore	2	0	0	0	0	0	2
Spain	253	10	9	0	0	34	306
Sri Lanka	0	0	0	0	0	1	1
Sweden	18	20	0	0	0	0	38
Switzerland	0	1	0	0	0	0	1
Tanzania	1	0	0	0	0	0	1
Turkey	1	5	3	0	0	0	9
Ukraine	4	2	4	0	0	60	70
United Kingdom	375	198	43	0	205	1327	2148
United States	2	9	3	0	1	5543	5558
total	4297	3788	2187	0	1127	26878	38277

Indicator 4.2 - Most downloaded platforms (top 100) – (period 01/07/2016 – 31/03/2017)[7]

Platform	Download	Web service	SeaDataNet	Total
USNDBC_mlww3	0	8029	0	8029
CorunaTG	11	539	16	566
SantanderTG	9	539	16	564
LeixoesTG	14	539	0	553
PortBlocTG	12	539	0	551
HuelvaTG	12	539	0	551
LaRochelleTG	10	539	0	549
GijonTG	10	539	0	549
NazareTG	11	538	0	549
SocoaTG	10	539	0	549
BilbaoTG	9	539	0	548
PenicheTG	8	539	0	547
LasPalmasTG	5	539	0	544
SinesTG	2	539	0	541
Offshore location - Maplin Sands (Site 5)	0	340	0	340
VigoTG	9	326	0	335
ART_132558	0	326	0	326
5904488	0	301	0	301
VigoTG_H	0	225	0	225
Millport	4	212	3	219
KeetenBoei	22	166	0	188
ANCONA-61218	4	176	0	180
62091	28	139	0	167
Westhinder	27	138	0	165
61002	4	160	0	164
MAZARA-61208	4	160	0	164
VIDA	9	154	0	163
62094	24	138	0	162
62001	101	58	0	159
PALOMA	5	154	0	159
PALERMO-61209	4	154	0	158
PONZA-61214	4	153	0	157
Europlatform	139	0	16	155
Roscoff	16	138	1	155
62305	34	117	0	151
62068	4	138	0	142
M5 Weather Buoy Station	3	138	0	141
Coastal location - Roscoff, France	0	138	1	139
62024	138	0	0	138

[7] http://www.emodnet-physics.eu/map/dashboard/ReservedAreaSection6.aspx

M2 Weather Buoy Station	0	138	0	138
62142	1	136	0	137
Shkorpilovtsi	2	134	0	136
Arkona	72	58	0	130
K13a	112	0	16	128
61284	29	96	0	125
61289	26	96	0	122
61197	22	96	0	118
61295	22	96	0	118
ADN-DWRG2	21	96	0	117
Kungsholmsfort	18	87	12	117
ADN-DWRG1	20	96	0	116
ADN-E2M3A	10	96	0	106
68422	8	96	0	104
CROTONE-61210	8	96	0	104
Vaderoarna	44	58	2	104
6901822	8	96	0	104
6901826	8	96	0	104
CenturiTG	8	96	0	104
W1M3A	7	96	0	103
ToulonTG	6	96	0	102
ATHOS	29	66	7	102
CATANIA-61207	6	96	0	102
CETRARO-61211	6	96	0	102
VENEZIA-61220	6	96	0	102
Molo-Bandiera	6	96	0	102
6901837	6	96	0	102
Molo-Sartorio	6	96	0	102
6901836	5	96	0	101
MONOPOLI-61215	5	96	0	101
IleRousseTG	5	96	0	101
CNR-ISMAR-Head-office	5	96	0	101
61022	4	96	0	100
61001	4	96	0	100
61021	4	96	0	100
ALGHERO-61213	4	96	0	100
CAGLIARI-61221	4	96	0	100
CIVITAVECCHIA-61216	4	96	0	100
LASPEZIA-61219	4	96	0	100
6901827	4	96	0	100
Faaborg	7	93	0	100
FosSurMerTG	4	96	0	100
LaFigueiretteTG	4	96	0	100
MarseilleTG	4	96	0	100
SolenzaraTG	4	96	0	100
1900848	4	96	0	100
6901829	3	96	0	99
6901846	3	96	0	99

NADR-S1	3	96	0	99
NiceTG	3	96	0	99
6901818	3	96	0	99
6901835	3	96	0	99
6901847	2	96	0	98
NADR-E1	2	96	0	98
6100866	2	96	0	98
6901839	2	96	0	98
F3platform	39	58	0	97
NADR-SNG	1	96	0	97
RMNGE	1	96	0	97

Indicator 5 - Organisations that have downloaded each data type

Indicator 5 shows the Country (rows) where a request came from versus the sea basin (columns) where the dataset - platform is belonging to.

Indicator 5 - Downloads by country[8] (period 01/03/2017 – 31/03/2017)

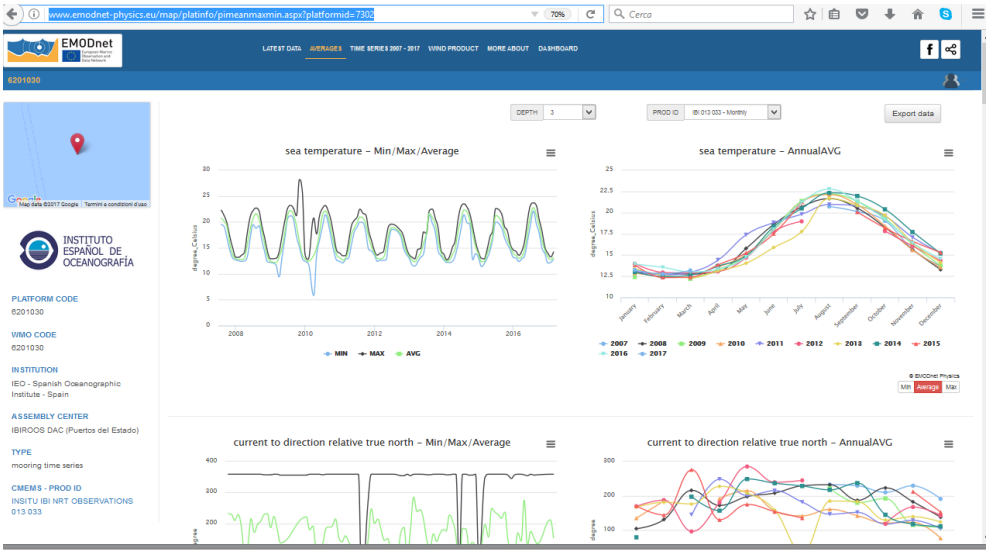
Country	Arctic, Barents, Greenland, Norwegian Sea	Atlantic, Bay of Biscay, Celtic Sea	Baltic Sea	Black Sea	Global	Mediterranean Sea	North Sea	Inland	total
Belgium	0	0	0	0	0	0	0	1	1
China	0	0	4	0	38	0	6	59	107
France	0	1	0	0	3	6	0	1	11
Germany	0	0	7	0	11	0	1	7	26
Greece	0	0	0	0	0	4	0	0	4
Italy	0	0	0	0	5	589	0	8	602
Mexico	0	0	0	0	1	0	0	0	1
Portugal	0	103	0	0	0	0	0	0	103
Romania	0	0	0	2	0	0	0	0	2
Russia	0	0	0	0	3	0	1	0	4
Sweden	0	0	3	0	0	0	1	0	4
United Kingdom	0	3	1	0	10	0	0	1	15
United States	0	0	3	0	51	0	4	49	107
total	**0**	**107**	**18**	**2**	**122**	**599**	**13**	**126**	**987**

[8] http://www.emodnet-physics.eu/map/dashboard/ReservedAreaSection5.aspx

Indicator 6 - Using user statistics to determine the main pages utilised and to identify preferred user navigations routes

This report is indicating how many times the pages/services have been viewed/used. Indicator 6.1 reports on the access and use of EMODnet Physics dynamic map, products, and services. Indicator 6.2 provides users statistics about navigation on the laning portal.

AVGS is indicating how many times the “averages” tab in the platform page have been view. This page is available in each of the platforms that provide timeseries data (e.g. Mooring buoys), e.g. platform 6200192[9]

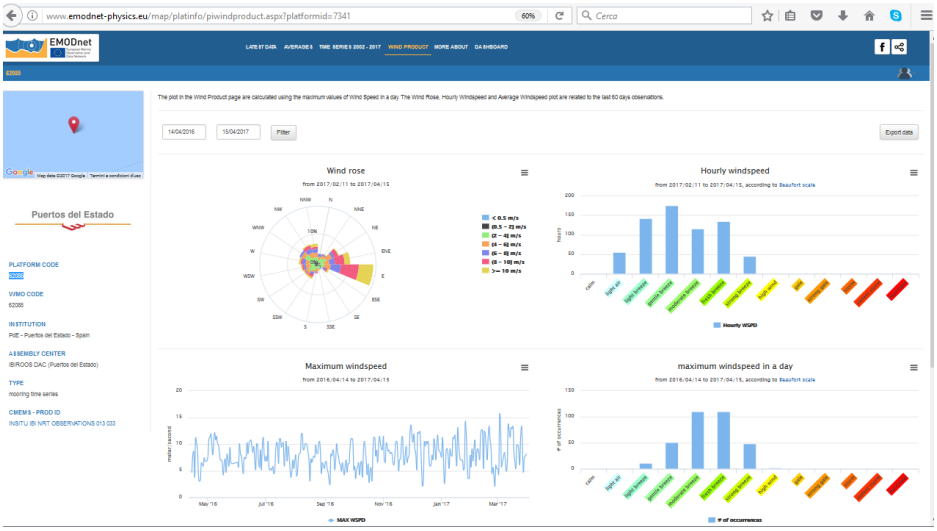


WIND is indicating how many times the “wind plot rose” tab in the platform page have been view. This page is only available for platforms[10] recoding wind data, e.g. platform 62085[11]

[9] http://www.emodnet-physics.eu/map/platinfo/pimeanmaxmin.aspx?platformid=7302

[10] http://www.emodnet-physics.eu/map/DefaultMap.aspx?sessionid=636277650091147219

[11] http://www.emodnet-physics.eu/map/platinfo/piwindproduct.aspx?platformid=7341



PR.XX are the product pages e.g. PR.AR[12] is the product page for the ARGO

WMS, WFS, WS SOAP, WS, SOS are the pages to access and use the EMODnet Physics M2M services

Indicator 6.1 - Pages and Services accesses[13] (period 01/07/2016 – 31/03/2017)

Country	AVGS	WIND	DASHB	PR.RD	PR.AR/PR	PR.DB	PR.FB	PR.GL	PR.MM	PR.ARCTIC	PR.ANTARTIC	PSMSL	WMS	WFS	WSSOAP	WS	SOS	TOTAL
Albania	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Algeria	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	4
Argentina	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
Australia	2	8	5	0	0	0	0	0	0	0	0	0	0	1	1	2	0	19
Austria	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	1	0	4
Belgium	35	14	10	1	2	0	0	0	1	0	0	2	45	12	21	5273	4	5420
Benin	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Brazil	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	6
Bulgaria	11	2	2	0	0	0	0	0	0	0	0	1	0	0	0	1	0	17
Canada	4	4	11	0	0	0	0	0	0	0	0	3	5	3	4	18	1	53
China	2	0	0	4	4	4	4	4	4	4	4	9	25	13	136	312	2	531
Croatia	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Czech Republic	1	20	1	0	0	0	0	0	0	0	0	11	12	15	16	57	5	138
Denmark	56	3	14	0	0	0	0	0	0	0	0	3	5	2	1	7	0	91
Estonia	8	0	1	0	0	0	0	0	0	0	0	0	0	0	0	7	0	16

[12] http://www.emodnet-physics.eu/map/Products/V2/PRODUCTS.aspx?PRODTYPE=RT&type=AR
[13] http://www.emodnet-physics.eu/map/dashboard/Section25.aspx

Faroe Islands	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	17	0	18
Finland	21	1	13	9	1	1	1	1	2	1	0	0	1	2	0	4	0	58
France	68	8	48	5	6	3	0	0	0	4	0	25	64	50	224	1150	136	1791
Germany	116	56	26	0	0	0	1	0	0	0	0	17	80	83	290	3544	242	4455
Greece	37	7	16	0	0	0	0	0	0	0	0	6	1	0	3	5	3	78
Guatemala	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
Hungary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
India	0	0	2	0	0	0	0	0	0	0	0	0	0	1	1	20	0	24
Indonesia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
Iran	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	2
Ireland	3	0	0	2	0	1	0	0	5	0	0	21	25	3	5	26	2	93
Italy	15	12	13	10	8	4	0	2	4	0	1	16	11	15	80	8311	26	8528
Japan	0	0	0	0	0	0	0	0	0	0	0	3	3	3	3	3	0	15
Latvia	0	0	3	0	0	0	0	0	0	0	0	0	2	0	0	2	0	7
Luxembourg	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Malaysia	2	0	3	0	0	0	0	0	1	0	0	5	2	2	0	1	0	16
Malta	0	0	4	0	0	0	0	0	0	0	0	1	0	0	0	0	0	5
Morocco	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	4	0	5
N.D.	0	0	0	1	0	0	0	0	0	0	0	0	3	0	1	32	0	37
Netherlands	60	4	20	2	0	2	0	0	2	2	0	2	8	6	4	199	7	318
New Zealand	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Nigeria	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2
Norway	7	0	1	0	0	0	0	1	0	0	0	0	4	3	4	4	1	25
Poland	2	0	3	0	0	0	0	0	0	0	0	1	2	1	0	2	0	11
Portugal	15	55	12	0	0	1	1	0	0	0	0	3	15	1	7567	121	3	7794
Puerto Rico	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	3
Qatar	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Republic of Korea	0	0	0	0	0	0	0	0	0	0	0	1	6	6	0	12	0	25
Republic of Lithuania	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Romania	26	7	3	0	0	0	0	0	0	0	0	1	1	36	0	3	0	77
Russia	9	1	4	3	1	1	2	1	2	2	2	60	38	39	49	213	2	429
Saudi Arabia	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10
Singapore	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
Slovenia	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	1	0	6
South Africa	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	4	0	7
Spain	65	48	35	1	1	0	0	1	0	0	0	9	22	13	12	53	3	263
Sri Lanka	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1

Sudan	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2
Sweden	27	9	5	6	1	4	0	0	3	2	0	2	1	0	1	4	1	66
Taiwan	0	0	1	1	0	0	0	0	0	0	0	1	1	0	1	1	0	6
Tunisia	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	1	0	6
Turkey	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	3	0	4
Ukraine	0	0	0	1	0	0	0	0	0	0	0	3	809	1	9	70	14	907
United Kingdom	49	111	16	6	3	4	4	2	2	2	2	29	54	37	462	1560	144	2487
United States	36	111	20	38	40	45	43	56	44	44	45	215	264	236	2253	6757	1754	12001
TOTAL	684	481	305	92	67	70	57	68	71	62	55	453	1513	588	11149	27845	2350	45910

Indicator 6.2 - Landing portal accesses[14] (period 01/03/2017 – 31/03/2017)

Country	Associ.	Backgr.	Catalo.	Cookie.	Docume.	Home	How to.	Login	Meetin.	Near R.	News	News -.	QA/QC .	Terms .	User's.	TOTAL
Argentina	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Australia	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Belgium	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4
Canada	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
China	0	0	0	0	0	9	1	0	1	0	0	0	0	0	0	11
Cyprus	2	1	2	0	0	12	0	0	0	3	0	0	0	0	0	20
Estonia	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3
France	0	0	0	1	0	7	1	6	0	0	2	2	1	1	0	21
Germany	1	1	1	2	2	4	1	15	0	4	3	1	1	1	1	38
Greece	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Ireland	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Italy	0	0	3	0	0	5	0	0	1	1	1	1	0	1	0	13
Poland	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Portugal	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
Russia	2	0	0	1	1	7	0	3	0	0	2	0	0	0	1	17
Spain	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
United Kingdom	0	1	0	0	0	5	0	0	0	0	1	0	0	0	0	7
United States	5	5	6	7	4	11	4	30	2	4	6	4	4	4	4	100
TOTAL	11	9	12	11	7	73	7	54	4	12	15	8	6	7	6	242

[14] http://www.emodnet-physics.eu/map/dashboard/Section30.aspx

Indicator 7 - List of what the downloaded data has been used for (divided into categories e.g. Government planning, pollution assessment and (commercial) environmental assessment, etc.)

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

EMODnet Physics is offering different web-services and machine-to-machine data distribution services. By means of a GeoServer based infrastructure, EMODnet Physics is offering OGC compliant catalogues and services (WMS, WFS, etc.). The following links redirect to the landing page of each of the available service and **Errore. L'origine riferimento non è stata trovata.** presents the available features and services in details.

- WEB SERVICE: www.emodnet-physics.eu/map/service/WSEmodnet2
- WMS: www.emodnet-physics.eu/map/service/GeoServerDefaultWMS
- WFS: www.emodnet-physics.eu/map/service/GeoServerDefaultWFS
- THREDDS: thredds.emodnet-physics.eu:8080/thredds/catalog.html
- SEXTANT: http://sextant.ifremer.fr/en/web/emodnet_physics/catalogue
- GEOSERVER: http://151.1.25.219:8181/geoserver/web/

Annex 1

(Excel File) – EMODnetPhysics_TrimonthlyReport_XX

The EMODnet Physics portal makes available the following data type:

- **Latest data** → freely available up to 60 days (automatic quality check/flag procedures)
- **Recent data** → organized in monthly data files (post 60 days, automatic quality check/flag procedures[15], requires user registration)
- **Long Term time series data** → organized one data file for platform (automatic quality check/flag procedures, requires user registration)
- **Historical validated data** → organized in CDI - dataset files hosted by NODCs (validated data[16], requires user registration).

The following table lists the full data availability, in particular it lists the typology of platform (MO= mooring buoy/fixed platform; FB=ferrybox; GL= glider, DB = drifting buoy, AR = Argo), whether it is providing data (NRT true/false), recent data time coverage (from to) and number of files (if the first number is lower than the second there are temporal gaps in the monthly data files; if the first number is higher than the second the platform hosts different data acquisition sets – e.g. Arkona), long term time series files (from to), if there are historical validated data for that platform (CDI) in SeaDataNet-NODCs network (from to, and the number of available CDIs covering the specified time range).

Summary table of all the data (latest, recent, long term and validated historical) by Country, Organization, Platform type and Data availability

Country	Data provider	Platform	Type	Data assembly center	Recent data From - To	Recent data #files	Long term TS From - To	CDI dataset ID - validated historical data From - To	CDI dataset ID #files	NRT true/ false

Where N.D. means that metadata or data is not available yet or it is under check procedure.
M: YY/XX → if YY = XX there are no temporal gaps in monthly time series

[15] http://www.emodnet-physics.eu/map/ARH/QualityCheck/recommendations_for_rtqc_procedures_v1_2.pdf

[16] Validated according the SeaDatanet Quality Check procedure -
http://www.seadatanet.org/content/download/18414/119624/file/SeaDataNet_QC_procedures_V2_%28May_2010%29.pdf