EMODnet Thematic Lot n° 06 - Physics

8th Bi-monthly Report

Reporting Period: 01/11/2014 – 31/12/2014

Date: 15/01/2015

Contents

1. Highlights in this reporting period

- *WMS/WFS from mapserver to geoserver*
- *Release of platforms - Wind Product*
- *Full integration with historical validated data – CDIs discovery an request system*

2. Meetings held since last report

The project officially started 24th July 2013.
List of the held meetings for the period November – December 2014

Meetings		
When	What	note
9-10 December	Steering Committee, Brussels, Belgium	

Meetings with ROOSs		
When	What	note
17-18 December	Meeting with ARTIC ROOS, Oslo, Norway	

Dissemination		
When	What	note
5-7 November	EMODnet Physics presentation @ EMODnet MED CheckPoint annual meeting, Bologna, Italy	Oral presentation
16-18 November	2nd International Ocean Research Conference (IORC) "One planet, one ocean, Barcelona, Spain[1]	Oral Presentation
22 November	EMODnet session @ PLOCAN Glider School, Las Palmas, Spain[2]	Oral presentation
26-27 November	EMODnet Physics presentation @ MonGOOS annual meeting, Lecce, Italy	Oral presentation

Technical Meetings		
When	What	note
10-11 November	EMODnet Physics technical meeting, Milan, Italy	
28 November	Progress technical meeting with MONGOOS, Lecce, Italy	

[1] www.iocunesco-oneplanetoneocean.fnob.org.
[2] http://acamimusan.es/gliderschool/

3. Work package updates

WP1 – Project Management

Objectives:
- To manage and to coordinate all project activities, ensuring timely delivery and high quality of results and products

Further ROOSs activities were formalized and officially started in

- Ireland-Biscay-Iberia (IBI ROOS) area in collaboration with INTECMAR

This activity is specifically focused testing new means for HFR data management and visualization.

Some organizations are already running these ROOSs related activities for a while and it is already possible to report some progress, in particular:

The ARTIC ROOS has already set up a new ftp folder to share regional data with EMODnet Physics in a better and more structured manner.

The SMHI, IOPAS, SYKE and MSI have been involved to support and assist the EMODnet Physics activities in the Baltic Area (BOOS) and since June 2014 about 30 new stations are connected and accessible (1 Polish station, 20 Swedish stations, and 10 Danish tide gauges), furthermore more and better Baltic Ferryboxes data (Travemünde – Helsinki, Århus-Lybeck-Kotka-Helsinki, and Helsinki-Stockholm) covering are already available)

In the North Sea Area (NOOS), the SHMI also supported the NOOS to make available 24 Norwegian stations and 15 Danish stations (from KDI via DMI), Deltares focused on wave data making available
2 Belgium platforms, 9 Dutch stations and 2 Danish wave platforms.

In the Mediterranean Area (MONGOOS) the HCMR supported EMODnet Physics in integrating further 7 Italian platforms (5 in the Regione Liguria, 2 in the Adriatic Sea) and 1 Spanish platform and 1 Cypriote station.

WP2 – Data Collection, Metadata Compilation and QA/QC

Objectives:

- To implement access to data and metadata from the data sources identified in EMODnet Physics
- To identify specific additional data sources that contribute to the EMODnet physical parameters portfolio (Argo profiling floats (Euro-Argo), gliders, radar, etc)
- To arrange that identified data sources become available *via* the underlying EuroGOOS ROOSes, MyOcean, and SeaDataNet infrastructures with common metadata and data formats. Arrange the data availability from other international programmes (Euro-Argo) through MyOcean *in situ* global component
- To validate the coverage and to complete the EDIOS metadata directory and standardised station index
- To establish and give guidance on common data and metadata models for complimentary data suppliers

:

Table 1[3] shows the operational platforms that provided at least one dataset for the past 60 days (for further details see Annex 1). Operational platforms provide data time series as soon as data is ready – e.g. a fixed platform is delivering data daily, an ARGO is delivering almost weekly -

Table 1	drifting bouys (DB)	ferrybox (FB)	gliders (GL)	fixed buoys or mooring time series (MO)	profiling floats vertical profiles (PF)	Argo Floats (AR)	Total
Jul-Aug 2014	54	8	10	670	28	651	1421
Sep-Oct 2014	60	10	12	723 (*)	35	651	1491
Nov-Dec 2014	35	6	1	666	26	490	1220

(*) some duplicates were discovered and fixed

The following table reports the operational platforms per Sea Region:

[3]

Table 2[4]	Wave & Winds	Temp.	Salinity	Currents	Light Attenuation	Sea Level	Atmospheric	Others	Chemical	
Artic, Barents, Greenland, Norwegian Sea	2	48	43	2	0	37	3	52	12	**199**
Atlantic, Bay of Biscay, Celtic Sea	94	427	287	84	12	179	68	366	77	**1594**
Baltic Sea	3	11	7	5	0	47	1	7	1	**82**
Black Sea	0	1	1	0	0	1	0	1	0	**4**
Global Ocean	1	120	104	8	0	5	3	126	13	**380**
Mediterranean Sea	105	244	123	157	23	112	55	157	39	**1015**
North Sea	7	16	13	12	1	41	6	9	5	**110**
Other (e.g. Land platforms)	0	4	2	1	0	25	2	4	1	**39**
TOTAL	**212**	**871**	**580**	**269**	**36**	**447**	**138**	**722**	**148**	**3423**

(*) previous report was also including many platforms that have yet to be mapped and validated – i.e. the potential portfolio.

The historical datasets (validated under the SeaDataNet network of NODCs) for 794 platforms (11450 datasets) are now available under EMODnet Physics.

[4] www.emodnet-physics.eu/map/dashboard/Section2SeaRegion.aspx

WP 3 Metadata aggregation, Data access and Data products

Objectives:

- To compile aggregated metadata with common format and quality for the EMODnet Physics portal
- To implement/create access to data sets and to compile aggregated data sets with common format and quality for the EMODnet Physics data products
- To generate products from the metadata and aggregated data sets

A Wind Data Product was developed and is now available via the EMODnet Physics portal, in particular for each platform that is measuring wind data, the platform page is providing a specific section “wind product” with the following:

1) Plot reporting the number of hours binned by wind strength for a given period

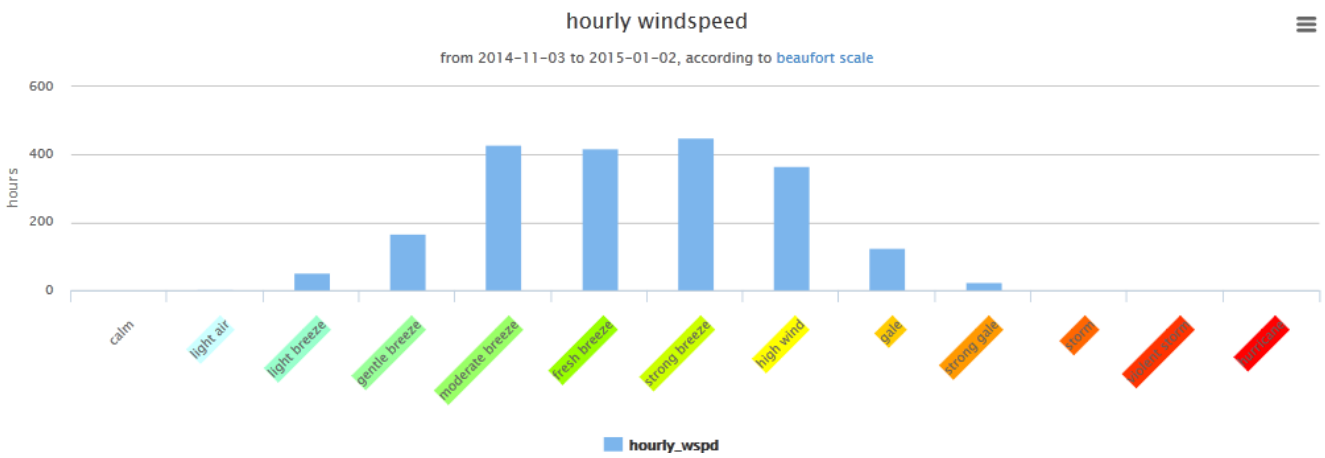

Figure 1

2) Plot reporting the maximum wind speed day by day for a given period

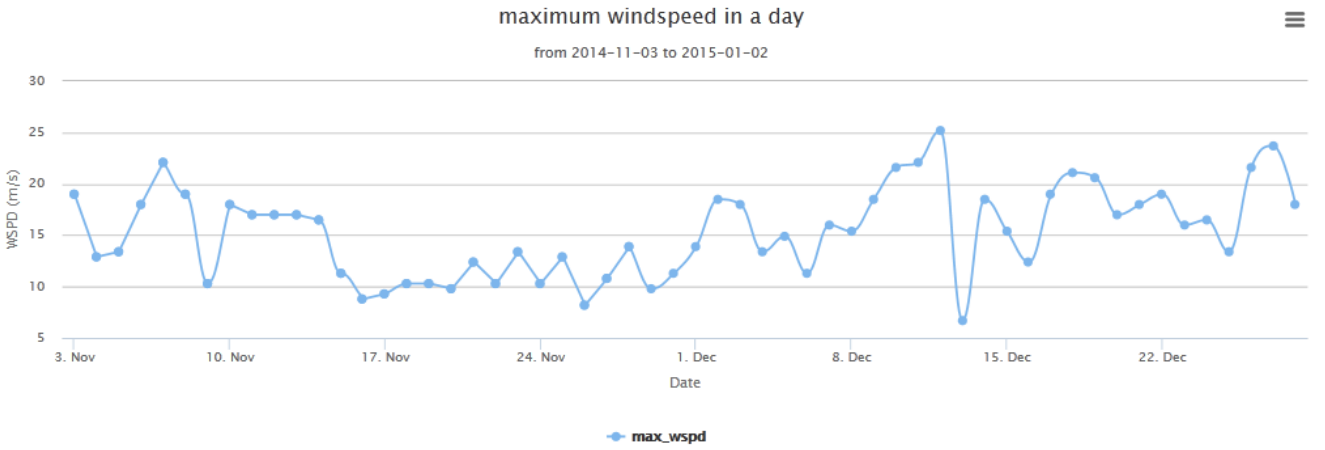

Figure 2

3) Plot reporting the max wind intensity binned by wind strength for a given period

Figure 3

4) Average wind strength hour by hour for a given period

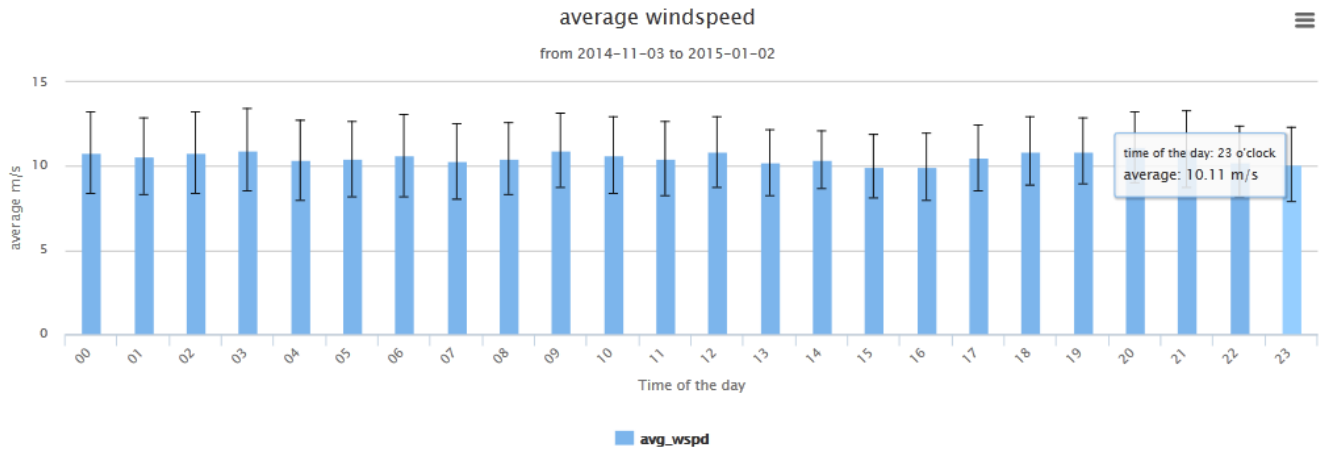

Figure 4

The full “wind” platforms list is reported in the Annex and visible at:

http://www.emodnet-physics.eu/map/DefaultMap.aspx?sessionid=635557992098044205

WP 4 Portal technical development and operation

Objectives:

- To implement the existing EMODnet Physics website with new services
- To keep the website and portal services operational, including monitoring

In order to improve the interoperability services and make them more OCG compliant the EMODnet Physics WMS/WFS etc service were moved from mapserver to geoserver. The following picture shows the WMS service page with the list of available layers (right)

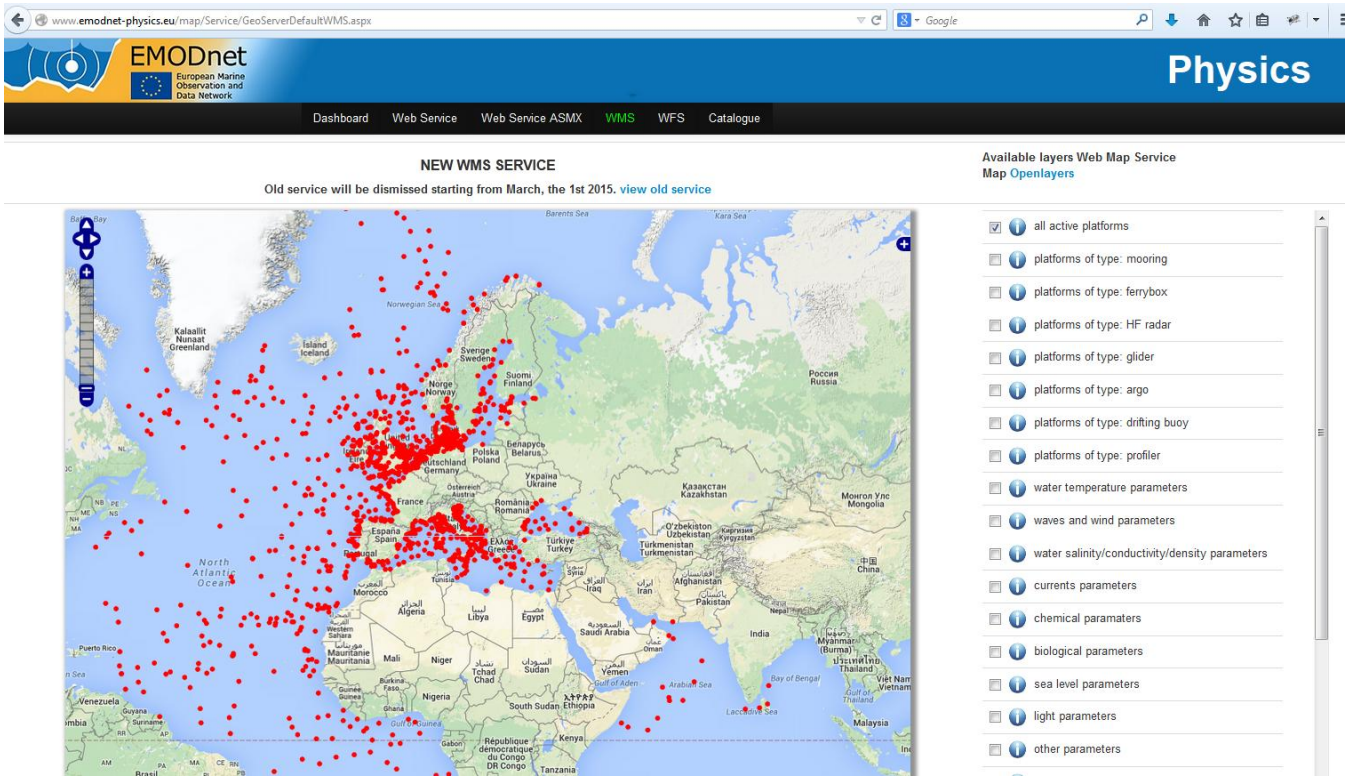

Figure 5

Full instructions to integrate the are provided by clicking the “i” and e.g. to link the “all active platform” layer the OGC-Openlayers call is:

```
var customLayer = new OpenLayers.Layer.WMS("Name custom layer",
"http://151.1.25.219:8181/geoserver/emodnet/ows",
      {
      "format": "image/png",
      "transparent": true,
      "layers": ["platforms"]
```

```
      },
      { isBaseLayer: false, opacity: 1 });
```

```
http://151.1.25.219:8181/geoserver/emodnet/ows?service=WMS&version=1.1.1&request=GetMap&format=image/png&transparent=true&SRS=EPSG%3A900913&BBOX=-2101155.3884615,5291639.887125,1655877.4252884,9048672.700875&WIDTH=768&HEIGHT=768&LAYERS=platforms
```

To make accessible the “wind product”, the “platform page” was updated and is now presenting a specific section to show the plots listed in WP3.

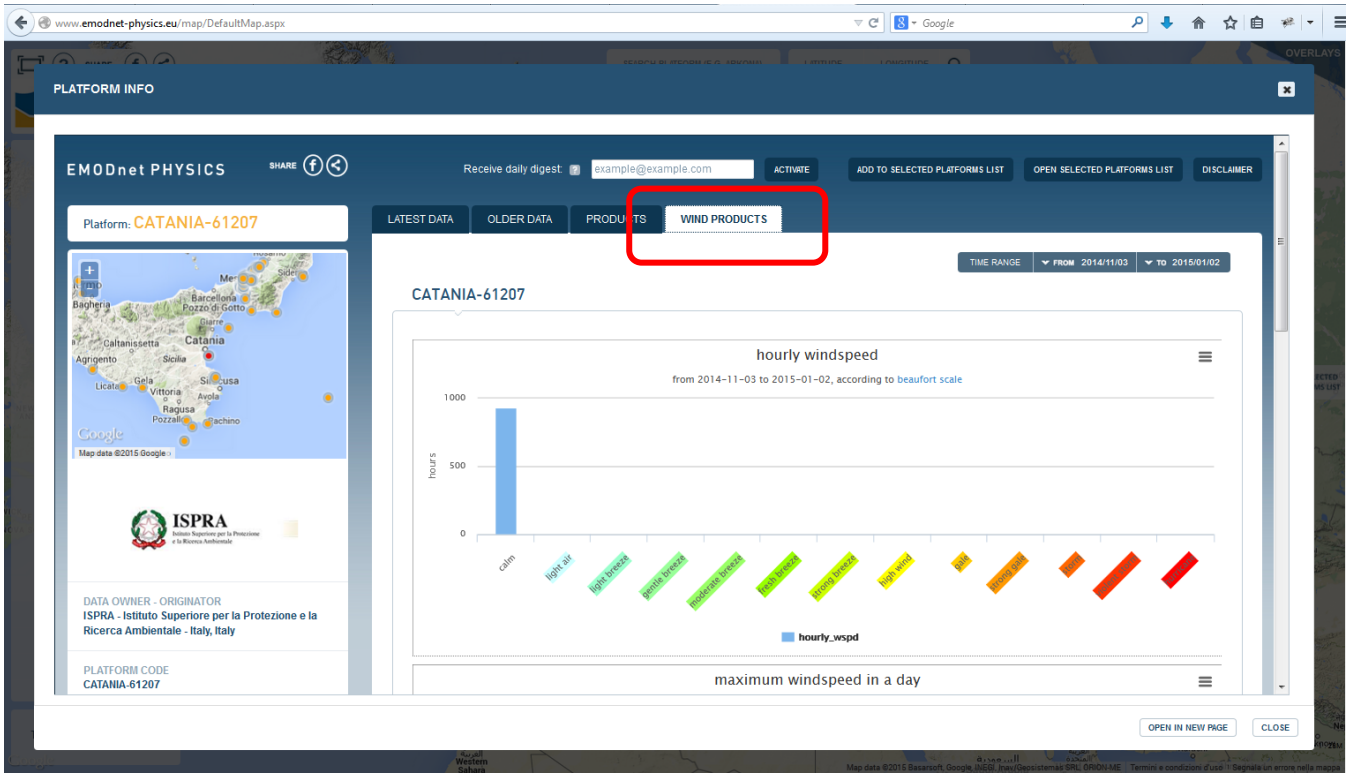

Figure 6

WP 5 Analysis, evaluation and feedback

Objectives:

- To report on the effectiveness of the system in meeting the needs of users and other EMODnet portals
- To analyse what further steps need to be taken for improvement, expansion and sustainability
- To assess the operationality of the EMODnet Physics portal Information System; Validate the services of the portal

Starting from this, the EMODnet Physics reports are updated according the updated "EMODnet Progress Indicator" document for a better analysis and evaluation of feedback and impact.

4. Specific challenges or difficulties encountered during the reporting period

Nothing to be highlighted for the reporting period

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.

Date	Name	Organization	Type of user feedback (*e.g. technical, case study etc)*	Response time to address user request

There is an emerging need for specific EMODnet Physics products e.g. in response to a specific request from the DG MARE we started working on some “Wind” products. We’re now collecting feedback to see which other specific/focused products may be useful for (new) end-users

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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.

Dissemination and outreach		
When	What	note
5-7 November	EMODnet Physics presentation @ EMODnet MED CheckPoint annual meeting, Bologna, Italy	Oral presentation
16-18 November	2nd International Ocean Research Conference (IORC) "One planet, one ocean, Barcelona, Spain[5]	Oral Presentation
22 November	EMODnet session @ PLOCAN Glider School, Las Palmas, Spain[6]	Oral presentation
26-27 November	EMODnet Physics presentation @ MonGOOS annual meeting, Lecce, Italy	Oral presentation

[5] www.iocunesco-oneplanetoneocean.fnob.org.
[6] http://acamimusan.es/gliderschool/

7. Updates on Progress Indicators

The Physics portal provides data from different platforms with specific set of parameters which can be classified into different time periods:

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[7], 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[8], requires user registration).

The information for each of these types of information is summarized in the tables below each indicator listed.

[7] http://www.emodnet-physics.eu/map/ARH/QualityCheck/recommendations_for_rtqc_procedures_v1_2.pdf
[8] 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 - Volume of data made available through the portal[9]

parameter group	Waves and winds	Water Temperature	Water Salinity/ Conductivity/ Density	Currents	Light Attenuation / Absorption/ Fluorescence/ Back Scattering	Sea Level	Atmospheric Parameters	Other Parameters	Chemical Parameters
Number of platforms providing operational data for latest 60days	202	627	491	41	12	443	149	561	147
Number of platforms providing operational data	206	616	472	43	16	469	159	550	154
Number of platforms providing historical validated data	84	317	239	24	9	133	101	292	80

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

➔ see Annex I

[9] Databases connected to the system is the number of providers

2. Summary of recent data availability (how much data in last month)

The following image shows the how many platforms are operationally delivering data – daily figure (more details in the Annex)

Figure 7 – November 2014

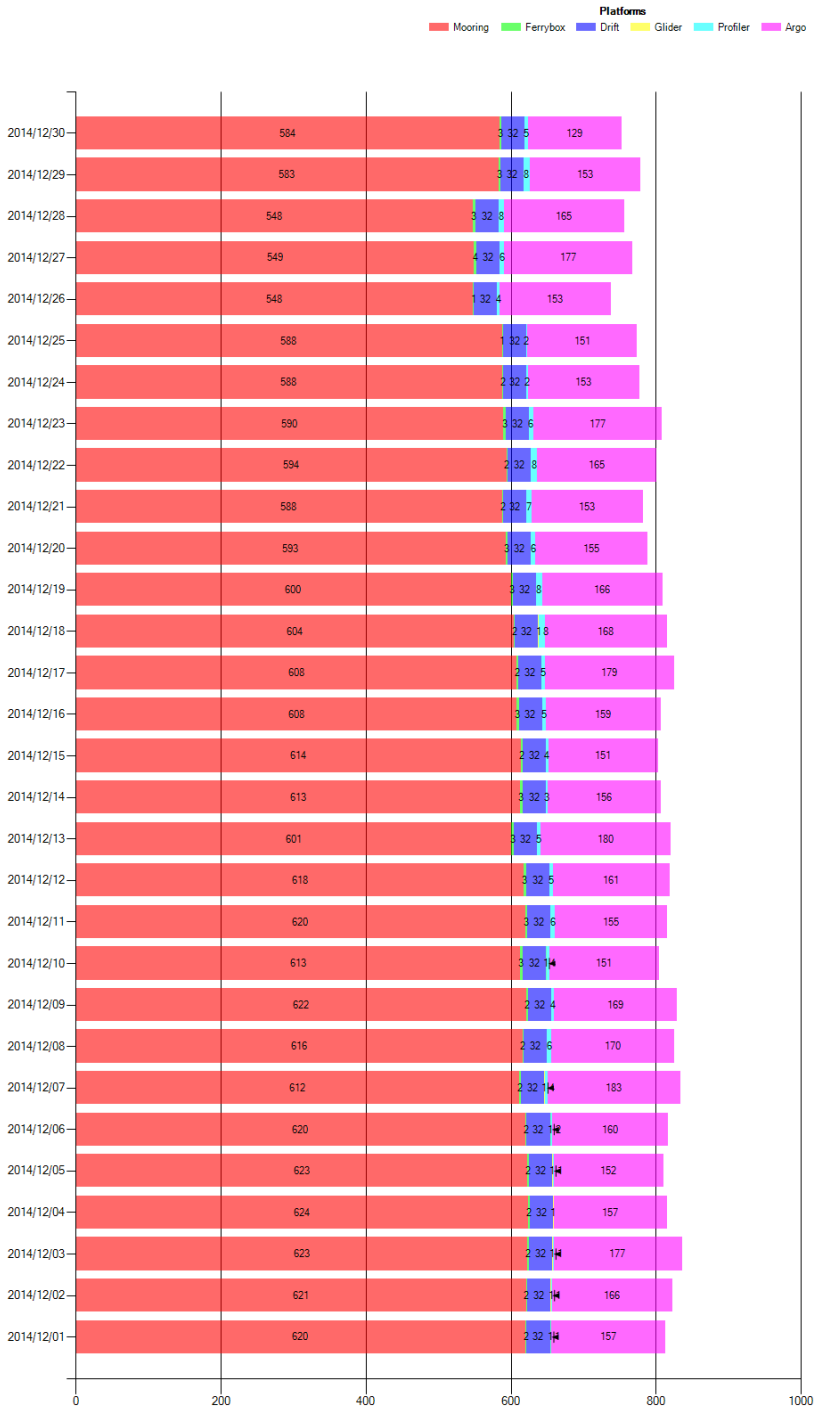


Figure 8 – December 2014

The following figure shows the number of monthly files available per month per platform type (since January 2014)

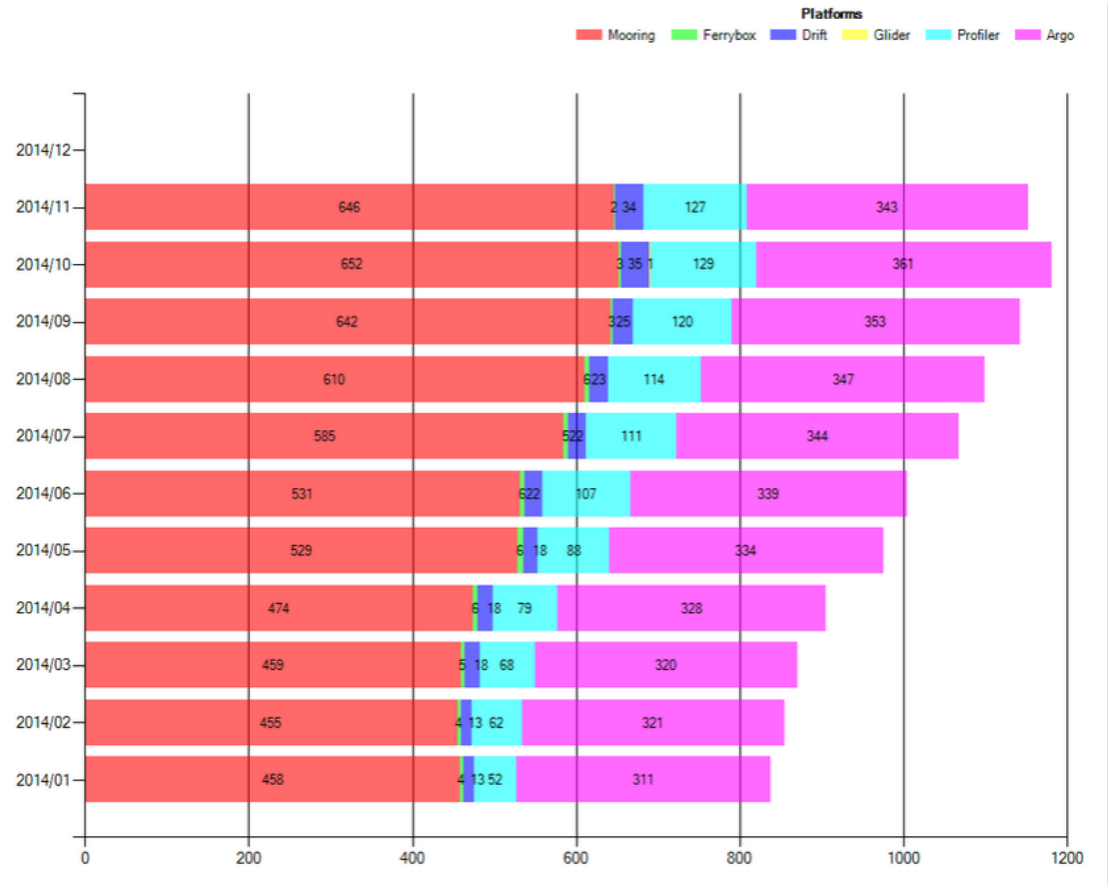


Figure 9 – recent data

3. Summary table of platforms linked to historically validated datasets.

The metadata provision is now accessible and selectable via EMODnet Physics[10] and the following table summarizes the figure.

	number of platforms	number of datasets (CDIs)
December 2014	795	11450

[10] http://www.emodnet-physics.eu/map/DefaultMap.aspx?sessionid=635558074831541519

Indicator 2 – Organizations supplying each data type[11]

➔ See Indicator 1.1

Indicator 3 – Organization that have been approached to supply data

During the 3rd MONGOOS Annual Meeting (26-28 November 2014, Lecce, Italy) all the attenders were encouraged to provide more and better data. All MONGOOS partners (see following list) were represented.

1. AMGI – Andrija Mohorovičić Geophysical Institute, University of Zagreb
2. ARSO – Slovenian Environment Agency
3. CMCC – Centro Euro-Mediterraneo sui Cambiamenti Climatici
4. CNR-IAMC – Istituto per l'Ambiente Marino Costiero
5. CNR-ISAC – Istituto di Scienze dell'Atmosfera e del Clima
6. CNR-ISMAR – Istituto di Scienze Marine
7. CNR-ISSIA – Istituto di Studi sui Sistemi Intelligenti per l'Automazione
8. CSIC – Consejo Superior de Investigaciones Cientificas
9. ENEA – Italian National Agency for new Technologies, Energy and Sustainable Economic Development
10. HCMR – Hellenic Centre for Marine Research
11. IEO – Instituto Español de Oceanografía
12. Ifremer – Institut Français de Recherche pour l'Exploitation de la Mer
13. IMB – Institute of Marine Biology, University of Montenegro
14. IMS/METU – Middle East Technical University Institute of Marine Sciences
15. INGV – Istituto Nazionale di Geofisica e Vulcanologia
16. INRH – Institut National de Recherche Halieutique
17. IOF – Institute of Oceanography and Fisheries
18. IOLR – Israel Oceanographic and Limnological Research, National Institute of Oceanography
19. LIM/UPC – Laboratorio de Ingeniería Marítima/Universidad Politécnica de Cataluña
20. Mercator Ocean – Mercator Océan
21. Météo-France – Météo-France
22. NIB – National Institute of Biology Marine Biology Station
23. OC-UCY – Oceanography Cente University of Cyprus
24. OGS – Istituto Nazionale di Oceanografia e di Geofisica Sperimentale
25. PdE – Puertos del Estado
26. RBI – Rudjer Boskovic Institute
27. SOCIB – Balearic Islands Coastal Observing and Forecasting System
28. UMT-IOI-POU – University of Malta / The International Ocean Institute, Malta Operational Centre / Physical Oceanography Unit
29. UNIBO – Alma Mater Studiorum Università di Bologna
30. University of Mohamed V – University Mohamed V-Agdal
31. University of Thessloniki – Aristotle University of Thessaloniki
32. UoA/IASA – University of Athens/ Institute of Accelerating Systems and Applications

[11] Groups partner involved in the EMODnet Physics project are different from groups hosting and providing data from the same institute: all contributors are "non" partners.

Indicator 4 – Volume of each data type download from portal

Tracking and identification of the downloads from the portal is a work in progress. Currently the number of data request per country is used as a metric to provide a reference to the monitor activity. Tracking is limited to the IP.

1. Recent data download requests

Country	via Web Services	via Map Portal[12]	total
Anonymous Proxy	0	19	19
Austria	4	0	4
Belgium	964	12	976
Brazil	0	1	1
Canada	1	0	1
China	11	0	11
Czech Republic	1	0	1
Denmark	0	5	5
Estonia	0	1	1
Europe	0	1	1
France	178	1	179
Germany	52	27	79
Greece	1	6	7
India	0	1	1
Iran, Islamic Republic of	1	0	1
Ireland	0	3	3
Italy	17741[13]	28	17769
Korea, Republic of	1	0	1
Lebanon	1	0	1
Netherlands	3	10	13
Norway	0	3	3
Pakistan	3	0	3
Portugal	2	7	9
Russian Federation	43	2	45
Spain	0	10	10
Sweden	0	3	3
Turkey	0	10	10
United Kingdom	0	3	3
United States	659	0	659
TOTAL	**19666**	**153**	**19819**

[12] www.emodnet-physics.eu/map

[13] We found a company in La Spezia to try and connect some of the EMODnet Physics data for a local research project

2. Summary of data download requests

	Artic Sea, Barents Sea, Greenland Sea, Norwegian Sea	Atlantic Ocean, Ireland Sea, Bay of Biscay, Celtic Sea	Baltic Sea	Black Sea	Global Ocean	Mediterranean Sea	North Sea	All Sea Areas	Total
Anonymous Proxy	0	0	0	0	6	13	0	0	**19**
Austria	0	1	0	0	3	0	0	0	**4**
Belgium	1	818	0	0	1	0	156	0	**976**
Brazil	1	0	0	0	0	0	0	0	**1**
Canada	0	0	0	0	1	0	0	0	**1**
China	0	3	0	0	8	0	0	0	**11**
Czech Republic	0	1	0	0	0	0	0	0	**1**
Denmark	0	0	3	0	-9	1	9	1	**5**
Estonia	0	0	1	0	0	0	0	0	**1**
Europe	0	1	0	0	0	0	0	0	**1**
France	0	75	0	0	99	5	0	0	**179**
Germany	0	31	7	0	13	3	25	0	**79**
Greece	0	6	0	0	-3	3	0	1	**7**
India	0	0	1	0	0	0	0	0	**1**
Islamic Republic of Iran	0	0	0	0	1	0	0	0	**1**
Ireland	0	3	0	0	0	0	0	0	**3**
Italy	1062	7275	1376	184	2521	2167	3182	2	**17769**
Republic of Korea	0	1	0	0	0	0	0	0	**1**
Lebanon	0	0	0	0	1	0	0	0	**1**
Netherlands	0	0	5	0	4	0	4	0	**13**
Norway	2	0	0	0	1	0	0	0	**3**
Pakistan	0	0	0	0	3	0	0	0	**3**

Portugal	0	0	0	0	-4	13	0	0	**9**
Russian Federation	0	5	0	1	38	0	0	1	**45**
Spain	0	4	0	0	0	5	0	1	**10**
Sweden	1	0	2	0	0	0	0	0	**3**
Turkey	0	0	0	0	-6	16	0	0	**10**
United Kingdom	0	1	0	0	-1	2	0	1	**3**
United States	0	286	0	0	353	20	0	0	**659**
TOTAL	**1067**	**8511**	**1395**	**185**	**3030**	**2248**	**3376**	**7**	**19819**

3. Most downloaded platforms[14]

Platform	Download	Web service	Total
41702	0	278	278
13130	0	190	190
Westhinder	2	103	105
62094	0	103	103
62091	0	102	102
Millport	0	101	101
MillportTG	0	101	101
Roscoff	0	101	101
RoscoffTG	0	101	101
62068	0	101	101
62305	0	73	73
FMLW	2	69	71
62142	0	71	71
ADN-MAMBO1	0	55	55
Arkona	41	12	53
61281	16	26	42
61001	1	39	40
61197	12	27	39
6901962	0	38	38
13131	0	37	37
M2 Weather Buoy Station	0	32	32
M5 Weather Buoy Station	0	32	32
61277	5	26	31
61198	4	27	31
61430	6	24	30
13585	0	30	30
13587	0	30	30
13588	0	30	30
62001	1	28	29

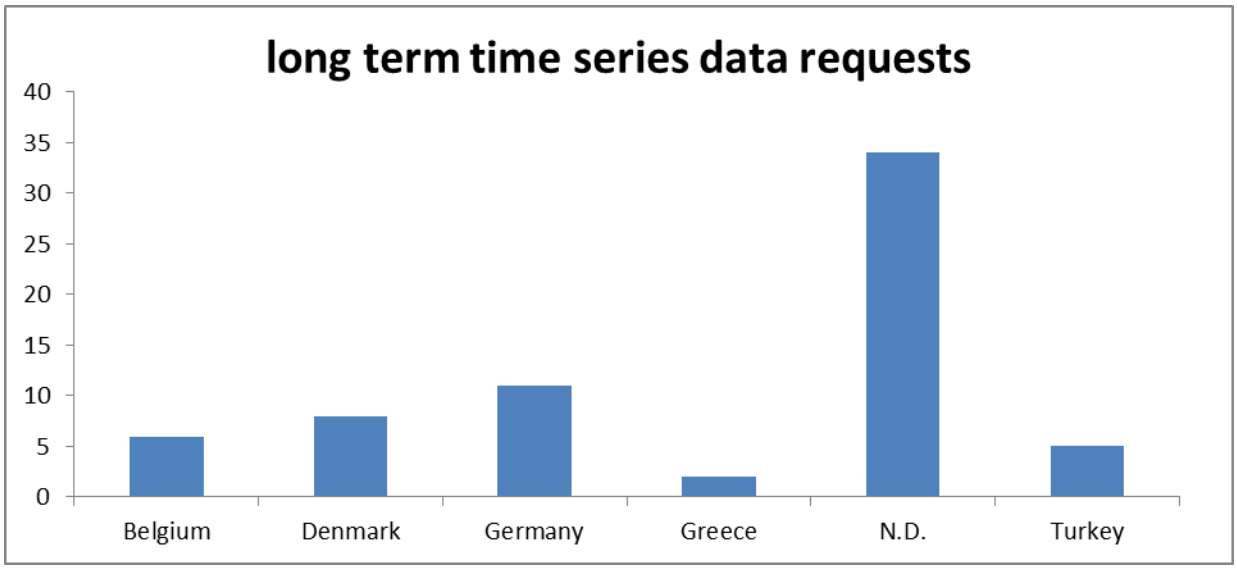
[14] http://www.emodnet-physics.eu/map/dashboard/ReservedAreaSection6.aspx

4. Validated historical data (CDIs) requests

The EMODnet Physics has recently been updated with new services to allow users to request historical validated data via CDIs. The system is now able to track requests and next bimonthly will report the first figure.

5. Long term time series data requests

The EMODnet Physics is also providing some re-grouped and reanalyzed historical dataset. These datasets are not validated according the very detailed procedure defined within the NODCs network, and they consists of packages of data that from near real time delivery are grouped into one file for a certain time period.



Country	Request
Belgium	6
Denmark	6
Germany	11
Greece	2
N.D.	34
Turkey	5

Indicator 5 – Organization that have downloaded each data type

➔ see indicator 4

Indicator 6 – Using user statistics to determine the main pages utilized and to identify data products being used

1. Monthly portal views as reported by Google Analytics

Portal	Visits	visit duration (average)	Page views	New visitors	New visitors %
June 2013	325	03:51	740	190	58%
July 2013	284	02:01	466	185	65%
August 2013	242	02:26	486	143	59%
September 2013	280	01:29	458	192	69%
October 2013	385	02:21	783	270	70%
November 2013	355	02:26	688	260	73%
December 2013	311	02:42	658	211	68%
January 2014	272	01:57	505	166	61%
February 2014	377	04:00	1007	191	50%
March 2014	342	02:06	686	191	56%
April 2014 (1st-18th)*	210	02:35	465	115	55%
April 2014 (18th-30th)	124	06:38	627	64	51%
May 2014	579	05:33	2014	191	33%
June 2014	282	03:49	685	155	57%
July 2014	188	01:40	347	110	58%
August 2014	190	01:55	492	105	55%
September 2014	280	03:02	705	160	67%
October 2014	280	02:54	693	133	65%
November 2014	462	02:44	1237	252	55%
December 2014	315	02:16	671	176	56%

(*) 18th April the new EMODnet Physics landing portal was published

Map Page	Visits	visit duration (average)	Page views	New visitors	new visitors %
November 2013	247	09:41	1210	42	17%
December 2013	263	11:37	1520	55	21%
January 2014	345	10:20	1671	38	11%
February 2014	426	08:38	2031	130	31%
March 2014	502	06:29	2005	176	35%
April 2014	440	06:27	1452	162	36%
May 2014	582	05:32	2040	193	33%
June 2014	534	05:37	2102	188	39%
July 2014	432	08:31	2724	128	30%
August 2014	334	07:20	2514	102	33%
September 2014	554	06:36	3869	158	31%
October 2014	442	07:42	4533	136	31%
November 2014	590	07:08	5726	209	35%
December 2014	669	05:57	5118	316	47%

(map page was not monitored before November)

2. Demography and Location of visitors

Table A – landing page visitors (November 2014 – December 2014)

	location	Session	% new session	New users	Bounce rate	Pages / session	av. Session Duration
		777	55.08%	428	67.18%	2.46	00:02:33
1.	en-us	218(28.06%)	54.59%	119(27.80%)	72.02%	1.82	00:02:19
2.	it	100(12.87%)	36.00%	36(8.41%)	55.00%	5.95	00:05:58
3.	it-it	94(12.10%)	42.55%	40(9.35%)	65.96%	1.96	00:01:16
4.	es-es	51(6.56%)	41.18%	21(4.91%)	64.71%	1.96	00:03:40
5.	es	47(6.05%)	48.94%	23(5.37%)	61.70%	2.45	00:02:30
6.	pt-br	45(5.79%)	100.00%	45(10.51%)	100.00%	1.00	00:00:00
7.	sv	34(4.38%)	8.82%	3(0.70%)	44.12%	3.24	00:03:18
8.	en-gb	25(3.22%)	76.00%	19(4.44%)	92.00%	1.36	00:01:00
9.	de	22(2.83%)	68.18%	15(3.50%)	63.64%	2.32	00:00:39
10.	pl	18(2.32%)	61.11%	11(2.57%)	50.00%	1.50	00:01:18
11.	fr	12(1.54%)	83.33%	10(2.34%)	66.67%	1.75	00:00:55
12.	pt-pt	11(1.42%)	90.91%	10(2.34%)	90.91%	1.09	00:00:05
13.	sv-se	8(1.03%)	100.00%	8(1.87%)	62.50%	1.38	00:00:45
14.	de-de	7(0.90%)	71.43%	5(1.17%)	57.14%	2.57	00:02:44
15.	zh-cn	7(0.90%)	100.00%	7(1.64%)	57.14%	2.29	00:00:42
16.	nl	6(0.77%)	16.67%	1(0.23%)	33.33%	2.17	00:04:05
17.	el-gr	5(0.64%)	20.00%	1(0.23%)	60.00%	1.80	00:02:58
18.	fr-fr	5(0.64%)	100.00%	5(1.17%)	60.00%	2.60	00:00:46
19.	nb-no	5(0.64%)	80.00%	4(0.93%)	80.00%	1.20	00:00:09
20.	nl-nl	5(0.64%)	80.00%	4(0.93%)	80.00%	1.80	00:00:36

Table B – map page visitors (November 2014 – December 2014)

	location	Session	% new session	New users	Bounce rate	Pages / session	av. Session Duration
		1259	41,70%	525	28.83%	8.61	00:06:30
1.	it	275(21.84%)	13.82%	38(7.24%)	21.82%	9.75	00:11:39
2.	en-us	267(21.21%)	49.81%	133(25.33%)	30.34%	8.53	00:05:22
3.	it-it	208(16.52%)	20.67%	43(8.19%)	27.40%	8.61	00:07:12
4.	de	68(5.40%)	39.71%	27(5.14%)	23.53%	12.99	00:07:20
5.	es	60(4.77%)	61.67%	37(7.05%)	40.00%	8.07	00:03:25
6.	es-es	55(4.37%)	72.73%	40(7.62%)	56.36%	4.89	00:02:40
7.	en-gb	40(3.18%)	50.00%	20(3.81%)	25.00%	7.22	00:04:25
8.	tr	30(2.38%)	93.33%	28(5.33%)	16.67%	4.63	00:01:29
9.	ru	27(2.14%)	18.52%	5(0.95%)	66.67%	2.78	00:01:37
10.	sv	23(1.83%)	21.74%	5(0.95%)	13.04%	10.83	00:08:39
11.	fr	22(1.75%)	68.18%	15(2.86%)	9.09%	9.27	00:04:14
12.	ca	17(1.35%)	58.82%	10(1.90%)	64.71%	10.12	00:04:37
13.	pl	17(1.35%)	64.71%	11(2.10%)	11.76%	12.59	00:04:15
14.	tr-tr	16(1.27%)	87.50%	14(2.67%)	50.00%	3.31	00:00:33
15.	el	15(1.19%)	100.00%	15(2.86%)	6.67%	9.27	00:03:18
16.	el-gr	15(1.19%)	93.33%	14(2.67%)	13.33%	8.47	00:02:18
17.	gl-gl	9(0.71%)	22.22%	2(0.38%)	22.22%	3.67	00:03:54
18.	nl	9(0.71%)	77.78%	7(1.33%)	55.56%	2.44	00:01:55
19.	da-dk	8(0.64%)	37.50%	3(0.57%)	37.50%	14.50	00:08:35
20.	fi-fi	7(0.56%)	57.14%	4(0.76%)	14.29%	3.57	00:02:34
21.	pt-pt	7(0.56%)	71.43%	5(0.95%)	14.29%	14.43	00:11:40

Annex I

Indicator 1 - Volume of data made available through the portal[15]

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[16], 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[17], 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).

[15] Description:
(NRT) 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 (TS) 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[15], requires user registration).

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

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

Summary table of all the data (latest, recent, long term and validated historical) by Country, Organization, Platform type and Data availability[18]

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

See the ExcelFile – "EMODnetPhysics_Annex"

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

Annex II

The following table indicates how much data was delivered by each platform, if the value is lower than 60 it means that there are gaps into the data platform temporal time series.

Number of daily files per platform in the last month[19]

Country	Data provider	Platform code	Number of daily files in last two solar month (last updated/mm/yyyy)

See the ExcelFile – "EMODnetPhysics_Annex"

[18] http://www.emodnet-physics.eu/map/Dashboard/Section1.aspx
[19] each platform delivers data on daily base which is added to a daily file, after one month the daily files are reorganized and grouped in a monthly file. http://www.emodnet-physics.eu/map/Dashboard/Section13.aspx

Organizations Acronym

AE	Amoco Exploration - Aberdeen - United Kingdom
AIRFORCE	General Office for Air Force Meteorology - Italy
APAT	APAT - Agency for Environmental Protection and Technical Services - Italy
APATVENICE	APAT of Venice - ex Istituto Idrografico e Mareografico di Venezia - Italy
AWI	AWI - The Alfred Wegener Institute - Germany
BANGOR	University of Wales - School of Ocean Sciences - United Kingdom
BODC	British Oceanographic Data Centre - United Kingdom
BSH	BSH - Bundesamt für Seeschifffahrt und Hydrographie - Germany
CALABRIA	Regione Calabria - Italy
CEAB	CEAB – Centre d'Estudis Avançats de Blanes - Spain
CEFAS	CEFAS - Centre for Environment, Fisheries & Aquaculture Science - UK
CETMEF	CETMEF - Centre d'etudes techniques maritimes et fluviales - France
CMR	CMR - Christian Michelsen Research - Norway
CMRE	CMRE - Centre for Maritime Research and Experimentation - Italy
CNRISMAR	Institute of Marine Science U.O.S. of Pozzuolo di Lerici (SP) - Italy
CNRSCOM	CNRS - Center of Oceanology of Marseille - La Seyne Sur Mer - France
CNRSCPPM	CNRS - Center for Particle physics of Marseilles - IN2P3 - CPPM - France
COSTADYN	Center Dynamics of the Nearshore Zone
CUGRI	University Centre for the Prediction and Prevention of Major Hazards - Italy
CYPRUS	Cyprus Oceanography Center - Cyprus
DAFSAML	Department of Agriculture and Fisheries for Scotland - Aberdeen Marine Laboratory - United Kingdom
DAMSA	DaMSA - Danish Maritime Safety Administration - Denmark
DCA	Danish Coastal Authority, Ministry of Transport and Energy
DELTARES	Deltares - Nederland
DISAT	DISAT - Department of Structural, Water and Soil Engineering - Italy
DMI	DMI - Danmarks Meteorologiske Institut - Denmark
ENELCRIS	ENEL SPA - Centro Ricerca Idraulica e Strutturale (CRIS) - Servizio Idrologico - Italy
ENSTA	ENSTA - Ecole Nationale Superieure des Techniques Avancees - France
EPA	EPA - Environmental Protection Agency, Department of Marine Research - Lithuania
ESEOO	ESEOO - Establecimiento de un sistema Espanol de oceanografia operacional - Spain
ESTADO	Puertos del Estado - Spain
EUSKALMET	Euskalmet- Basque Goverment - Spain
FMI	FMI - Finnish Meteorological Institute - Finland
GEES	University of Birmingham School of Geography Earth and Environmental Sciences - United Kingdom
GEODNA	Iv Javakhishvili Tbilisi State University, Centre of Relations with UNESCO Oceanological Research Centre and GeoDNA (UNESCO) - Georgia
GTUGIH	Georgian Institute of Hydrometeorology of Georgian Technical University - Georgia

HCMRIO	Hellenic Centre for Marine Research, Institute of Oceanography (HCMR/IO) - Greece
HIDROGRAFICO	Instituto Hidrografico - Portugal
HPA	HPA - Hamburg Port Authority - Germany
HRS	Hydraulics Research Station - United Kingdom
HRWALLINGFORD	HR Wallingford Group Ltd. - United Kingdom
HZG	HZG - Helmholtz-Zentrum Geesthacht - Germany
ICOT	Institute of Coastal Oceanography and Tides - United Kingdom
ICPSM	Comune di Venezia - Centro Previsioni e Segnalazioni Maree - Italy
IEO	Spanish Oceanographic Institute - Spain
IFM	IFM - Institute of Oceanography, University of Hamburg - Germany
IFREMER	IFREMER - France
IFREMERBREST	IFREMER - Centre de Brest - France
IMEDEA	IMEDEA - Mediterranean Institute for Advanced Studies - Spain
IMR	IMR - Institute of Marine Research - Norway
IMS-METU	IMSMETU - Middle East Technical University - Institute of Marine Sciences - Turkey
INSU	INSU - Institut National des Sciences de l'Univers - France
IOBAS	IOBAS - Institude of Oceanology - Bulgarian Academy of Science - Bulgaria
IOI	International Ocean Institute - Malta Operational Centre - University Of Malta - Physical Oceanography Unit - Malta
IOPAS	IOPAS - Institute of Oceanology of the Polish Academy of Sciences - Poland
IOSBL	Institute of Oceanographic Sciences - Bidston Laboratory - United Kingdom
IOST	Institute of Oceanographic Sciences Taunton - United Kingdom
IOSWL	Institute of Oceanographic Sciences Wormley Laboratory - United Kingdom
IRD	IRD - L'Institut de recherche pour le développement - France
ISMAR	ISMAR - Istituto di Scienze Marine - Italy
ISPRA	ISPRA - Istituto Superiore per la Protezione e la Ricerca Ambientale - Italy
KIELMS	KIELMS - University of Kiel Institute for Marine - Germany
KNMI	KNMI - Koninklijk Nederlands Meteorolologisch Instituut - Netherlands
LEGMA	LEGMA - Latvian Environment, Geology and Meteorology Agency - Latvia
LOCEAN	LOCEAN - Laboratoire d'Oceanographie et du Climat - France
LOV	LOV - Laboratoire Oceanographique de Villefranche - France
LPO	Laboratory of Physical Oceanography - UMR 6523 CNRS-IFREMER-IRD-UBO - France
MAFFLFL	Ministry of Agriculture, Fisheries and Food, Lowestoft Fisheries Laboratory
MARINE	Marine Institute - Ireland
MARLAB	Fisheries Research Services - Aberdeen Marine Laboratory - United Kingdom
MDK	MDK - Maritieme Dienstverlening en Kust - Belgium
MET	MET éireann - Irish Meterological Service - Ireland
Meteo France	Meteo France - France
METNO	MetNo - Norwegian Meteorological Institute - Norway
METOFFICE	Met Office- United Kingdom
MIO	MIO - Mediterranean Institute of Oceanography - France
MSI	MSI - Marine Systems Institute - Estonia

MUMM	MUMM - Management Unit of the North Sea Mathematical Models - Belgium
NHS	NHS - Norwegian Hydrographic Service - Norway
NIB	NIB - National Institute of Biology - Slovenia
NIMRD	NIMRD - National Institute for Marine Research and Development - Romania
NIO	National Institute of Oceanography - United Kingdom
NIVA	NIVA - Norsk Institutt for Vannforskning - Norway
NMA	NMA - Norwegian Mapping Authority - Norway
NRA	National Rivers Authority - United Kingdom
NUIG	NUIG - National University of Ireland - Galway - Ireland
NWAHEM	NWAHEM - North-West Regional Administration for Hydrometeorology and Environmental Monitoring - Russia
OES	Offshore Environmental Systems Ltd
OGS	Istituto Nazionale di Oceanografia e di Geofisica Sperimentale - Division of Oceanography - Italy
OILPLAT	Oil Platform - Private Industry
PEML	University of Liverpool - Port Erin Marine Laboratory - United Kingdom
PLOCAN	PLOCAN - Oceanic Platform of the Canary Islands - Spain
POL	Proudman Oceanographic Laboratory - United Kingdom
RIKZ	Rijkswaterstaat Waterdienst - Netherlands
SAMS	Scottish Marine Biological Association - United Kingdom
SBR	SBR - Station Biologique de Roscoff - France
SHOM	SHOM - Service Hydrografique et Oceanographique de la marine - France
SMHI	Swedish Meteorological and Hydrological Institute - Sweden
SNAMPROGETTI	Snamprogetti SPA - Italy
SOC	Southampton Oceanography Centre - United Kingdom
SYKE	SYKE - Finnish Environment Institute - Finland
TIDAL	University of Liverpool Tidal Institute and Observatory
UAC	UAC - Universidade dos Açores - Portugal
UBO	Laboratoire de Physique des Oceans - UBO (Universite de Bretagne Occidentale - France
UHMI	Marine branch of Ukrainian Hydrometeorological Institute
UKHO	United Kingdom Hydrographic Office - United Kingdom
UKM	UKM - United Kingdom Recent Marine Data - UK
UKMOMF	UKMO MF - Met Office - Meteo France - UK &France
UKOOA	United Kingdom Offshore Operators Association - United Kingdom
UMAAPDII	Malaga University (UMA) - Applied Physics departament II - Spain
UPC	UPC - Universitat Politecnica de Catalunya - Spain
UPT	Polytechnic University of Tirana - Institute of GeoSciences, Energy, Water and Environment - Albania
VMM	VMM - Flemish government agency - Belgium
WEATHER	National Institute of Meteorology and Hydrology, Bulgarian Academy of Sciences - Bulgary
WSAL	WSAL - Waterways and Shipping Authority Lübeck - Germany
WSAW	WSAW - Waterways and Shipping Authority Wilhelmshaven (WSA-WIL) - Germany

WSOB	WSOB - Waterways and Shipping Office Bremerhaven - Germany
WSOC	WSOC - Waterways and Shipping Office Cuxhaven - Germany
WSOE	WSOE - Waterways and Shipping Board Emden - Germany
WSOS	WSOS - Waterways and Shipping Office Stralsund
WSOT	WSOT - Waterways and Shipping Office Toenning - Germany
XUNTA	Xunta Galicia - Spain