



EMODNet Thematic Lot n° 4 - Chemistry

12th Bi-monthly Report

Reporting Period: May – June 2015

Date: 22/07/2015

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1. Highlights in this reporting period

This report gives an overview of the activities undertaken during the period May – June 2015. In this period EMODNet Chemistry 2 activities were mainly related to the following topics:

- Finalization of the first set of products with Diva maps and dynamic plots on top of regional aggregated datasets
- Tuning and further development of the Cloud environment, where all EMODnet Chemistry services should be hosted
- Planning of future tuning EMODnet/INSPIRE
- Preparation of the 2nd year plenary meeting (held in Istanbul, 15-17 June 2015)

2. Meetings held since last report

Date	Location	Topic	Short Description
12/05/2015	Web meeting	Meeting with Regional leaders and web services operators	To monitor progress of regional products
15-17/06/2015	Istanbul, Turkey	2 nd year plenary meeting	Annual meeting with the whole partnership, Steering Committee
30/06/2015	Ispra, Italy	EMODnet/INSPIRE meeting	Presentation of EMODnet Lots to the Marine Pilot project group discussing possible EMODnet/INSPIRE further tunings

3. Specific challenges or difficulties encountered during the reporting period

- Validation of the DIVA Interpolated maps obtained by the Regional Leaders.
- Metadata products generation and loading in Sextant
- Improving of performances of the viewing services (PostgreSQL database and WPS/WFS services)
- Tuning between nodes hosted a Cineca

4. Outreach and communication activities

Date	Media	Title	Short description and/or link to the activity
4-6/05/2015	Conference	2015 Liege Colloquium	Contribution of EMODnet Chemistry to the management and visualization of marine chemical data

5. Updates on Progress Indicators

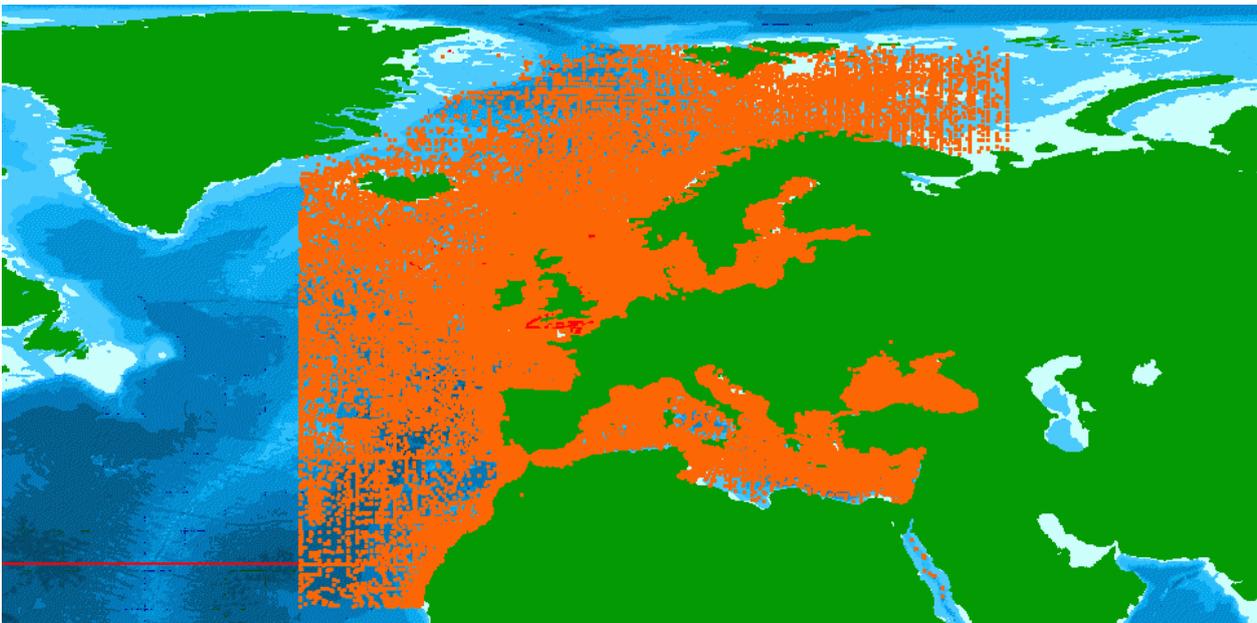
Indicator 1 - Volume of data made available through the portal

The total number of CDIs for chemistry data sets has increased from: **735115 to 744294**.

This covers the whole globe. Specifically relevant for European waters have increased from: **652229 to 660246**.

Lat Long box: **N80, W-30; N20, E45**

Of these **553703** are unrestricted (unrestricted and SeaDataNet license), while others (**106543**) require (possible) negotiation due to restrictions.



Note: a division per MSFD region will be provided in future progress reports, once the boundaries of the MSFD regions have been cleared by EEA and DG Environment, and integrated into the CDI User Interface.

The division per **Discovery Parameter** is as follows:

Parameter	No. of CDI	No restrictions	Restrictions
Dissolved oxygen parameters in the water column	429302	383573	45729
Salinity of the water column	405795	362519	43276
Temperature of the water column	399825	361111	38714
Phosphate concentration parameters in the water column	282388	239489	42899
Nitrate concentration parameters in the water column	243332	203694	39638
Silicate concentration parameters in the water column	223189	185316	37873
Chlorophyll pigment concentrations in the water column	183692	161937	21755
Ammonium concentration parameters in the water column	175377	145487	29890
Vertical spatial coordinates	166579	120654	45925
Nitrite concentration parameters in the water column	162504	133217	29287
Particulate total and organic nitrogen concentrations in the water column	91760	85585	6175
Alkalinity, acidity and pH of the water column	90133	67793	22340
Particulate total and organic phosphorus concentrations in the water column	85104	79487	5617
Dissolved total or organic phosphorus concentration in the water column	70288	60629	9659
Density of the water column	64807	61293	3514
Dissolved total and organic nitrogen concentrations in the water column	51094	48666	2428
Phaeopigment concentrations in the water column	33381	27316	6065
Concentration of suspended particulate material in the water column	27856	19765	8091
Transmittance and attenuation of the water column	26802	25459	1343
Electrical conductivity of the water column	24198	23192	1006
Particulate total and organic carbon concentrations in the water column	21165	18396	2769
Raw fluorometer output	21107	14397	6710
Dissolved organic carbon concentration in the water column	18317	12979	5338
Inorganic chemical composition of sediment or rocks	15082	7205	7877
Concentration of inorganic sulphur species in the water column	14038	12351	1687
Moored instrument depth	12953	12924	29
Visible waveband radiance and irradiance measurements in the water column	12733	10806	1927
Secchi disk depth	11614	7593	4021
Temperature variation in the water column	10413	10413	0
Redox potential in sediment	10092	0	10092

Concentration of polycyclic aromatic hydrocarbons (PAHs) in sediment samples	9681	4304	5377
Date and time	8792	8520	272
Dissolved inorganic nitrogen concentration in the water column	8202	3385	4817
Reference numbers	7614	6904	710
Dissolved metal concentrations in the water column	7225	5410	1815
Concentration of polychlorobiphenyls (PCBs) in sediment samples	7090	2721	4369
Metal concentrations in biota	6995	1933	5062
Carbon concentrations in sediment	6495	724	5771
Nitrogen concentrations in suspended particulate material	6285	2624	3661
Concentration of other organic contaminants in the water column	6240	3326	2914
Sediment grain size parameters	6193	5097	1096
Concentration of other hydrocarbons in the water column	6165	5427	738
Carbon concentrations in suspended particulate material	5941	2037	3904
Concentration of polychlorobiphenyls (PCBs) in biota	5535	891	4644
Raw temperature and/or salinity instrument output	5295	1803	3492
Raw oxygen sensor output	5185	1757	3428
Optical backscatter	4492	1914	2578
Concentration of other organic contaminants in sediment samples	4188	4047	141
Sound velocity and travel time in the water column	4040	3978	62
Raw light meter output	3819	1155	2664
Variable fluorescence parameters	3744	3531	213
Pesticide concentrations in biota	3677	1589	2088
Pesticide concentrations in water bodies	3640	2526	1114
Sea level	3329	696	2633
Pesticide concentrations in sediment	3204	2438	766
Metal concentrations in sediment pore waters	2715	2708	7
Quality control flags	2712	2712	0
Carotenoid pigment concentrations in the water column	2676	449	2227
Unclassified pigment concentrations in the water column	2676	449	2227
Nitrogen concentrations in sediment	2613	2026	587
Radioactivity in the water column	2558	1348	1210
Unspecified	2544	2393	151
Particulate metal concentrations in the water column	1982	993	989
Concentration of polycyclic aromatic hydrocarbons (PAHs) in biota	1902	368	1534
Total metal concentrations in water bodies	1895	688	1207

Raw suspended particulate material concentration sensor output	1853	1723	130
Concentration of other organic contaminants in biota	1769	113	1656
Organometallic species concentration parameters in sediments	1756	1432	324
Light absorption in the water column	1362	1362	0
Dissolved concentration parameters for other gases in the water column	1310	952	358
Organometallic species concentration parameters in biota	1222	1156	66
Concentration of organic matter in sediments	1192	355	837
Concentration of carbohydrates, phenols, alkanols (alcohols), ethers, aldehydes and ketones in sediment	1150	353	797
Concentration of polychlorobiphenyls (PCBs) in the water column	1143	956	187
Lithology	1090	599	491
Concentration of polycyclic aromatic hydrocarbons (PAHs) in suspended particulate material	1051	1051	0
Primary production in the water column	1018	648	370
Urea concentration parameters in the water column	999	690	309
Concentration of polycyclic aromatic hydrocarbons (PAHs) in the water column	833	816	17
Sediment water content, porosity and surface area	695	648	47
Suspended particulate material grain size parameters	669	114	555
Horizontal velocity of the water column (currents)	655	655	0
Concentration of other organic contaminants in suspended particulate material	648	648	0
Metadata parameters	647	646	1
Geological sample radioactivity	451	387	64
Total dissolved inorganic carbon (TCO ₂) concentration in the water column	416	302	114
Dissolved trace metalloid concentrations in the water column	362	113	249
Phosphorus concentrations in suspended particulate material	332	60	272
Phytoplankton taxonomic abundance in water bodies	322	322	0
Terrestrial detritus in the water column suspended particulate material	322	322	0
Bacteria generic abundance in water bodies	293	257	36
Acoustic backscatter in the water column	283	283	0
Concentration of alkanes in the water column	251	251	0
Water body redox potential	231	231	0
Trace metalloid concentrations in biota	212	179	33
Visible waveband radiance and irradiance measurements in the atmosphere	205	205	0
Concentration of carbohydrates, phenols, alkanols (alcohols), aldehydes and ketones in water bodies	194	194	0

Concentration of proteins in the water column	194	194	0
Mineralogical composition	189	12	177
Zooplankton and zoobenthos morphological parameters	185	185	0
Suspended particulate material aggregates	176	176	0
Concentration of inorganic halogens in water bodies	168	168	0
Concentration of polychlorobiphenyls (PCBs) in suspended particulate material	163	163	0
Other halocarbon concentrations in water bodies	156	0	156
Sedimentary structure	156	0	156
Shellfish morphology, age and physiology	148	82	66
Raw in-situ nutrient analyser output	143	143	0
Regenerated production in water bodies	141	141	0
New production in water bodies	139	139	0
Oxygen production and respiration in the water column	136	136	0
Other physical and chemical properties of suspended particulate material	132	132	0
Phaeopigment concentrations in sediment	108	108	0
Geological sample density	80	0	80
Organosulphur species concentration parameters in the water column	76	76	0
Concentration of inorganic sulphur species in sediment	66	46	20
Bacteria non taxonomy-related biomass expressed as carbon per unit volume of the water column	63	0	63
Colloidal organic carbon concentration in the water column	60	60	0
Excretion rate parameters in the water column	55	55	0
Nitrification rate in the water column	54	54	0
Horizontal spatial co-ordinates	53	53	0
Stable isotope enrichment in the water column	46	20	26
Concentration of dissolved organic matter in the water column	44	0	44
Concentration of adenylates in the water column	38	38	0
Fish morphology, age and physiology	38	38	0
Radioactivity in biota	38	38	0
Bacterial production in the water column	36	0	36
Phytoplankton generic abundance in water bodies	36	0	36
Phytoplankton generic biomass in water bodies	36	0	36
Dissolved inorganic carbon in sediment pore waters	32	0	32
Geotechnics	32	32	0
Water body lipid concentrations	32	32	0
Air temperature	29	27	2
Air pressure	28	28	0
Plankton biomass expressed as carbon per unit volume of the water column	27	0	27
Wind strength and direction	27	27	0
Concentration of silicon species in the water column	24	9	15

Biota lipid concentrations	23	23	0
Wave direction	23	23	0
Wave height and period statistics	23	23	0
Geological sample magnetic, electrical and acoustic properties	22	0	22
Concentration of aliphatic hydrocarbons in sediment samples	20	0	20
Phytoplankton taxonomic biomass in water bodies	20	20	0
Dissolved organic carbon concentrations in sediment pore waters	16	0	16
Nutrient concentrations in sediment pore waters	16	0	16
Chlorofluorocarbon concentrations in the water column	15	15	0
Organometallic species concentration parameters in water bodies	15	2	13
Sediment accumulation rate	14	0	14
Horizontal platform movement	6	6	0
Atmospheric humidity	4	4	0
Platform or instrument orientation	4	4	0
Solar Radiation	4	4	0
Bathymetry and Elevation	3	3	0
Dissolved oxygen concentration parameters in sediment pore waters	1	1	0
Engineering parameters	1	1	0
Sediment age	1	0	1
Sediment lipid concentrations	1	1	0
Water body released tracers	1	1	0

Indicator 2 - Organisations supplying each type of data based on (formal) sharing agreements and broken down into country and organisation type (e.g. government, industry, science).

Data Centre	Country	No. of CDI	No restrictions	Restrictions
British Oceanographic Data Centre	United Kingdom	55056	28818	26238
German Oceanographic Datacentre (NODC)	Germany	17470	13670	3800
OGS (Istituto Nazionale di Oceanografia e di Geofisica Sperimentale), Division of Oceanography	Italy	48741	23234	25507
CNR, Institute of Marine Science U.O.S. of Pozzuolo di Lerici (SP)	Italy	484	1	483
Institute of Marine Science (ISMAR) - Ancona	Italy	2206	1	2205
ISAC - Institute of Atmospheric Sciences and Climate (Rome)	Italy	81	81	0
Institute of Fishery Resources (IFR)	Bulgaria	257	257	0
Institute of Meteorology and Water Management, Maritime Branch in Gdynia (IMWM MB)	Poland	2726	0	2726
Hellenic Centre for Marine Research, Hellenic National Oceanographic Data Centre (HCMR/HNODC)	Greece	9583	6779	2804
IEO/Spanish Oceanographic Institute	Spain	14283	6582	7701
Marine Institute	Ireland	7153	7153	0
Flanders Marine Institute	Belgium	1967	1967	0
IFREMER / IDM / SISMER - Scientific Information Systems for the SEA	France	23823	23603	220
Swedish Meteorological and Hydrological Institute	Sweden	62359	62289	70
IHPT, Hydrographic Institute	Portugal	2461	1524	937
Polish Geological Institute - National Research Institute, Branch of Marine Geology (PGI BMG)	Poland	326	0	326
Institute of Marine Research - Norwegian Marine Data Centre (NMD)	Norway	30802	30802	0
NIOZ Royal Netherlands Institute for Sea Research	Netherlands	3906	3892	14
Netherlands Institute for Ecology, Centre for Estuarine and Marine Ecology	Netherlands	12894	2145	10749
All-Russia Research Institute of Hydrometeorological Information - World Data Centre (RIHMI-WDC) National Oceanographic Data Centre (NODC)	Russian Federation	43623	43623	0
P.P.Shirshov Institute of Oceanology, RAS	Russian Federation	364	364	0
National Institute of Fisheries Research (INRH)	Morocco	326	0	326
Bulgarian National Oceanographic Data Centre(BGODC), Institute of Oceanology	Bulgaria	777	777	0
Iv.Javakhishvili Tbilisi State University, Centre of Relations with UNESCO Oceanological Research Centre and GeoDNA (UNESCO)	Georgia	445	445	0
Institute of Marine Sciences, Middle East Technical University	Turkey	6620	1750	4870
National Institute for Marine Research and Development "Grigore Antipa"	Romania	6249	3000	3249
Latvian Institute of Aquatic Ecology	Latvia	2512	2512	0

Institute of Oceanography and Fisheries	Croatia	1743	1743	0
International Ocean Institute - Malta Operational Centre (University Of Malta) / Physical Oceanography Unit	Malta	128	128	0
Cyprus Oceanography Center	Cyprus	561	499	62
Marine Systems Institute at Tallinn University of Technology	Estonia	16961	16961	0
State Oceanographic Institute (SOI)	Russian Federation	2915	0	2915
Marine Hydrophysical Institute	Ukraine	3665	2058	1607
Aarhus University, Department of Bioscience, Marine Ecology Roskilde	Denmark	184624	184624	0
International Council for the Exploration of the Sea (ICES)	Denmark	10360	10360	0
Karadeniz Technical University, Faculty of Marine Sciences	Turkey	246	29	217
Sinop University, Fisheries Faculty	Turkey	343	343	0
Dokuz Eylul University, Institute of Marine Science and Technology	Turkey	1603	0	1603
Istanbul University, Institute of Marine Science and Management	Turkey	256	88	168
Institute of Biology of the Southern Seas, NAS of Ukraine	Ukraine	998	998	0
Marine branch of Ukrainian Hydrometeorological Institute	Ukraine	17955	17955	0
Russian State Hydrometeorological University, St-Petersburg	Russian Federation	139	139	0
National Institute of Meteorology and Hydrology, Bulgarian Academy of Sciences	Bulgaria	839	602	237
Israel Oceanographic and Limnological Research (IOLR)	Israel	3623	3623	0
BRGM / Office of Geological and Mining Resources	France	1087	0	1087
Finnish Environment Institute	Finland	964	964	0
Ukrainian scientific center of Ecology of Sea (UkrSCES)	Ukraine	4089	4089	0
Odessa National I.I.Mechnikov University	Ukraine	889	25	864
National Institute of Biology - NIBMarine Biology Station	Slovenia	7145	3412	3733
Institut National des Sciences et Technologies de la Mer – INSTM	Tunisia	885	21	864
Scientific - Research Firm "GAMMA"	Georgia	1163	1163	0
Rijkswaterstaat Water, Traffic and Environment	Netherlands	13197	13197	0
Institute of Geology and Geography of Nature Research Centre	Lithuania	118	118	0
Management Unit of North Sea and Scheldt Estuary Mathematical Models, Belgian Marine Data Centre	Belgium	9268	9268	0
Geological Survey of Estonia	Estonia	542	542	0
Finnish Meteorological Institute	Finland	7985	7985	0
Ankara University	Turkey	24	24	0
Taurida V.I. Vernadsky National University	Ukraine	55	0	55
Danube Hydro-meteorological Observatory	Ukraine	44	0	44
Faculty of Geography and Earth Sciences, University of Latvia (LU)	Latvia	721	721	0
National Environmental Agency of the Ministry of	Georgia	26	26	0

Environment Protection and Natural Resources				
Institute of Marine Biology (IMBK)	Montenegro	13	13	0
ISPRA-Institute for Environmental Protection and Research	Italy	3761	3761	0
PANGAEA - Data Publisher for Earth & Environmental Science	Germany	2858	2858	0
Portuguese Institute of Ocean and Atmosphere	Portugal	919	57	862

These centres are government and research institutes. No industry.

Difference between end April 2015 and end June 2015:

Data Centre	Country	No of CDI	No restrictions	Restrictions
British Oceanographic Data Centre	United Kingdom	6070	6800	-730
German Oceanographic Datacentre (NODC)	Germany	0	27	-27
OGS (Istituto Nazionale di Oceanografia e di Geofisica Sperimentale), Division of Oceanography	Italy	0	0	0
CNR, Institute of Marine Science U.O.S. of Pozzuolo di Lerici (SP)	Italy	0	0	0
Institute of Marine Science (ISMAR) - Ancona	Italy	145	0	145
ISAC - Institute of Atmospheric Sciences and Climate (Rome)	Italy	0	0	0
Institute of Fishery Resources (IFR)	Bulgaria	0	0	0
Institute of Meteorology and Water Management, Maritime Branch in Gdynia (IMWM MB)	Poland	2588	0	2588
Hellenic Centre for Marine Research, Hellenic National Oceanographic Data Centre (HCMR/HNODC)	Greece	69	0	69
IEO/Spanish Oceanographic Institute	Spain	0	0	0
Marine Institute	Ireland	0	0	0
Flanders Marine Institute	Belgium	0	0	0
IFREMER / IDM / SISMER - Scientific Information Systems for the SEA	France	3242	3242	0
Swedish Meteorological and Hydrological Institute	Sweden	0	0	0
IHPT, Hydrographic Institute	Portugal	599	320	279
Polish Geological Institute - National Research Institute, Branch of Marine Geology (PGI BMG)	Poland	0	0	0
Institute of Marine Research - Norwegian Marine Data Centre (NMD)	Norway	0	0	0
NIOZ Royal Netherlands Institute for Sea Research	Netherlands	77	77	0
Netherlands Institute for Ecology, Centre for Estuarine and Marine Ecology	Netherlands	0	0	0
All-Russia Research Institute of Hydrometeorological Information - World Data Centre (RIHMI-WDC) National Oceanographic Data Centre (NODC)	Russian Federation	0	0	0
P.P.Shirshov Institute of Oceanology, RAS	Russian Federation	58	58	0
Southern Scientific Research Institute of Marine Fisheries and Oceanography	Ukraine	-18228	-18228	0
National Institute of Fisheries Research (INRH)	Morocco	0	0	0
Bulgarian National Oceanographic Data Centre(BGODC), Institute of Oceanology	Bulgaria	102	102	0

Iv.Javakhishvili Tbilisi State University, Centre of Relations with UNESCO Oceanological Research Centre and GeoDNA (UNESCO)	Georgia	0	0	0
Institute of Marine Sciences, Middle East Technical University	Turkey	0	0	0
National Institute for Marine Research and Development "Grigore Antipa"	Romania	1603	556	1047
Latvian Institute of Aquatic Ecology	Latvia	150	150	0
Institute of Oceanography and Fisheries	Croatia	0	0	0
International Ocean Institute - Malta Operational Centre (University Of Malta) / Physical Oceanography Unit	Malta	0	0	0
Cyprus Oceanography Center	Cyprus	34	0	34
Marine Systems Institute at Tallinn University of Technology	Estonia	27	27	0
State Oceanographic Institute (SOI)	Russian Federation	222	0	222
Marine Hydrophysical Institute	Ukraine	4	4	0
Aarhus University, Department of Bioscience, Marine Ecology Roskilde	Denmark	0	0	0
International Council for the Exploration of the Sea (ICES)	Denmark	1373	1373	0
Karadeniz Technical University, Faculty of Marine Sciences	Turkey	0	0	0
Sinop University, Fisheries Faculty	Turkey	0	0	0
Dokuz Eylul University, Institute of Marine Science and Technology	Turkey	0	0	0
Istanbul University, Institute of Marine Science and Management	Turkey	0	0	0
Institute of Biology of the Southern Seas, NAS of Ukraine	Ukraine	0	0	0
Marine branch of Ukrainian Hydrometeorological Institute	Ukraine	6560	6560	0
Russian State Hydrometeorological University, St-Petersburg	Russian Federation	0	0	0
National Institute of Meteorology and Hydrology, Bulgarian Academy of Sciences	Bulgaria	2	2	0
Israel Oceanographic and Limnological Research (IOLR)	Israel	0	0	0
BRGM / Office of Geological and Mining Resources	France	0	0	0
Finnish Environment Institute	Finland	0	0	0
Ukrainian scientific center of Ecology of Sea (UkrSCES)	Ukraine	0	0	0
Scientific Research Institute of Ecological Problems (USRIP)	Ukraine	-4	-4	0
Odessa National I.I.Mechnikov University	Ukraine	1	0	1
National Institute of Biology - NIBMarine Biology Station	Slovenia	84	0	84
Institut National des Sciences et Technologies de la Mer – INSTM	Tunisia	0	0	0
Scientific - Research Firm "GAMMA"	Georgia	133	133	0
Rijkswaterstaat Water, Traffic and Environment	Netherlands	0	0	0
Institute of Geology and Geography of Nature Research Centre	Lithuania	0	0	0
Management Unit of North Sea and Scheldt Estuary Mathematical Models, Belgian Marine Data Centre	Belgium	0	2	-2
Geological Survey of Estonia	Estonia	0	0	0

Finnish Meteorological Institute	Finland	0	0	0
Ankara University	Turkey	0	0	0
Taurida V.I. Vernadsky National University	Ukraine	0	0	0
Danube Hydro-meteorological Observatory	Ukraine	0	0	0
Faculty of Geography and Earth Sciences, University of Latvia (LU)	Latvia	0	0	0
National Environmental Agency of the Ministry of Environment Protection and Natural Resources	Georgia	16	16	0
Institute of Marine Biology (IMBK)	Montenegro	0	0	0
ISPRA-Institute for Environmental Protection and Research	Italy	3050	3050	0
PANGAEA - Data Publisher for Earth & Environmental Science	Germany	0	0	0
Portuguese Institute of Ocean and Atmosphere	Portugal	0	0	0

Indicator 3 - Organisations that have been approached to supply with no result, including type of data sought and reason why it has not been supplied.

Nothing to report.

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

Time period 1 May 2015 – 30 June 2015:

RSM => EMODNet Chemistry portal

No of CDI basket transactions: **21**

No of CDIs requested: **78**

Different users: **13**

Different data centres: **9**

Regional Data products from OceanBrowser viewing service:

DIVA data product (direct download or OPENDAP)	
Data product	Downloads
Baltic->Winter (December-February) - 10-years running averages->Water body phosphate	8
Baltic Sea->Water body phosphate	4
Black Sea->Seasonal distribution->DIVA 4D seasonal analysis of water body nitrate (1920-2011)	3
Mediterranean Sea->Spring (April-June) - 10-years running averages->DIVA 4D analysis of Water body nitrate	2
Mediterranean Sea->Adriatic->DIVA 4D analysis of water body phosphate	2
Black Sea->Annual distribution->Annual distribution of Wolfram in the Kerch strait at the bottom depth for period 2007-2011. QC of MHI, generated by DIVA.	2
Black Sea->Winter (December-February) - 10-years running averages->DIVA 4D analysis of Water body silicate	2
Mediterranean Sea->Adriatic->DIVA 4D analysis of water body nitrate	2
North Sea->DIVA 4D analysis of water body nitrite (1970-2009)	1
North Sea->DIVA 4D analysis of water body phosphate (1970-2009)	1
Mediterranean Sea->DIVA 4D analysis of water body nitrate (1890-2008)	1
Black Sea->Monthly distribution->Monthly distribution of Nitrite concentration in the Black Sea. QC of MHI, generated by DIVA.	1
Black Sea->Annual distribution->Annual distribution of Alkalinity in the Black Sea for the period of 1957-2011. QC of MHI, generated by DIVA.	1
North Sea->DIVA 4D analysis of water body nitrate (1970-2009)	1
Total	31
DIVA data product (Web Map Service)	
Region	Downloads
Black Sea->Winter (December-February) - 10-years running averages->DIVA 4D analysis of Water body silicate	128487
Black Sea->Annual distribution->Annual distribution of Alkalinity in the Black Sea for the period of 1957-2011. QC of MHI, generated by DIVA.	17472

Baltic->Winter (December-February) - 10-years running averages->Water body phosphate	11816
Mediterranean Sea->Spring (April-June) - 10-years running averages->DIVA 4D analysis of Water body nitrate	2866
Mediterranean Sea->Winter (January-March) - 10-years running averages->DIVA 4D analysis of Water body silicate	2283
Mediterranean Sea->Winter (January-March) - 10-years running averages->DIVA 4D analysis of Water body nitrate	2040
Mediterranean Sea->Summer (July-September) - 10-years running averages->DIVA 4D analysis of Water body nitrate	1791
Mediterranean Sea->Winter (January-March) - 10-years running averages->DIVA 4D analysis of Water body phosphate	1599
Mediterranean Sea->Autumn (October-December) - 10-years running averages->DIVA 4D analysis of Water body nitrate	1583
North Sea->DIVA 4D analysis of water body nitrate (1970-2009)	1547
Mediterranean Sea->DIVA 4D analysis of water body chlorophyll (1890-2008)	1486
Mediterranean Sea->DIVA 4D analysis of water body dissolved oxygen concentration (1890-2008)	1314
Black Sea->Autumn (September-November) - 10-years running averages->DIVA 4D analysis of Water body nitrate	649
Mediterranean Sea->DIVA 4D analysis of pH (1890-2008)	617
Mediterranean Sea->Autumn (October-December) - 10-years running averages->DIVA 4D analysis of Water body phosphate	543
Baltic Sea->Autumn (September-November) - 10-years running averages->DIVA 4D analysis of Water body nitrate	518
Black Sea->Spring (March-May) - 10-years running averages->DIVA 4D analysis of Water body silicate	517
Mediterranean Sea->Summer (July-September) - 10-years running averages->DIVA 4D analysis of Water body phosphate	453
Mediterranean Sea->Adriatic->DIVA 4D analysis of water body nitrate	433
Black Sea->Autumn (September-November) - 10-years running averages->DIVA 4D analysis of Water body silicate	393
Mediterranean Sea->Summer (July-September) - 10-years running averages->DIVA 4D analysis of Water body silicate	388
Black Sea->Summer (June-August) - 10-years running averages->DIVA 4D analysis of Water body silicate	375
Mediterranean Sea->Adriatic->DIVA 4D analysis of water body phosphate	346
Black Sea->Seasonal distribution->DIVA 4D seasonal analysis of water body total alkalinity (1920-2011)	344
Black Sea->Seasonal distribution->DIVA 4D seasonal analysis of water body nitrate (1920-2011)	330
North Sea->DIVA 4D analysis of water body phosphate (1970-2009)	306
Mediterranean Sea->DIVA 4D analysis of water body ammonium (1890-2008)	290
Black Sea->Spring (March-May) - 10-years running averages->DIVA 4D analysis of Water body nitrate	267
Mediterranean Sea->Spring (April-June) - 10-years running averages->DIVA 4D analysis of	255

Water body phosphate	
Black Sea->Monthly distribution->Monthly distribution of Phosphate concentration in the Black Sea. QC of MHI, generated by DIVA.	242
Mediterranean Sea->Gulf of Lions->DIVA 4D analysis of water body phosphate (1971-2003)	219
point:Black Sea->Winter (December-February) - 10-years running averages->Water body silicate	213
Black Sea->Annual distribution->Annual distribution of CS-137 in the Black Sea	211
Mediterranean Sea->Monthly climatological (1998-2007) sea surface chlorophyll concentration over Mediterranean sea (1/16 degree grid)	184
Black Sea->Monthly distribution->Monthly distribution of Nitrite concentration in the Black Sea. QC of MHI, generated by DIVA.	148
Mediterranean Sea->DIVA 4D analysis of water body nitrate (1890-2008)	137
Baltic Sea->Spring (March-May) - 10-years running averages->DIVA 4D analysis of Water body nitrate	135
Black Sea->Annual distribution->Annual distribution of Nitrates in the Black Sea for the period of 1957-2011. QC of MHI, generated by DIVA.	127
Black Sea->Winter (December-February) - 10-years running averages->DIVA 4D analysis of Water body phosphate	103
Mediterranean Sea->Gulf of Athens->Mean distribution (1990-1999)->DIVA 4D analysis of water body dissolved cadmium	102
North Sea->DIVA 4D analysis of water body nitrite (1970-2009)	95
Black Sea->Annual distribution->Annual distribution of CS-134 in the Black Sea	94
point:Black Sea->Autumn (September-November) - 10-years running averages->Water body nitrate	87
Mediterranean Sea->Autumn (October-December) - 10-years running averages->DIVA 4D analysis of Water body silicate	85
Black Sea->Annual distribution->Annual distribution of Nitrites in the Black Sea for the period of 1957-2011. QC of MHI, generated by DIVA.	79
Black Sea->Monthly distribution->Monthly distribution of Oxygen in the Black Sea. QC of MHI, generated by DIVA.	79
Black Sea->Winter (December-February) - 10-years running averages->DIVA 4D analysis of Water body nitrate	77
Black Sea->Seasonal distribution->Seasonal distribution of Nitrate concentration in the Black Sea. QC of MHI, generated by DIVA.	69
Black Sea->Summer (June-August) - 10-years running averages->DIVA 4D analysis of Water body phosphate	65
Baltic Sea->Winter (December-February) - 10-years running averages->DIVA 4D analysis of Water body phosphate	65
Black Sea->Autumn (September-November) - 10-years running averages->DIVA 4D analysis of Water body phosphate	65
Baltic Sea->Autumn (September-November) - 10-years running averages->DIVA 4D analysis of Water body phosphate	63
Black Sea->Annual distribution->Annual distribution of Alkalinity in the Black Sea. QC of MHI, generated by DIVA.	60
Black Sea->Spring (March-May) - 10-years running averages->DIVA 4D analysis of Water body phosphate	54

Mediterranean Sea->Spring (April-June) - 10-years running averages->DIVA 4D analysis of Water body silicate	53
Mediterranean Sea->DIVA 4D analysis of water body silicate (1890-2008)	50
Black Sea->Summer (June-August) - 10-years running averages->DIVA 4D analysis of Water body nitrate	50
Mediterranean Sea->DIVA 4D analysis of water body nitrite (1890-2008)	46
point:Mediterranean Sea->Autumn (October-December) - 10-years running averages->Water body nitrate	45
Black Sea->Seasonal distribution->Seasonal distribution of Silicate in the Black Sea. QC of MHI, generated by DIVA.	44
Mediterranean Sea->DIVA 4D analysis of water body phosphate (1890-2008)	40
Mediterranean Sea->Summer (July-September) - 10-years running averages ->Water body nitrate	39
Black Sea->Annual distribution->Annual distribution of Arsenic in the Kerch strait at the bottom depth for period 2007-2011. QC of MHI, generated by DIVA.	38
Mediterranean Sea->Spring (April-June) - 10-years running averages ->Water body nitrate	38
point:Mediterranean Sea->Winter (January-March) - 10-years running averages->Water body nitrate	36
Baltic Sea->Spring (March-May) - 10-years running averages->DIVA 4D analysis of Water body phosphate	34
Black Sea->Seasonal distribution->Seasonal distribution of Ammonium concentration in the Black Sea. QC of MHI, generated by DIVA.	34
Mediterranean Sea->Summer (July-September) - 10-years running averages ->Water body phosphate	32
Mediterranean Sea->Winter (January-March) - 10-years running averages ->Water body silicate	32
Mediterranean Sea->Winter (January-March) - 10-years running averages ->Water body phosphate	32
point:Baltic Sea->Autumn (September-November) - 10-years running averages->Water body nitrate	31
point:Baltic Sea->Spring (March-May) - 10-years running averages->Water body nitrate	29
Black Sea->Monthly distribution->Monthly distribution of Silicate concentration in the Black Sea. QC of MHI, generated by DIVA.	29
Mediterranean Sea->Summer (July-September) - 10-years running averages ->Water body silicate	28
Mediterranean Sea->Spring (April-June) - 10-years running averages ->Water body silicate	28
Mediterranean Sea->Winter (January-March) - 10-years running averages ->Water body nitrate	28
Black Sea->Annual distribution->Annual distribution of Silicates in the Black Sea for the period of 1957-2011. QC of MHI, generated by DIVA.	27
point:Mediterranean Sea->Spring (April-June) - 10-years running averages->Water body nitrate	26
Black Sea->Annual distribution->Annual distribution of Ammonium in the Black Sea. QC of MHI, generated by DIVA.	26
Black Sea->Annual distribution->Annual distribution of Chromium in the Kerch strait at the bottom depth for period 2007-2011. QC of MHI, generated by DIVA.	23

Mediterranean Sea->Levantine Basin->DIVA 4D analysis of water body nitrate	23
point:Baltic Sea->Spring (March-May) - 10-years running averages->Water body phosphate	22
Mediterranean Sea->Balearic Sea->Summer->DIVA 4D analysis of water body nitrite	20
point:Mediterranean Sea->Autumn (October-December) - 10-years running averages->Water body phosphate	20
point:Mediterranean Sea->Autumn (October-December) - 10-years running averages->Water body silicate	19
point:Black Sea->Winter (December-February) - 10-years running averages->Water body nitrate	19
Black Sea->Annual distribution->Annual distribution of Phosphates in the Black Sea for the period of 1957-2011. QC of MHI, generated by DIVA.	18
Black Sea->Annual distribution->Annual distribution of Zinc in the Kerch strait at the bottom depth for period 2007-2011. QC of MHI, generated by DIVA.	16
emodnet->Black Sea->Winter (December-February) - 10-years running averages->Water body silicate	14
Black Sea->Seasonal distribution->DIVA 4D seasonal analysis of water body silicate (1920-2011)	12
Black Sea->Seasonal distribution->Seasonal distribution of Phosphate in the Black Sea. QC of MHI, generated by DIVA.	10
point:Baltic Sea->Autumn (September-November) - 10-years running averages->Water body phosphate	8
point:Black Sea->Autumn (September-November) - 10-years running averages->Water body silicate	4
Total	185289
Note: The download count represent the individual WMS tiles.	
Time series	
Region	Downloads
Greater North Sea	4
Black Sea	4
Adriatic	1
Aegean Sea	1
Total	10

Indicator 5 - Organisations that have downloaded each data type

From CDI service:

organisation	country
IEO	Spain
UPV	Spain
private	Switzerland
Odyssey Marine	Canada

Universidad de Sevilla	Spain
Lynx Informations systems	United Kingdom
DIHA - Pontificia Universidad Catolica de Chile	Chile
TCarta Marine	United States
MIRARCO	Cameroon
Shell Global Solutions Intl. BV	Netherlands
ANTEA GROUP	France
University of Kiel	Germany
Ghent University	Belgium

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

Time period 1 May 2015 – 30 June 2015:

Chemistry main portal: www.EMODNet-Chemistry.eu

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
May 2015	15	21	52	56	3.20 MB
Jun 2015	21	43	53	56	2.14 MB

Chemistry Products – Ocean Browser service:

<http://oceanbrowser.net/emodnet/>

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
May 2015	70	124	17,399	21,694	2.83 GB
Jun 2015	120	263	159,772	175,62	5.87 GB

Chemistry CDI data discovery and access service:

http://emodnet-Chemistry.maris2.nl/v_cdi_v3/search.asp

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
May 2015	203	362	3799	10053	291.28 MB
Jun 2015	296	704	20456	45410	606.31 MB

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.)

Nothing to report.

Indicator 8 - List of organisations that have downloaded data from more than one portal in a given space of time e.g. 2 weeks (assumed to be for a single project).

Nothing to report.

Indicator 9 - Interoperability of data of different types and from different portals

Nothing to report.

Annex X

Nothing to annex.