



EMODNet Thematic Lot n° 4 - Chemistry

9th Bi-monthly Report

Reporting Period: November – December 2014

Date: 13/01/2015

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1. Highlights in this reporting period

This report gives an overview of the activities undertaken during the period November – December 2014. In this period the EMODNet Chemistry 2 activities were mainly related to the following lines:

- Regional Leaders are focused on data QA/QC and on the generation of the first set of new products
- The whole partnership is involved in the QC Loop for the validation of the official copy of the data
- Implementation of the first prototype for Cloud hosting with Cineca
- Continuation of the inventory of Quality Checks from the whole partnership
- Inventory of the QC/QA “ex ante”
- Ongoing development for new products: Dynamic Time Series plots and synchronization with Ocean Browser

2. Meetings held since last report

Date	Location	Topic	Short Description
7 th of November 2014	Voorburg	Internal meeting with Deltares, Gher and Maris	Technical meeting for tuning the new visualization services
2nd and 3rd of December 2014	Amsterdam	4th Steering Committee	The 4th EMODnet Chemistry 2 Steering Committee took place in Amsterdam. The meeting was focused on the updates from the different work packages, on the agreement of the priorities and definition of the action list.
9th and 10th of December 2014	Brussels	EMODnet Lots Steering Committee	

3. Outreach and communication activities

Date	Media	Title	Short description and/or link to the activity
5 th -7 th of November 2014	Oral presentation	EMODnet MedSea Checkpoint plenary meeting	Share information, find synergies and how to contribute to their evaluation activity.
10 th of November 2014	Oral presentation	Dedicated meeting with UNEP-MAP	The objective of the meeting was to introduce EMODnet Chemistry infrastructure and results, to find synergies and integration to connect the existing data infrastructures.
17 th -20 th of November 2014	Oral presentation	EastMed Symposium	The event was focused on the Eastern Mediterranean for fostering new networks and strengthening mutual collaboration.

4. 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: **675765 to 709167**. This increase is due to revision and new entry activities by the data providers.

This covers the whole globe. Specifically relevant for European waters have increased from: **600122 to 629343**

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

Of these **528384** are unrestricted (unrestricted and SeaDataNet license), while others (**100959**) 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	415512	370931	44581
Salinity of the water column	392645	349329	43316
Temperature of the water column	386340	348017	38323
Phosphate concentration parameters in the water column	272836	232233	40603
Nitrate concentration parameters in the water column	234409	197114	37295
Silicate concentration parameters in the water column	216543	181605	34938
Chlorophyll pigment concentrations in the water column	172989	151590	21399
Ammonium concentration parameters in the water column	169094	142158	26936
Nitrite concentration parameters in the water column	154467	128116	26351
Vertical spatial coordinates	129939	86770	43169
Particulate total and organic nitrogen concentrations in the water column	90464	84345	6119
Alkalinity, acidity and pH of the water column	85942	64317	21625
Particulate total and organic phosphorus concentrations in the water column	82232	78909	3323
Density of the water column	76683	73273	3410
Dissolved total or organic phosphorus concentration in the water column	70383	60790	9593
Dissolved total and organic nitrogen concentrations in the water column	51126	48700	2426
Phaeopigment concentrations in the water column	33293	27228	6065
Concentration of suspended particulate material in the water column	23261	15242	8019
Particulate total and organic carbon concentrations in the water column	21696	19087	2609
Electrical conductivity of the water column	21322	20508	814
Raw fluorometer output	20562	13992	6570
Transmittance and attenuation of the water column	19826	18650	1176
Dissolved organic carbon concentration in the water column	18377	13039	5338
Concentration of inorganic sulphur species in the water column	13060	11373	1687
Moored instrument depth	13001	13001	0
Inorganic chemical composition of sediment or rocks	10170	2987	7183
Redox potential in sediment	10092	0	10092
Temperature variation in the water column	10076	10076	0
Secchi disk depth	8920	4899	4021
Dissolved inorganic nitrogen concentration in the water column	8756	5625	3131
Date and time	8493	8230	263
Visible waveband radiance and irradiance measurements in the water column	7809	5877	1932
Concentration of polycyclic aromatic hydrocarbons (PAHs) in sediment samples	6893	1657	5236
Nitrogen concentrations in suspended particulate material	6259	2624	3635

Carbon concentrations in sediment	6221	704	5517
Dissolved metal concentrations in the water column	6221	5199	1022
Metal concentrations in biota	6140	981	5159
Carbon concentrations in suspended particulate material	5915	2037	3878
Concentration of polychlorobiphenyls (PCBs) in sediment samples	5339	1331	4008
Raw temperature and/or salinity instrument output	5295	1803	3492
Raw oxygen sensor output	5185	1757	3428
Concentration of other organic contaminants in the water column	5011	2871	2140
Concentration of polychlorobiphenyls (PCBs) in biota	4876	218	4658
Unspecified	4719	4568	151
Optical backscatter	4387	1818	2569
Sound velocity and travel time in the water column	3986	3953	33
Variable fluorescence parameters	3737	3531	206
Raw light meter output	3731	1096	2635
Sediment grain size parameters	3650	2638	1012
Sea level	3329	696	2633
Concentration of other hydrocarbons in the water column	3030	2302	728
Reference numbers	2908	2279	629
Pesticide concentrations in biota	2810	698	2112
Carotenoid pigment concentrations in the water column	2676	449	2227
Unclassified pigment concentrations in the water column	2676	449	2227
Concentration of other organic contaminants in sediment samples	2268	2152	116
Radioactivity in the water column	2104	886	1218
Raw suspended particulate material concentration sensor output	1812	1723	89
Concentration of polycyclic aromatic hydrocarbons (PAHs) in biota	1768	217	1551
Concentration of other organic contaminants in biota	1661	0	1661
Pesticide concentrations in water bodies	1615	987	628
Total metal concentrations in water bodies	1527	688	839
Pesticide concentrations in sediment	1382	1072	310
Light absorption in the water column	1235	1235	0
Particulate metal concentrations in the water column	1199	993	206
Lithology	1090	599	491
Dissolved concentration parameters for other gases in the water column	1059	919	140
Concentration of polycyclic aromatic hydrocarbons (PAHs) in suspended particulate material	1051	1051	0
Organometallic species concentration parameters in sediments	1025	701	324
Primary production in the water column	1018	648	370
Urea concentration parameters in the water column	985	676	309
Concentration of organic matter in sediments	922	77	845
Concentration of polychlorobiphenyls (PCBs) in the water column	871	871	0

Nitrogen concentrations in sediment	871	282	589
Concentration of carbohydrates, phenols, alkanols (alcohols), ethers, aldehydes and ketones in sediment	771	0	771
Sea level expressed as pressure	734	734	0
Sediment water content, porosity and surface area	694	648	46
Horizontal velocity of the water column (currents)	655	655	0
Suspended particulate material grain size parameters	653	114	539
Concentration of other organic contaminants in suspended particulate material	648	648	0
Concentration of polycyclic aromatic hydrocarbons (PAHs) in the water column	548	541	7
Geological sample radioactivity	399	387	12
Phosphorus concentrations in suspended particulate material	332	60	272
Phytoplankton taxonomic abundance in water bodies	332	332	0
Total dissolved inorganic carbon (TCO ₂) concentration in the water column	324	210	114
Terrestrial detritus in the water column suspended particulate material	322	322	0
Organometallic species concentration parameters in biota	318	252	66
Bacteria generic abundance in water bodies	293	257	36
Acoustic backscatter in the water column	283	283	0
Dissolved trace metalloid concentrations in the water column	243	4	239
Metadata parameters	235	235	0
Zooplankton and zoobenthos morphological parameters	220	220	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
Concentration of alkanes in the water column	193	193	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
Shellfish morphology, age and physiology	163	97	66
Other halocarbon concentrations in water bodies	156	0	156
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
Fish morphology, age and physiology	117	117	0
Phaeopigment concentrations in sediment	108	108	0
Raw in-situ nutrient analyser output	105	105	0
Visible waveband radiance and irradiance measurements in the atmosphere	104	104	0
Geological sample density	79	0	79
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
Mineralogical composition	47	12	35
Concentration of dissolved organic matter in the water column	44	0	44
Horizontal spatial co-ordinates	41	41	0
Concentration of adenylates in the water column	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
Trace metalloid concentrations in biota	33	0	33
Water body lipid concentrations	32	32	0
Phytoplankton taxonomic biomass in water bodies	30	30	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
Wave direction	23	23	0
Wave height and period statistics	23	23	0
Geological sample magnetic, electrical and acoustic properties	21	0	21
Stable isotope enrichment in the water column	20	20	0
Zoobenthos taxonomic abundance	17	17	0
Dissolved organic carbon concentrations in sediment pore waters	16	0	16
Nutrient concentrations in sediment pore waters	16	0	16
Zoobenthos taxonomy-related wet weight biomass per unit area of the bed	16	16	0
Chlorofluorocarbon concentrations in the water column	15	15	0
Zoobenthos dry weight biomass	14	14	0
Zooplankton taxonomy-related abundance per unit volume of the water column	14	14	0
Organometallic species concentration parameters in water bodies	13	0	13
Atmospheric humidity	4	4	0
Platform or instrument orientation	4	4	0
Solar Radiation	4	4	0
Bathymetry and Elevation	3	3	0
Horizontal platform movement	3	3	0
Metal concentrations in sediment pore waters	3	0	3
Zooplankton taxonomy-related biomass expressed as carbon per unit volume of the water column	2	2	0

Dissolved oxygen concentration parameters in sediment pore waters	1	1	0
Engineering parameters	1	1	0
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	45615	18676	26939
German Oceanographic Datacentre (NODC)	Germany	17408	13581	3827
OGS (Istituto Nazionale di Oceanografia e di Geofisica Sperimentale), Division of Oceanography	Italy	48718	23234	25484
CNR, Institute of Marine Science U.O.S. of Pozzuolo di Lerici (SP)	Italy	484	1	483
Institute of Marine Science (ISMAR) - Ancona	Italy	1742	1	1741
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	2672	2240	432
Hellenic Centre for Marine Research, Hellenic National Oceanographic Data Centre (HCMR/HNODC)	Greece	8742	6790	1952
IEO/Spanish Oceanographic Institute	Spain	14184	6582	7602
Marine Institute	Ireland	6893	6893	0
Flanders Marine Institute	Belgium	1967	1967	0
IFREMER / IDM/SISMER	France	19549	19330	219
Swedish Meteorological and Hydrological Institute	Sweden	62593	62523	70
IHPT, Hydrographic Institute	Portugal	1862	1204	658

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	3829	3815	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	29304	29304	0
P.P.Shirshov Institute of Oceanology, RAS	Russian Federation	306	306	0
Southern Scientific Research Institute of Marine Fisheries and Oceanography	Ukraine	18228	18228	0
National Institute of Fisheries Research (INRH)	Morocco	326	0	326
Bulgarian National Oceanographic Data Centre (BGODC), Institute of Oceanology	Bulgaria	623	623	0
Iv.Javakhishvili Tbilisi State University, Centre of Relations with UNESCO Oceanological Research Centre and GeoDNA (UNESCO)	Georgia	425	425	0
Institute of Marine Sciences, Middle East Technical University	Turkey	7889	3257	4632
National Institute for Marine Research and Development "Grigore Antipa"	Romania	5208	3006	2202
Latvian Institute of Aquatic Ecology	Latvia	2081	2081	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	527	499	28
Marine Systems Institute at Tallinn University of Technology	Estonia	16921	16921	0
State Oceanographic Institute (SOI)	Russian Federation	2103	0	2103
Marine Hydrophysical Institute	Ukraine	3669	2054	1615
Aarhus University, Department of Bioscience, Marine Ecology Roskilde	Denmark	184624	184624	0

International Council for the Exploration of the Sea (ICES)	Denmark	2297	2297	0
Karadeniz Technical University, Faculty of Marine Sciences	Turkey	247	29	218
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	11395	11395	0
Russian State Hydrometeorological University, St-Petersburg	Russian Federation	139	139	0
National Institute of Meteorology and Hydrology, Bulgarian Academy of Sciences	Bulgaria	837	600	237
Israel Oceanographic and Limnological Research (IOLR)	Israel	3623	3623	0
BRGM / Office of Geological and Mining Resources	France	1087	0	1087
Ukrainian scientific center of Ecology of Sea (UkrSCES)	Ukraine	5912	5912	0
Scientific Research Institute of Ecological Problems (USRIP)	Ukraine	4	4	0
Odessa National I.I.Mechnikov University	Ukraine	888	25	863
National Institute of Biology - NIBMarine Biology Station	Slovenia	7061	3412	3649
Institut National des Sciences et Technologies de la Mer – INSTM	Tunisia	783	21	762
Scientific - Research Firm "GAMMA"	Georgia	1030	1030	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	9184	9184	0
Geological Survey of Estonia	Estonia	542	542	0
Finnish Meteorological Institute	Finland	7985	7985	0
National Laboratory of Energy and Geology	Portugal	919	48	871
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 Environment Protection and Natural Resources	Georgia	10	10	0
Institute of Marine Biology (IMBK)	Montenegro	13	13	0
ISPRA-Institute for Environmental Protection and Research	Italy	711	711	0
PANGAEA - Data Publisher for Earth & Environmental Science	Germany	2594	2594	0
		629343	528384	100959

These centers are government and research institutes. No industry.

Difference between end October 2014 and end December 2014:

Data Centre	Country	No of CDI	No restrictions	Restrictions
British Oceanographic Data Centre	United Kingdom	2306	51	2255
German Oceanographic Datacentre (NODC)	Germany	2	76	-74
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	0	0	0
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	0	0	0
Hellenic Centre for Marine Research, Hellenic National Oceanographic Data Centre (HCMR/HNODC)	Greece	1	1	0
IEO/Spanish Oceanographic Institute	Spain	-6	-5	-1
Marine Institute	Ireland	0	0	0

Flanders Marine Institute	Belgium	0	0	0
IFREMER / IDM/SISMER	France	0	0	0
Swedish Meteorological and Hydrological Institute	Sweden	0	0	0
IHPT, Hydrographic Institute	Portugal	0	0	0
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	16834	16834	0
NIOZ Royal Netherlands Institute for Sea Research	Netherlands	156	156	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	10112	10112	0
P.P.Shirshov Institute of Oceanology, RAS	Russian Federation	71	71	0
Southern Scientific Research Institute of Marine Fisheries and Oceanography	Ukraine	0	0	0
National Institute of Fisheries Research (INRH)	Morocco	0	0	0
Bulgarian National Oceanographic Data Centre(BGODC), Institute of Oceanology	Bulgaria	0	0	0
Iv.Javakhishvili Tbilisi State University, Centre of Relations with UNESCO Oceanological Research Centre and GeoDNA (UNESCO)	Georgia	21	21	0
Institute of Marine Sciences, Middle East Technical University	Turkey	0	0	0
National Institute for Marine Research and Development "Grigore Antipa"	Romania	0	0	0
Latvian Institute of Aquatic Ecology	Latvia	113	113	0
Institute of Oceanography and Fisheries	Croatia	118	118	0
International Ocean Institute - Malta Operational Centre (University Of Malta) / Physical Oceanography Unit	Malta	0	0	0
Cyprus Oceanography Center	Cyprus	0	0	0

Marine Systems Institute at Tallinn University of Technology	Estonia	-30	-30	0
State Oceanographic Institute (SOI)	Russian Federation	0	0	0
Marine Hydrophysical Institute	Ukraine	0	0	0
Aarhus University, Department of Bioscience, Marine Ecology Roskilde	Denmark	-159	-159	0
International Council for the Exploration of the Sea (ICES)	Denmark	0	0	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	0	0	0
Russian State Hydrometeorological University, St-Petersburg	Russian Federation	0	0	0
National Institute of Meteorology and Hydrology, Bulgarian Academy of Sciences	Bulgaria	0	0	0
Israel Oceanographic and Limnological Research (IOLR)	Israel	0	0	0
BRGM / Office of Geological and Mining Resources	France	0	0	0
Ukrainian scientific center of Ecology of Sea (UkrSCES)	Ukraine	-328	-328	0
Scientific Research Institute of Ecological Problems (USRIEP)	Ukraine	0	0	0
Odessa National I.I.Mechnikov University	Ukraine	0	0	0
National Institute of Biology - NIBMarine Biology Station	Slovenia	0	0	0
Institut National des Sciences et Technologies de la Mer – INSTM	Tunisia	0	0	0
Scientific - Research Firm "GAMMA"	Georgia	0	0	0
Rijkswaterstaat Waterdienst	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	0	0
Geological Survey of Estonia	Estonia	0	0	0
Finnish Meteorological Institute	Finland	0	0	0
National Laboratory of Energy and Geology	Portugal	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
Institute of Marine Biology (IMBK)	Georgia	-3	-3	0
	Montenegro	13	13	0
ISPRA-Institute for Environmental Protection and Research	Italy	0	0	0
PANGAEA - Data Publisher for Earth & Environmental Science	Germany	0	0	0
		29221	27041	2180

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 November 2014 – 31 December 2014:

RSM => EMODNet Chemistry portal

No of CDI basket transactions: **4**

No of CDIs requested: **105**

Different users: **4**

Different data centres: **5**

Regional Data products from OceanBrowser viewing service:

DIVA data product (direct download or OPENDAP)

Data product	Downloads
Black Sea->Annual distribution->Annual distribution of CS-137 in the Black Sea	4
North Sea->DIVA 4D analysis of water body nitrate (1970-2009)	4
North Sea->DIVA 4D analysis of water body phosphate (1970-2009)	3
Mediterranean Sea->DIVA 4D analysis of water body phosphate (1890-2008)	2
Black Sea->Annual distribution->Annual distribution of Nickel in the Kerch strait at the bottom depth for period 2007-2011. QC of MHI, generated by DIVA.	1
Black Sea->Seasonal distribution->DIVA 4D seasonal analysis of water body nitrate (1920-2011)	1
Mediterranean Sea->Monthly climatological (1998-2007) sea surface chlorophyll concentration over Mediterranean sea (1/16 degree grid)	1
Black Sea->Annual distribution->Annual distribution of Alkalinity in the Black Sea. QC of MHI, generated by DIVA.	1
Mediterranean Sea->DIVA 4D analysis of water body nitrate (1890-2008)	1
Black Sea->Annual distribution->Annual distribution of Total nitrogen in the Black Sea for the period of 1957-2011. QC of MHI, generated by DIVA.	1
Black Sea->Annual distribution->Annual distribution of Oxygen in the Black Sea for the period 1957-2011. QC of MHI, generated by DIVA.	1
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.	1
Total	21

DIVA data product (Web Map Service)

Region	Downloads
Black Sea->Annual distribution->Annual distribution of Alkalinity in the Black Sea for the period of 1957-2011. QC of MHI, generated by DIVA.	17595
North Sea->DIVA 4D analysis of water body nitrate (1970-2009)	4458
Mediterranean Sea->Adriatic->DIVA 4D analysis of water body nitrate	3918
Mediterranean Sea->DIVA 4D analysis of water body nitrate (1890-2008)	2607
Mediterranean Sea->Monthly climatological (1998-2007) sea surface chlorophyll concentration over Mediterranean sea (1/16 degree grid)	1447
Mediterranean Sea->DIVA 4D analysis of water body chlorophyll (1890-2008)	759
Mediterranean Sea->DIVA 4D analysis of water body ammonium (1890-2008)	734
Black Sea->Seasonal distribution->DIVA 4D seasonal analysis of water body nitrate (1920-2011)	714
Mediterranean Sea->Adriatic->DIVA 4D analysis of water body phosphate	684
Mediterranean	640

Mediterranean Sea->DIVA 4D analysis of water body phosphate (1890-2008)	615
Black Sea->Seasonal distribution->DIVA 4D seasonal analysis of water body total alkalinity (1920-2011)	552
North Sea->DIVA 4D analysis of water body phosphate (1970-2009)	511
Mediterranean Sea->Balearic Sea->Fall->DIVA 4D analysis of water body nitrite	467
Mediterranean Sea->Gulf of Athens->Mean distribution (2000-2010)->DIVA 4D analysis of water body dissolved lead	422
Mediterranean Sea->Gulf of Athens->Annual distribution (1987-1994)->DIVA 4D analysis of water body nitrate	310
Black	308
Mediterranean Sea->Balearic Sea->Summer->DIVA 4D analysis of water body nitrite	246
Mediterranean Sea->Levantine Basin->DIVA 4D analysis of water body phosphate	245
Black Sea->Monthly distribution->Monthly distribution of Alkalinity in the Black Sea. QC of MHI, generated by DIVA.	243
Black Sea->Monthly distribution->Monthly distribution of Phosphate concentration in the Black Sea. QC of MHI, generated by DIVA.	211
Mediterranean Sea->Gulf of Athens->Mean distribution (2000-2010)->DIVA 4D analysis of water body dissolved cadmium	209
Mediterranean Sea->Balearic Sea->Spring->DIVA 4D analysis of water body nitrite	131
North Sea->DIVA 4D analysis of water body nitrite (1970-2009)	129
Mediterranean Sea->DIVA 4D analysis of water body nitrite (1890-2008)	115
Black Sea->Annual distribution->Annual distribution of CS-137 in the Black Sea	105
Black Sea->Seasonal distribution->DIVA 4D seasonal analysis of pH (1924-2011)	103
Black Sea->Seasonal distribution->Seasonal distribution of Ammonium concentration in the Black Sea. QC of MHI, generated by DIVA.	87
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.	87
Mediterranean Sea->Levantine Basin->DIVA 4D analysis of water body nitrate	80
North	66
Black Sea->Annual distribution->Annual distribution of Nickel in the Kerch strait at the bottom depth for period 2007-2011. QC of MHI, generated by DIVA.	45
Black Sea->Seasonal distribution->Seasonal distribution of Nitrate concentration in the Black Sea. QC of MHI, generated by DIVA.	35
Black Sea->Seasonal distribution->Seasonal distribution of Silicate in the Black Sea. QC of MHI, generated by DIVA.	32
Mediterranean Sea->North Adriatic->Phosphate	30
Black Sea->Annual distribution->Annual distribution of Ammonium in the Black Sea. QC of MHI, generated by DIVA.	17
Mediterranean Sea->Gulf of Athens->Seasonal distribution (1987-1994)->DIVA 4D analysis of water body phosphate	12
Black Sea->Seasonal distribution->DIVA 4D seasonal analysis of water body	5

dissolved oxygen concentration (1920-2011)	
Black Sea->Seasonal distribution->DIVA 4D seasonal analysis of water body phosphate (1920-2011)	3
Mediterranean Sea->Balearic Sea->Winter->DIVA 4D analysis of water body nitrite	3
Black Sea->Seasonal distribution->DIVA 4D seasonal analysis of water body ammonium (1920-2011)	1
Mediterranean Sea->Gulf of Athens->Mean distribution (1990-1999)->DIVA 4D analysis of water body dissolved lead	1
Total	38982

Note: The download count represents the individual WMS tiles.

Time series	
Region	Downloads
Greater North Sea	15
Adriatic	10
Black Sea	5
Western Mediterranean Sea	4
Baltic	1
Total	35

Indicator 5 - Organisations that have downloaded each data type

From CDI service:

NERSC, Norway
University, United Kingdom
University of Waterloo, Canada
SMHI, Sweden

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

Time period 1 November 2014 – 31 December 2014:

Chemistry main portal: www.EMODNet-chemistry.eu

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Nov 2014	9	9	23	23	427.30 KB
Dec 2014	14	15	16	16	143.24 KB

Chemistry Products – Ocean Browser service:

<http://gher-diva.phys.ulg.ac.be/EMODNet/>

Month	Unique visitors	Number of visits	Pages	Hits	Bandwidth
Nov 2014	103	146	13,004	18,843	1.40 GB
Dec 2014	95	159	19,647	28,568	958.79 MB

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
Nov 2014	155	249	2,542	7,602	119.85 MB
Dec 2014	110	203	2,047	6,862	155.27 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.



EMODnet Thematic Lot n° 4 - Chemistry 9th Bi-monthly report