



EMODnet Thematic Lot n° 6

EMODnet Phase III - Trimonthly Report

Reporting Period: 01/04/2017 – 14/07/2017

Date: 14/07/2017

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1. Highlights in this reporting period

- The following datasets have been updated: aquaculture, aggregate extraction, dredging, environment, ocean energy facility, other forms of area management, waste disposal, fisheries, hydrocarbon extraction, major ports
- A draft communication plan with detailed tasks, time period, and partner responsible for each task has been designed
- 2 new blogs have been published (May, June)
- Live demonstration of EMODnet Human Activities were given at Cogea's stand during the EU Maritime Day in May 2017.

2. Meetings held since last report

Date	Location	Topic	Short Description
4 May 2017	Rome	Internal kick-off meeting	The purpose of the meeting was to kick-off the project and organise the internal work.
23 May 2017	Bruxelles	EMODnet kick-off	EMODnet kick-off meeting
20-21 June 2017	Marne-la-Vallee (France)	INSPIRE Extension workshop	(http://www.eurogeographics.org/content/workshop-inspire-extension-june-2017)
5-6 July 2017	Genova (Italy)	Technical working group meeting	The EMODnet Ad Hoc Technical Working Group supports the technical implementation of the EMODnet Central Portal.

3. Work package updates

WP1 – Project Management

The project is being managed through Teamwork, a cloud-based platform for project management. Each partner is assigned roles, responsibilities, tasks and deadlines. Cogea monitors the overall development of the projects through a Gantt chart that is generated and updated automatically. The platform is also used to exchange files and messages, and also serves as an issue tracker.

An internal kick-off meeting took place in Rome on 4 May 2017. All project partners were present. Highlights from the meeting:

Collection of new datasets:

- Lighthouses: the dataset currently covers all of the lighthouses in the Amateur Radio Lighthouse Society's database. It will be improved, by highlighting the lighthouses that actually represent cultural heritage.
- Ship wrecks: there is only limited coverage of EU waters (the Netherlands and Belgium), so the dataset should be improved. The main problem is that the data sources are reluctant to disseminate coordinates of wrecks. One of the proposed solution is to use the EMODnet Bathymetry wrecks dataset and choose only the wrecks with recognised heritage value (pre-historic, Roman, Hellenistic, Phoenician, middle-age etc). Another proposed solution is to publish a buffer area around the exact location in which the wrecks are located. By doing so, it might be easier to persuade data sources to share their information, since the exact coordinates of a wreck will not be disclosed.
- Aquaculture: in this phase of EMODnet we are requested to provide information on location of farms (marine and inland) species of fish and shellfish and production tonnage per year. One of the proposed solutions to estimate production is to use satellite imagery and/or Google Earth. It was suggested to look at the Blue-Bridge project (they conducted a satellite image analysis for automatic detection of fish cages at sea). AND will get in touch with the Blue-Bridge staff and CLS in France. Another solution could be to generalize the mapping of the aquaculture production at the lowest NUTS level available. AND found new data sources for both finfish and shellfish. Regarding the new dataset – inland aquaculture – the data sources have already been identified.
- Wind farms: the use of satellite imagery was suggested as a way to describe farms as polygons for the countries in which are currently described as points. It was also pointed out that in some cases polygons and points appear together on the map to show the same wind farm – only one feature should be used (preferably polygons, when available).
- Maritime Spatial Planning (MSP): the main challenge will be that only few Member States have already delivered their Maritime Spatial plans. It was suggested to liaise with the Member States' Expert Group on MSP. It was also suggested to get in touch with Project Northsee and with VASAB, who both have started work on harmonisation of MSPs.

- Vessel density map: Cogea and DG MARE are in touch with EMSA and DG MOVE. AZTI suggested [ORBCOMM](#) as an alternative data provider, should it be impossible to get data from EMSA. Another issue could be the time and the technology needed to calculate and load the map with vessel density. Note that a solution was found during the Technical Working Group that took place in Genoa on 5-6 July 2017.

Analysis of compliance with INSPIRE

An analysis on each dataset will look at what needs to be done to align Human Activities to INSPIRE's data model. Sometimes it can be difficult to align EMODnet data models with the INSPIRE data models. When no solutions are available we can provide two different data models for the same data: one EMODnet-compliant and one INSPIRE-compliant.

Considering that some of the datasets characteristics will be extended, to control their compliance with INSPIRE data model a list of new attributes is needed and will be provided by June (after the first data update submission).

Relationship with the Data Ingestion Project

It was discussed how to liaise with the EMODnet Data Ingestion project. The project aims to facilitate "ingestion" of data into the EMODnet portals from sources that are currently not involved in the EMODnet data collection systems. As the coordinator of Human Activities, Cogea is part of the data ingestion Consortium. The project could be useful to Human Activities in two ways:

1. It is possible that new sources – of which we're unaware – will want to submit data that can be useful to us. In that case, it will be up to us to decide whether they're data can be accepted as they are, or if they require some processing before being integrated into EMODnet.
2. All partners of the data ingestion consortium (44 partners from all over Europe) are preparing inventories (now complete) of potential new data sources in their countries. The data ingestion consortium will contact the identified sources one by one to invite them to submit their data. The data ingestion project may thus help us finding new data and filling current gaps.

WP 2 – Data Collection

Cultural heritage

New data have been collected on lighthouses in non-EU countries (Mediterranean countries, Baltic countries and Black Sea countries).

A new source, Historic England, covering various themes such as wreck, monuments and world heritage sites has been identified. The data is still under investigation.

Aquaculture

Data collection for aquaculture has focused on gathering new data in order to:

- Fill in data gaps within the EU;
- Expand the geographical coverage beyond the EU, in particular in Norway and Mediterranean countries;
- Expand the thematic coverage by including continental (freshwater) aquaculture;
- Provide more detail data on shellfish farming areas (detailed concession areas in France, rather than points).

The following table summarises the state of play for the different countries and types of aquaculture (shellfish, marine finfish, continental finfish).

Country	Organisations	Data availability	Data collected	Format available	Marine finfish	Freshwater Finfish	Shellfish
Austria	Ministerium frauen Gesundheit	Download	Yes - New data	CSV file		x	
Belgium	AFSCA	Download	Yes - New data	PDF file and incomplete data		x	
Bulgaria	Bulgarian food safety agency	Download	Yes - New data	Excel file in a database format		x	
Cyprus	Veterinary services	Download	Yes	PDF file	x		
Croatia	Veterinary administration	No	No				
Czech Republic	State Veterinary administration	No	No				
Denmark	CVO / FVST	Download	Yes	CSV files	x		x
Finland	Finnish food safety authority	On request	Yes	CSV files	x		
France	DIRM Bretagne	Download	Yes - New data	shapefiles			x
	DDTM Calvados	Download	Yes - New data	shapefiles			x
	DDTM Charente maritime	Download	Yes - New data	shapefiles			x
	DDTM Loire Atlantique	Download	Yes - New data	shapefiles			x
	DDTM Manche	Download	Yes - New data	shapefiles			x
	DDTM Vendée	Download	Yes - New data	shapefiles			x
	DDTM	Download	Yes - New data	shapefiles			x
	OIEau	Download	Yes - New data	shapefiles			x
	Euroshell project	On request	Yes	shapefiles			x
Greece	Ministry of rural development and food	On request	Yes	CSV files	x	x	x
Hungary	CVO / FM	No	No				
Italy	Euroshell project	On request	Yes	shapefiles			x
Ireland	Department of Agriculture, Food and the Marine	On request	Yes	shapefiles	x	x	x

Country	Organisations	Data availability	Data collected	Format available	Marine finfish	Freshwater Finfish	Shellfish
Latvia	No organisation identified	No	No				
Lithuania	No organisation identified	No	No				
Luxembourg	AFSCA	Download	Yes - New data	PDF file and incomplete data		x	
Norway	Fiskeridirektoratet	Download	Yes - New data	shapefiles	x	x	x
Poland	Biuletyn Informacji Publicznej	Download	Yes - New data	Excel tables by region	x	x	x
Portugal	DGRM, APA, IPMA	No	No				
Romania	No organisation identified	No	No				
Slovakia	No organisation identified	No	No				
Slovenia	Administration for Food Safety, Veterinary Sector and Plant Protection	Download	Yes - New data	PDF files		x	x
Spain	MAPAMA	On request	Yes	Shapefiles	x	x	x
Switzerland	Federal Food Safety and Veterinary Office	Download	Yes - New data	PDF files		x	
The Netherlands	Euroshell project	On request	Yes	shapefiles			x
UK - England and Wales	Euroshell project	On request	Yes	shapefiles			x
UK - Scotland	Aquaculture Scotland	Download	Yes	CSV files	x	x	x
Morocco	Agence nationale de développement de l'aquaculture	Data exist - contacts have been made (possibly available on request)	No		x		x
Tunisia	Direction générale de la pêche et de l'aquaculture	Data exist - contacts have been made (possibly available on request)	No		x		x
Turkey	Identification of the relevant organisation still pending	Data exist in publications - Contacts have been made to identify the source used in scientific publications with maps of aquaculture sites	No		x		

Aggregate extraction

The field 'Material Type' has been added to the data model. It will include information on the type of the extracted material (e.g. sand, fill sand, gravel, till, mud, etc.), when available.

Danish data on raw material production (1997-2005 and 2012), available on pdf reports (<http://naturstyrelsen.dk/publikationer>, Søg: Råstofproduktion), has been added; the data currently available and point locations have been updated.

Dredging

The field 'Material Type' has been added to the data model. It will include information on the type of the extracted material (e.g. sand, fill sand, gravel, till, mud, etc.), when available.

Danish data on raw material production (1997-2005 and 2012), available on pdf reports (<http://naturstyrelsen.dk/publikationer>, Søg: Råstofproduktion), has been added; the currently available data and point locations have been updated.

Materials dredged at ports/harbors in 2014, and collected by OSPAR (Dumping of Wastes or Other Matter at Sea for Belgium, France, Germany, Ireland, the Netherlands, Portugal, Spain and the UK), have been included.

Finally, Puertos del Estado (Spain) sent data on dredging activities in Spanish ports in 2015; this information has also been added to the dredging dataset.

Environment

- **Protected areas**

The dataset is entirely based on the European Environmental Agency's (EEA) datasets "Natura 2000" and "Nationally designated areas (CDDA)". Both layers were updated to 'CDDA v14' and 'Natura 2000 End 2016' in May 2017. New fields have been added to CDDA, reporting the lowest possible level code of the Nomenclature of Territorial Units for Statistics (NUTS1, NUTS2 or NUTS3) in which the geographical entity is located, the percentage of the total area of marine ecosystems in the site, the major ecosystem type, additional notes about sites. New fields have been added to Natura 2000 with area of site (ha), and the percentage of the site considered as marine.

The datasets are already available for viewing and download (shapefiles) on EMODnet Human Activities' website.

- **State of bathing waters**

The dataset has been updated with the latest information reported by the Member States (EU28) for the 2016 bathing season, as well as some historical data since 1990. The geographic coverage is: Albania, Belgium, Bulgaria, Croatia, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Malta, Netherlands, Poland, Portugal, Romania, Slovenia, Spain, Sweden, United Kingdom.

The dataset is already available for viewing and download (geodatabase) on EMODnet Human Activities' website. The whole EEA dataset has also been made available in Excel format. It includes data on the other two categories of water sampled (river, lake) together with data on bathing waters status in Austria, Czech Republic, Luxembourg, Slovakia, and Switzerland.

Ocean energy facility

Test sites have been updated in Ireland, Spain, Portugal, France, Sweden, The Netherlands, Denmark United Kingdom and Norway. Project sites have been updated in Portugal, Spain, France, Italy, Belgium, The Netherlands, Denmark and United Kingdom.

New sources have been included:

- Falmouth Bay Test Site (<http://www.fabtest.com/links>)
- JRC Ocean Energy Status Report 2016 Edition (https://setis.ec.europa.eu/sites/default/files/reports/ocean_energy_report_2016.pdf)
- Queens University Belfast (<https://www.qub.ac.uk/research-centres/cerc/Facilities/MarineFacilities/FieldTestSites>)

In the case of United Kingdom, information available from the European Marine Energy Centre (EMEC) was revised to update our data. For the rest of the countries, the “Ocean Energy Systems” (OES) web was checked. This portal is updated every year.

Other forms of area management

The dataset of “Advisory Councils (AC)” is updated according to the Regulation 1380/2013 where new ACs are approved and defined in the Annex III for the Black Sea, Aquaculture, Markets and Outermost regions.

Waste disposal

New data for Waste Disposal sites in Spain (Points from Spanish coasts updated in June 2017). Current data sources are being reviewed, and new sources are being sought.

Wind farms

Contacts with national authorities have been established to update the dataset.

Fisheries

The dataset was updated in April 2017 and is already available for viewing and download (geodatabase, shapefile and Excel spreadsheet) on EMODnet Human Activities’ website. It covers a time series from 1950 to 2015. Compared with the previous version this new version includes data for 2015, as well as the new Main Commercial Species identified by the EUMOFA in 2015.

Hydrocarbon extraction

- **Boreholes**

The dataset was updated in July 2017, and in August it will be available for viewing and download (geodatabase and shapefile) on EMODnet Human Activities’ website. Compared with the previous version, this new version has not only been updated, but it has also been reviewed in order to make it more compliant with INSPIRE.

- **Active Licences**

The dataset was updated in June 2017, and in August it will be available for viewing and download (geodatabase and shapefile) on EMODnet Human Activities' website. Compared with the previous version this new version has not only been updated but it has also been reviewed (dataset schema and attributes values) in order to make it more compliant with INSPIRE.

- **Offshore installations**

The dataset was updated in May 2017 and is already available for viewing and download (geodatabase and shapefile) on EMODnet Human Activities' website.

New installations, previously uncovered have been added through Marine Traffic's AIS data. The new installations are located in Bulgaria, Lybia, Poland, Russia (in the Baltic Sea and in the Black Sea), Spain and Ukraine.

Major ports

Goods - Data was downloaded for 23 EU Member states and Norway from Eurostat Maritime transport data portal (Gross weight of goods handled in main ports by direction and type of cargo - quarterly data [mar_go_qmc]). Data was downloaded on a quarterly basis from Q1 2011 to Q4 2016. Data is reported in 1 000 tonnes.

Passengers - Data was downloaded for 21 EU member states and Norway from the Eurostat Maritime transport data portal (Passengers transported to/from main ports by direction and type of traffic (national and international) - quarterly data[mar_pa_qm]). Data was downloaded on a quarterly basis from Q1 2014 to Q4 2016. Data is reported in units (1 000 passengers, excluding cruise passengers).

Vessels - Data was downloaded for 23 EU Member states and Norway from Eurostat Maritime transport data portal (Maritime transport - Vessel traffic - Quarterly data - Main ports - Number and gross tonnage of vessels - by type and size of vessels - Direction: inwards only - year 2006 onwards [mar_tf_qm]). Data was downloaded on a quarterly basis from Q1 2014 to Q4 2016. Data is reported in two units of measure: number of vessels and gross tonnage (1 000 tonnes).

Major ports – waste collected

Structured analysis and data model characterization of the new subtopic "Major ports-waste collected" is carried out in order to define the attributes to be included in the ports already included in the "major ports" layer.

WP 3 – Data Harmonisation

Cultural heritage

The dataset has not been modified.

Aquaculture

The marine finfish dataset has been updated with data from Norway. Steps for the data harmonization involved:

- Quality checks (possible duplicates, locations, species names)
- Translation and harmonization of the species names;
- Calculation of the distance to the coast.

Considering the great number of species grown in Norway, the integration of this new country also implied a modification of the design of the database. Instead of having one column with the different combinations of standardized species, the table now has one column per species for the 13 main species (Arctic Char, Cod, Halibut, Lumpfish, Meager, Salmon, Seabass, Seabream, Trout, Tuna, Turbot, Wolffish, Wrasse) and one column for “other species” with “Yes”/”No”/”n.a.” answers to facilitate filters, one column for “Detailed species” that gives the level of detail provided in the source and one column with the combination of “Harmonised species” that is easier to read.

For the next update, a relational scheme will be proposed, especially if freshwater farms are integrated into the same dataset.

Aggregate extraction

Updated data has been harmonized

Dredging

Updated data has been harmonized

Environment

Updated data has been harmonized

Ocean energy facility

Updated data has been harmonized.

Waste disposal

Waste Disposal points from Spanish coasts updated.

Fisheries

Updated data has been harmonized.

Hydrocarbon extraction

Updated data has been harmonized.

Major ports

Goods – For each reporting country and its respective reporting marine entities /ports, quarterly data has been aggregated on an annual basis from 2001 to 2016 (16 years). For each port, data is

harmonised by the direction of flow (inwards and outwards) and type of cargo (including the respective total values).

Passengers – For each reporting country and its respective reporting marine entities /ports, quarterly data has been aggregated on an annual basis from 2014 to 2016 (3 years). For each port, data is harmonised by the direction of flow (inwards and outwards) and transport coverage (international and national). The respective total values are also provided.

Vessels – For each reporting country and its respective reporting marine entities /ports, quarterly data has been aggregated on an annual basis from 2014 to 2016 (3 years). For each port, data is harmonised by the type of vessel and size classes (in gross tonnage). The respective total values are also provided.

In addition, the corresponding metadata file and the data-set schema for the 3 data sets (Goods, Passengers, Vessels) have been provided.

WP 6 – Maintenance of the portal

Progress:

- Numerous updates to data and metadata including:
 - Offshore installations
 - Protected Areas
 - Fish Catches
 - State of Bathing Waters
 - FAO Areas
 - Natura2000
- Minor bug fixes and updates to textual information

Next Steps:

- Implementation of other new datasets as they become available
- Implementation of Live Chat functionality and associated changes to support pages

WP 7 – Development of data products

The development of the vessel density map is currently on hold, because it has to be understood whether EMSA will share the raw data or they will make the map themselves. The alternative solution is to buy the data from a commercial provided as planned in the Technical Proposal. Several providers have been contacted in the meantime.

WP 13 – Dissemination and communication

- The blog planning with topics to be published till the end of the EMODnet project (including the frequency of publishing and partner responsible) has been agreed by partners and is being implemented.
- 2 blogs have been published (May, June) on EMODnet Human Activities portal and a 3rd blog will be published by the end of July.
- A draft communication plan with detailed tasks, time period, and partner responsible for each task has been designed. The plan is currently adjusted, following up a conference call with EMODnet Secretariat.
- An updated description of the EMODnet Human Activities project has been sent to EMODnet Secretariat.
- The “About” section of the EMODnet Human Activities portal has been updated.
- A test newsletter has been circulated among EMODnet Human Activities partners for feedback and improvement.
- We presented an abstract to the ‘COAST Bordeaux 2017’ congress. This international symposium on ‘Systemic and Biodiversity Evolution of Marine Coastal Ecosystems under the Pressure of Climate Change, Natural and Anthropogenic Local Factors’, will be held in Bordeaux from the 7th to the 10th of November 2017.
- Cogea had a stand at the European Maritime Day in Poole where live demonstrations of EMODnet Human Activities were given to users.

4. Specific challenges or difficulties encountered during the reporting period

Nothing to report.

5. User Feedback

Date	Name	Organization	Type of user feedback (<i>e.g. technical, case study etc</i>)	Response time to address user request
17/5/17	Knut Krämer	Marum	How to cite EMODnet	Ca. 30 minutes
15/6/17	Mariana Horigome	Metocean	Technical	1 day
26/6/17	Claudia Junge	Aquatt	Copyright	Ca. 30 minutes

6. Outreach and communication activities

Date	Media	Title	Short description and/or link to the activity
4/05/2017	Blog of EMODNET-HA.	Update on aggregate extraction data	http://www.emodnet-humanactivities.eu/blog/?m=201705
18-19/05/2017	Conference	EU Maritime Day	Live demonstration of EMODnet Human Activities
5/06/2017	Blog of EMODNET-HA.	Vessel density maps: help us make a difference	http://www.emodnet-humanactivities.eu/blog/?m=201706
to be published	Blog of EMODNET-HA.	Waste disposal at sea: what and where.	Article explaining what kind of waste we refer to and where it takes place.
To be published	Blog of EMODNET-HA.	Largest EU maritime freight transport countries	Largest EU maritime freight transport countries

7. Updates on Progress Indicators

Indicator 1 - Volume of data made available through the portal

Activity		Type/format					
		Points	Lines	Polygons	Related tables/records	Raster tiles/cells	
Cultural heritage (Lighthouses)							
Mariculture	Shellfish						
	Finfish	2.495					
Aggregate extraction		340			1 related table containing 2.237 records		
Dredging		985			1 related table containing 4.668 records		
Ocean energy facility	Projects	143			1 related table containing 209 records		
	Test sites			30			
Other forms of area management/designation	International conventions						
	Maritime boundaries						
	Advisory councils				8		
Waste disposal (solids, including dredge material, dumped munitions, marine constructions)	Dumped munitions						
	Dredge spoil dumping		1.414		1.731		
Wind farms							
Fisheries	Fishery zones (FAO and ICES)	FAO Fishery Statistical Areas					
		ICES Statistical Areas					
	Fishery catches by FAO statistical area				137 areas with related data	5 related tables by FAO area level containing 79.608 records: Major 7.676, division 36.237, subdivision 16.380, subarea 18.517, subunit 798	
	Monthly first sales, EUMOFA						
Hydrocarbon extraction	Boreholes		24.763				
	Active licenses				1.990		
	Offshore installations		1.739				
Pipelines and cables	Landing stations (schematic cables)						

	Schematic cables						
	Actual route locations (cables)						
Environment	Protected areas	Nationally designated areas (CDDA)			94.705 areas, 11.974 of which are coastal and/or marine		
		Natura 2000			27.510 areas, 4.574 of which are coastal and/or marine		
	State of bathing waters		16.071				
Commercial shipping, recreational shipping							
Major ports traffic	Goods		893 ports with related data			1 related table containing 235.200 records	
	Passengers					1 related table containing 74.157 records	
	Vessels					1 related table containing 2.557.632 records	

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

1st April 2017 to 30th June 2017

Included are instances of downloads and initial requests for WFS links. Statistics exclude Human Activities and Central Portal partners.

Wind Farms	44
Shellfish Production	42
Telecommunication Cables (actual)	37
Main Ports	35
Telecommunication Cables (schematic)	33
Offshore Installations	25
Natura2000	20
Advisory Councils	19
Barcelona Convention	18
Aggregate Extraction	14
Dumped Munitions	13
Hydrocarbon Extraction Active Licenses	13
Maritime Boundaries	13
CDDA	12

Finfish Production	12
Fish Catches	11
Ocean Energy Facilities	11
State of Bathing Waters	10
Dredging	8
Fish Sales	8
Hydrocarbon Extraction Boreholes	8
Lighthouses	8
ICES Statistical Areas	6
Dredge Spoil Dumping	3
FAO Fishery Statistical Areas	2
OSPAR Maritime Area	2
Telecommunication Landing Stations	1
HELCOM Maritime Area	0
Bucharest Convention	0
Ship Wrecks	n/a
Submerged Prehistoric Archaeology and Landscapes	n/a

Indicator 5 - Organisations that have downloaded each data type

Users are asked for their organisation name when downloading data or requesting WFS links. It is a non-mandatory field. Only those organisations that can be easily validated online as genuine are listed.

1st April 2017 to 30th June 2017

- Centre for New Energy Technologies (Energy), PT
- ABPmer (Environment), UK
- Advisian (Environment), AE
- Bangor University (Research), UK
- Bundeswehr Geoinformation Service (Other), DE
- Ca' Foscari University (Education), IT
- CEFAS - Centre for Environment (Environment), UK
- Centre for Environment, Fisheries and Aquaculture Science (Fisheries and agriculture), UK
- Cerema (Mining), FR
- Cost Monitor Group (Energy), IR
- DEME (Energy), BE
- Dirm-MEMN (Fisheries and agriculture), FR
- Technical University of Denmark (Fisheries and agriculture), DK
- Edinburgh University (Research), UK
- European Environment Agency (Environment), DK
- Effe (Energy), DZ

- ERM (Environment), IT
- Eticas (Other), ES
- Faroe Petroleum (Energy), NO
- Geophysical Quality Services (Energy), UK
- G-tec S.A. (Research), BE
- Hansa Hydrocarbons Ltd (Energy), UK
- Hartley Anderson Ltd (Research), UK
- HCMR - Hellenic Centre for Marine Research (Research), GR
- HPC AG (Environment), IT
- Intertek (Energy), UK
- Joint Research Centre (Energy), NL
- KSS (Energy), FR
- Land Office for Agriculture, Environment and Rural Areas (Fisheries and agriculture), DE
- MaREI (Research), IE
- Marine Institute (Research), IE
- Marine Scotland (Fisheries and agriculture), UK
- MarineSpace Ltd (Environment), UK
- MARUM (Research), DE
- MetOcean Solutions (Environment), NZ
- Metria (Environment), SE
- Natural Power (Energy), UK
- Granadilla Environmental Observatory (Environment), ES
- oceanDTM (Research), UK
- OMT (Other), FR
- Pelagian (Physical planning), UK
- Plan-GIS GmbH (Energy), DE
- Portuguese Hydrographic Institute (Other), PT
- Red Penguin Ltd (Transport), UK
- Royal Belgian Institute of Natural Sciences (Environment), BE
- SHOM (Other), FR
- Shell UK Ltd (Energy), UK
- SIGGIS (Energy), BE
- State Agency for Agriculture, Environment and Rural Areas (Environment), DE
- TCNode (Environment), SI
- TenneT (Energy), NL
- Tethys Research Institute (Environment), IT
- The Renewables Consulting Group (Energy), UK
- Miguel de Cervantes European University (Other), ES
- UN-IHE Delft (Education), NL
- University of Venice IUAV (Education), IT
- University of Padua (Research), IT
- Marche Polytechnic University (Research), IT

- University of Aberdeen (Education), UK
- University of Azores (Education), PT
- University of Edinburgh (Education), UK
- University of Geneva (Environment), CH
- University of the Aegean (Environment), GR
- Vahana (Energy), AE
- Wageningen Marine Research (Environment), NL
- Wasit Provence Council (Other), IQ
- World Maritime University (Research), SE

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

1st April 2017 to 30th June 2017

Statistics include all visitors including partners.

View Data

Month	Unique Page Views	Avg. Time on Page (mm:ss)	Page Views	New Visitors	% New Visitors
Apr-17	312	03:22	437	186	59.62%
May-17	335	03:24	510	149	44.48%
Jun-17	384	03:45	597	179	46.61%

Home

Month	Unique Page Views	Avg. Time on Page (mm:ss)	Page Views	New Visitors	% New Visitors
Apr-17	155	01:25	200	60	38.71%
May-17	171	00:48	232	57	33.33%
Jun-17	184	00:56	253	65	35.33%

Search Data

Month	Unique Page Views	Avg. Time on Page (mm:ss)	Page Views	New Visitors	% New Visitors
Apr-17	280	01:12	450	144	51.43%
May-17	231	01:26	351	109	47.19%
Jun-17	327	01:36	496	166	50.76%

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.)

1st April 2017 to 30th June 2017

Users must select their sector when downloading data or requesting WFS links.

1	Environment	20.22%
2	Energy	17.25%
3	Research	13.73%
4	Other	12.80%
5	Fisheries and agriculture	11.87%
6	Education	10.02%
7	Demography	4.27%
=	Physical planning	4.27%
9	Mining	2.78%
10	Transport	1.67%
11	Tourism	0.74%
12	Health	0.37%

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

WFS are available as XML format, or JOSN format (by adding `&OUTPUTFORMAT=json` to the URL).

Active Licenses

<http://77.246.172.208/WFSactivelicenses?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=activelicenses>

Advisory Councils

<http://77.246.172.208/WFSadvisorycouncils?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=advisorycouncils>

Aggregate Extraction

<http://77.246.172.208/WFSaggregates?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=aggregates>

Barcelona Convention

<http://77.246.172.208/WFSbarcelona?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=barcelona>

Boreholes

<http://77.246.172.208/WFShydrocarbons?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=hydrocarbons>

BSH CONTIS Cables

<http://77.246.172.208/WFSbshcontiscables?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=bshcontiscables>

Bucharest Convention

<http://77.246.172.208/WFSbucharest?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=bucharest>

Dredge Spoil Dumping (Points)

<http://77.246.172.208/WFSdredgespoildumping?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=dredgespoil>

Dredge Spoil Dumping (Polygons)

<http://77.246.172.208/WFSdredgespoildumpingpoly?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=dredgespoilpoly>

Dredging

<http://77.246.172.208/WFSdredging?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=dredging>

Dumped Munitions (Points)

<http://77.246.172.208/WFSmunitions?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=munitions>

Dumped Munitions (Polygons)

<http://77.246.172.208/WFSmunitionspoly?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=munitionspoly>

FAO Fishery Statistical Areas

http://www.fao.org/figis/geoserver/area/ows?version=1.0.0&typeName=area:FAO_AREAS

Finfish Production

<http://77.246.172.208/WFSfinfish?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=finfish>

HELCOM Maritime Area

<http://77.246.172.208/WFShelcom?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=helcom>

ICES Statistical Areas

<http://77.246.172.208/WFSicesareas?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=icesareas>

Kis Orca Subsea Cables

<http://77.246.172.208/WFSkisorcacables?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=kisorcacables>

Landing Stations

<http://77.246.172.208/WFSlandingstations?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=landingstations>

Lighthouses

<http://77.246.172.208/WFSlighthouses?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=lighthouses>

Maritime Boundaries

<http://77.246.172.208/WFSmaritimebnds?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=maritimebnds>

Nationally Designated Areas

[http://77.246.172.208/WFSccda?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=cd
da](http://77.246.172.208/WFSccda?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=cd
da)

Natura 2000

[http://77.246.172.208/WFSnatura2000?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeNa
me=natura2000](http://77.246.172.208/WFSnatura2000?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeNa
me=natura2000)

Offshore Installations

[http://77.246.172.208/WFSplatforms?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeNam
e=platforms](http://77.246.172.208/WFSplatforms?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeNam
e=platforms)

OSPAR Maritime Area

[http://77.246.172.208/WFSospar?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=os
par](http://77.246.172.208/WFSospar?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=os
par)

Project Locations

<http://77.246.172.208/WFSenergy?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=energy>

Shellfish Production

<http://77.246.172.208/WFSshellfish?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=shellfish>

SIGCables Submarine Cables Routes

<http://77.246.172.208/WFSsigcables?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=sigcables>

State of Bathing Waters

[http://77.246.172.208/WFSbathingwaters?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&type
Name=bathingwaters](http://77.246.172.208/WFSbathingwaters?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&type
Name=bathingwaters)

Telecommunication Cables (schematic routes)

[http://77.246.172.208/WFScableschematic?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&type
Name=cableschematic](http://77.246.172.208/WFScableschematic?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&type
Name=cableschematic)

Test Sites

<http://77.246.172.208/WFSoenergytests?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=oenergytests>

Wind Farms (Points)

<http://77.246.172.208/WFSwindfarms?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=windfarms>

Wind Farms (Polygons)

<http://77.246.172.208/WFSwindfarmspoly?SERVICE=WFS&VERSION=1.1.0&request=GetFeature&typeName=windfarmspoly>

Attribute data for Main Ports and Fish Catches are complex and are currently not released as WFS.

Users are asked to volunteer their organisation name and sector and country when requesting initial WFS (web feature services) information. Organisation name and country are not mandatory fields. Only those organisations that can be easily validated online as genuine are listed. It is not possible to track user's organisations who have acquired the WFS links from other sources (e.g. from a shared link) or track an organisation's usage once WFS are in use.

Organisations that have made initial requests for WFS links include the following:

1st April 2017 to 30th June 2017

- Centre for New Energy Technologies (Energy), PT
- Effe (Energy), DZ
- Eticas (Other), ES
- G-tec S.A. (Research), BE
- KSS (Energy), FR
- Land Office for Agriculture, Environment and Rural Areas (Fisheries and agriculture), DE
- Granadilla Environmental Observatory (Environment), ES
- Plan-GIS GmbH (Energy), DE
- SHOM (Other), FR
- SIGGIS (Energy), BE
- Miguel de Cervantes European University (Other), ES
- UN-IHE Delft (Education), NL
- Wageningen Marine Research (Environment), NL