# EMODnet Thematic Lot n° 6

## EMODnet Phase III - Trimonthly Report

## Reporting Period: 14/10/2017 – 15/01/2018

Date: 15/01/2018

# Contents

# 1. Highlights in this reporting period

- The following datasets have been updated**:** aquaculture, other forms of area management, boreholes (hydrocarbon extraction), active licenses (hydrocarbon extraction), offshore installations (hydrocarbon extraction).
- New dataset on pipelines completed and soon to be available for download.
- 3 new blogs have been published (November, December).
- WP 8 Involvement of Regional Sea Conventions: meetings with the Black Sea Commission (The Bucharest Convention) and HELCOM (The Helsinki Convention) have been held.
- AIS data for 2017 have been purchased from a commercial provider.
- An EMODnet Info Day in Italy is being organized together with the other Italian partners in EMODnet.

# 2. Meetings held since last report

| Date | Location | Topic | Short Description |
|------|----------|-------|-------------------|
| 12 December 2017 | Helsinki | Involvement of Regional Sea Conventions | A meeting was organized with HELCOM to discuss how EMODnet could support their work and vice versa. |
| 22 December 2017 | Istanbul | Involvement of Regional Sea Conventions | A meeting was organized with the Black Sea Commission to discuss how EMODnet could support their work and vice versa. |

# 3. Work package updates

## *WP 2 – Data Collection*

### Cultural heritage

Data sources identified in the "Beagins study" have been looked at for the following data categories:

| 800 | Cultural Heritage |
|-----|-------------------|
| 801 | Designated sites e.g. national monuments |
| 802 | Historic Marine Protected areas |
| 803 | Wrecks |
| 804 | World Heritage Sites |
| 805 | Natural and mixed World Heritage Sites |
| 806 | World Marine Heritage Sites |
| 807 | Submerged Prehistoric Archaeology and Landscapes |
| 808 | Heritage & Culture - Belgium |
| 809 | Heritage & Culture - Denmark |
| 811 | Ship wrecks |

Most of the national sources have already been investigated and when relevant integrated to the EMODNET datasets. A contact has been established with UNESCO for world heritage sites (no downloadable datasets).

Coordinates of lighthouses located in non-EU countries (South Mediterranean, Black Sea, Norway….) have been downloaded from ARLS (current EMODNET dataset). A cost estimate is expected to be received soon from Lighthouses R'us for a full dataset (EU and non-EU countries) with more accurate coordinates and additional information (type of building, age, heritage value…).

### Aquaculture

The bulk of the work for aquaculture since the 2nd progress report has been on collecting updated data and harmonising inland marine aquaculture dataset.

Specifically, data collection tasks have included:

- Updates of Ireland data for 2017.
- Collection of freshwater shellfish data for Poland.
- Contact with previous source providers in Spain concerning data used for Acuivisor. However, contacts have not answered yet and we are processing and harmonizing data of 2015.

**Analysis of possible new datastets**

In the current EMODnet portal there is no dedicated area to harvesting production (algae, shellfish...) and to macroalgae aquaculture. We are evaluating the the feasibility of adding algae in the marine aquaculture dataset and providing new dataset on algae and shellfish harvesting areas.

### 1) Algae

One option could be to create a separate portal for algae where we would have the categories macroalgae aquaculture, macroalgae harvesting, microalgae. Information should come from the sector, through a specific enquiry, as no EU wide database is available. Minimum data requested would be:

➢ Location of the production facilities (GPS coordinates)
➢ Denomination of species produced: ASFIS codes used by FAO and Eurostat. For microalgae add relevant species names not yet included in ASFIS list.
➢ Production method: macroalgae: aquaculture (IMTA or monoculture; land-based or offshore) and harvesting; microalgae: photobiorreactors or open ponds.

### 2) Production areas for bivalve molluscs

Location and boundaries of production areas suitable for shellfish harvesting or farming are fixed by national competent authority (REGULATION (EC) No 854/2004 – defining sanitary quality catergories) . Most of these areas are available online. For instance, in Spain, the ACUIVISOR portal (https://servicio.pesca.mapama.es/acuivisor/) has included all this information. Similar information is available for UK, http://data.cefas.co.uk/#/View/79; for France, http://www.atlas-sanitaire-coquillages.fr/telechargements and for Ireland: http://atlas.marine.ie/. We are currently investigating to what extent a new dataset could be added for shellfish aquaculture.

**Aggregate extraction**

Shapefiles with polygons of licence areas for aggregate extractions have been collected for United Kingdom, Denmark, France and Belgium. A new dataset including the data available in these shapefiles is being prepared: Emodnet_HA_Aggregates_areas.

**Ocean energy facility**

The "SmartBay" (Irland), "Folkecenter Wave Test Station" (Denmark) and "Pembrokeshire Wave Demonstration Zone" (United Kingdom) ocean energy test site promoters send us updated data that has been included in our dataset. Furthermore, additional information has being included, such as the link to the documents in relation to the studies conducted for the Environmental Impact Assessment during the consenting process for different test sites in Ireland, Spain, Portugal, France, Sweden, The Netherlands, Denmark and United Kingdom.

**Other forms of area management**

The dataset was updated in October 2017, and is already available for viewing and download (geodatabase and shapefile) on the portal. Compared with the previous version this new updated dataset contains updated information on the Black Sea Advisory Countries, and also the 'Market', the 'Aquaculture', and the'Outermost Regions' Advisory Councils. The new dataset groups all the advisory councils in a single layer (previously split across several layers).

**Waste disposal**

Search of new data sources, contacts and data requests on waste disposal at Environment Ministry level.

**Wind farms**

Dataset updated; new version will soon be available online.

Data have been purchased from a commercial provider ([www.thewindpower.net](http://www.thewindpower.net)) to crosscheck the information collected.

**Hydrocarbon extraction**

**Boreholes**

The dataset was updated in November and in December 2017, and is already available for viewing and download  (geodatabase and shapefile) on the portal. Compared with the previous version this new version contains also the Faroese boreholes and the Croatian updated boreholes.

**Active licences**

The dataset was updated in December 2017, and is already available for viewing and download (geodatabase and shapefile) on the portal. Compared with the previous version this new version contains the Croatian updated active licenced areas.

**Offshore installations**

The dataset was updated in December 2017, and is already available for viewing and download (geodatabase and shapefile) on the portal. Compared with the previous version this new version contains also the Croatian offshore installations.

**Pipelines and cables**

This is a new dataset that was created in 2017 by Cogea and will soon be available for viewing and download on EMODnet Human Activities. It is the result of the aggregation and harmonization of datasets provided by several sources from all over the EU (plus Norway). The database contains lines

representing the actual routes of offshore pipelines (where available) in the following countries: Croatia, Denmark, Estonia, Finland, Germany, Ireland, Netherlands, Norway, Poland, Russia, Spain (Andalucía). Each line has the following harmonized attributes (where available): status (in service, decommissioned, under construction, proposed, planned), country, code, name, year, medium (air, condensate, 'control', cooling water, gas, geothermal heating, glycol, methanol, oil, sewage, water), operator, from and to locality or facility, length (metres) and size (inches).

When a pipeline crosses more than a country, it may appear as two different pipelines which do not perfectly overlap. This is because it was not possible to harmonize the geometric component of the data, as each source reports a slightly different pipeline's path and there is no way to know which one is more accurate.

The dataset is incomplete, as many countries do not make available these data for security reasons. It is unlikely it will ever be complete, unless the legislative framework changes. However, the dataset will be updated as soon as additional data are available. In theory, information could be available via commercial providers, but the licence terms do not allow us to share it online.

## Major ports

- **Waste disposal collected in ports**

Extensive search of data sources has been carried out. 125 ports have been contacted and emails have been sent to about 240 contact persons. A support letter from DG MARE has been attached.

Contacts have been established with EMSA, DG-MARE and DG-MOVE in order to get access to MARPOL information.

Datasets have been collected from ports (Santander, Vigo, Aveiro, Valencia, Rovinj, Igoumenitsa, Helsinki, Loviisa) as well as fragmented data from 5 more ports (A Coruña, Bilbao, Castellón, Marín, Tenerife).

## Spatial planning zones

- No response from most of national contacts.
- Acquisition of "Malta Strategic Plan for Environment and Development" (Malta's MSP Plan) and Belgium.

## *WP 3 – Data Harmonisation*

**INSPIRE**

Analysis of current EMODNET's data model and search of best fit INSPIRE application schemas and features, to specify the compliance degree and the actions/transformations needed to align the data models to INSPIRE requirements is being carried out.

**Aquaculture**

The bulk of the work for aquaculture since the 2nd progress report has been on collecting updated data and harmonising inland the marine aquaculture dataset.
Specifically, data processing and harmonisation tasks have concerned:

- Freshwater shellfish and inland marine aquaculture data in Poland,
- Inland marine aquaculture data in Spain. We are using 2015 dataset.
- Harmonisation of up-dated data for Ireland.

The preparation of this new dataset has involved important processing and harmonization work (in progress), including:

- Transposition of data into a database format (case of Poland),
- Translation of species, farm types and production stages,
- Harmonisation of species names and production stages,
- Creation of geodatabase entities from Excel and CSV files (using XY fields),
- Conversion of all entities into WGS 84 SCR,
- Calculating distance to coast for the updated dataset for Ireland.

**Aggregate extraction**

Data on licence areas for aggregate extractions is being harmonised to prepare the new dataset (Emodnet_HA_Aggregates_areas).

**Major ports**

- **Waste disposal collected in ports**

Compilation of fragmented data on waste collection from a huge number of reports (Annual Reports of Port Authorities) and ongoing harmonisation.

**Spatial planning zones**

Elaboration of Belgium, Germany, Finland and Malta MSP plans

## *WP 6 – Maintenance of the portal*

**Progress:**

- Numerous updates to data and metadata
- New 'Freshwater Production' layer
- Implementation of WMS
- Migration of WFS from Mapserver to GeoServer
- Implementation of Piwik

**Next Steps:**

- Implementation of other new datasets as they become available
- Implementation of development site using elements from the visual guidelines for Technical Workshop in March
- Review of home page elements
- Update of download / web service request page to include more mandatory fields (e.g. e-mail address)

## *WP 7 – Development of data products*

AIS data have been purchased from a commercial provider (CLS) in order to make a vessel density map.

The data, which will be delivered via ftp within the third week of January, have the following characteristics:

- The AIS messages that will be delivered are the ones relevant to assess shipping activities (AIS messages 1, 2, 3, 18 and 19).
- The AIS messages will be downsampled to 3 minutes. All available data will be delivered in case further analysis is needed
- Duplicate signals will be removed
- Wrong MMSI signals will be removed
- Wrong IMO numbers will be corrected
- Special characters and diacritics will be removed
- Signals with erroneous speed over ground (SOG) (negative values or speed higher than 80 knots) will be removed.
- Signals with erroneous course over ground (COG) (negative values or more than 360°) will be removed
- S-AIS noise will be removed by using Kalman filters

Footprint filtering will be performed for S-AIS data consistency.

This pre-processing of data (agreed with HELCOM and the JRC) will make it possible to save time.

Data will be provided for the following zone:



Coordinates of the zone polygon points:

> 35.5793000002947,84.1457766111018
> 68.6079635620688,84.1457766111018
> 68.6079635620688,66.7866189035703
> 44.4963834818124,63.8033254953754
> 41.8082307313632,39.9969181476544
> 36.2158415629379,30.8193040544386
> -11.7531667987087,24.6036292163154
> -35.5793000002947,24.6036292163154
> -41.3099169996698,24.5935451406957
> -41.3099169996698,48.9976000010394
> -35.5793000002947,84.1457766111018

The first set of data will cover 2017. The data will then be updated every year.

# WP 8 – Involvement of regional sea conventions

- **The Bucharest Convention**

A meeting was held in Istanbul on 22 December 2017 with the Commission on the Protection of the Black Sea Against Pollution to discuss about what action should be taken to ensure that Human Activities is consistent with their work, and can be used in the framework of the MSFD. Also, involvement of the Bucharest Convention into Human Activities was discussed. The minutes of the meeting are attached in Annex 1.

- **The Helsinki Convention**

CETMAR introduced EMODnet to HELCOM at their headquarters in Helsinki in December. The topics addressed during the meeting were: (i) introduction of EMODNet – Human activities (HA) datasets; (ii) assessment of the portal (overall and for specific datasets); (iii) synergies exploration for EMODnet and HELCOM. The overall conclusions of the meeting were very positive, remarking further collaboration in the datasets related to dredge material, cable and pipelines, wind farms, maritime spatial planning. The minutes of the meeting are attached in Annex 1.

- **The OSPAR Convention**

In order to establish a structured form of cooperation with Regional Sea Conventions, a face-to-face meeting with OSPAR is being organised. It has been proposed that the Human Activities team could visit them in January 2018 to discuss the progress of the project, what actions should be taken to ensure that Human Activities is consistent with their work and what could be improved to make Human Activities team's work more useful for them.

- **The Barcelona Convention**

To ensure relevance of human activities portal for the activities related to the Barcelona Convention, a face-to-face meeting is being organized. It has been proposed that Human Activities team could visit by the end of January 2018 to discuss the progress of the project, what actions should be taken to ensure that Human Activities is consistent with their work and what could be improved to make Human Activities team's work more useful for them.

# WP 9 – Analysis of standards and protocols used by non-EU organizations

The analysis has been started and will be completed in February. The findings will be reported in the next progress report.

# WP 13 – Dissemination and communication

Three blogs have been published since the last progress report:

- Inland aquaculture: a river of opportunities? (November)
- Vessel density map: and so it begins! (December)
- Marine aggregate extraction data to support new 2018 MSFD reporting phase (December)

Other Dissemination and communication activities:

- The poster titled 'EMODnet Human Activities portal: geo-referenced information on human activities' was presented in the COAST 2017 congress, an international symposium on 'Systemic and Biodiversity Evolution of Marine Coastal Ecosystems under the Pressure of Climate Change,

Natural and Anthropogenic Local Factors', held in Bordeaux from the 7th to the 10th of November 2017 (poster's picture below).

# 4. Specific challenges or difficulties encountered during the reporting period

Nothing to report.

# 5. User Feedback

| Date | Name | Organization | Type of user feedback (*e.g. technical, case study etc)* | Response time to address user request |
|------|------|--------------|------------------------------------------------------------|----------------------------------------|
| 10/01/18 | Maurizio Gibin | JRC | Methodological – collaboration on vessel density map | 1 day |

# 6. Outreach and communication activities

| Date | Media | Title | Short description and/or link to the activity |
|------|-------|-------|-----------------------------------------------|
| 28/11/2017 | Blog of EMODnet HA | Inland aquaculture: a river of opportunities? | http://www.emodnet-humanactivities.eu/blog/?p=433 |
| 06/12/2017 | Blog of EMODnet HA | Vessel density map: and so it begins! | http://www.emodnet-humanactivities.eu/blog/?p=467 |
| 19/12/2017 | Blog of EMODnet HA | *Marine aggregate extraction data to support new 2018 MSFD reporting phase* | http://www.emodnet-humanactivities.eu/blog/?p=497 |
| 7-10/11/2017 | Poster | EMODnet Human Activities portal: geo-referenced information on human activities | Poster was presented in the COAST 2017 congress, an international symposium on 'Systemic and Biodiversity Evolution of Marine Coastal Ecosystems under the Pressure of Climate Change, Natural and Anthropogenic Local Factors', held in Bordeaux |
| 11/01/2018 | Conference | EMODnet Italian Info Day | Together with the other Italian partners of EMODnet, we started organising an EMODnet Info Day in Italy, with the aim of promoting EMODnet activities to Italian stakeholders and presenting the Data Ingestion Project. The conference will take place either in June or in October (date yet to be decided). |

# 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) | | | | | | | |
| Aquaculture | Mariculture  - Shellfish | | | | | | |
| | Mariculture  - Finfish | | | | | | |
| | Freshwater | | 6.898 | | | | |
| Aggregate extraction | | | | | | | |
| Dredging | | | | | | | |
| Ocean energy facility | Projects | | | | | | |
| | Test sites | | | | | | |
| Other forms of area management/designation | International conventions | | | | | | |
| | Maritime boundaries | | | | | | |
| | Advisory councils | | | | 3 | | |
| Waste disposal (solids, including dredge material, dumped munitions, marine constructions) | Dumped munitions | | | | | | |
| | Dredge spoil dumping | | | | | | |
| Wind farms | | | | | | | |
| Fisheries | Fishery zones (FAO and ICES) | FAO Fishery Statistical Areas | | | | | |
| | | ICES Statistical Areas | | | | | |
| | Fishery catches by FAO statistical area | | | | | | |
| | Monthly first sales, EUMOFA | | | | | | |
| Hydrocarbon extraction | Boreholes | | 178 | | | | |
| | Active licenses | | | | 3 | | |
| | Offshore installations | | 20 | | | | |
| Cables | Landing stations (schematic cables) | | | | | | |
| | Schematic cables | | | | | | |
| | Actual route locations (cables) | | | | | | |
| Pipelines | | | | 1.068 | | | |
| Environment | Protected areas | Nationally designated areas (CDDA) | | | | | |
| | | Natura 2000 | | | | | |

| | State of bathing waters | | | | | | |
|---|---|---|---|---|---|---|---|
| Commercial shipping, recreational shipping | | | | | | | |
| Major ports traffic | Goods | | | | | | |
| | Passengers | | | | | | |
| | Vessels | | | | | | |

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

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

### 1st September 2017 to 31st December 2017

| | |
|---|---|
| Wind Farms | 93 |
| Telecommunication Cables (actual) | 44 |
| Telecommunication Cables (schematic) | 41 |
| Offshore Installations | 32 |
| Main Ports | 27 |
| CDDA | 25 |
| Dredge Spoil Dumping | 22 |
| Natura2000 | 20 |
| Dumped Munitions | 19 |
| Hydrocarbon Extraction Active Licenses | 19 |
| Hydrocarbon Extraction Boreholes | 19 |
| Shellfish Production | 17 |
| Aggregate Extraction | 16 |
| Dredging | 16 |
| Lighthouses | 16 |
| Finfish Production | 14 |
| Maritime Boundaries | 14 |
| Ocean Energy Facilities | 12 |
| State of Bathing Waters | 10 |
| Fish Catches | 9 |
| Barcelona Convention | 6 |
| Bucharest Convention | 6 |
| HELCOM Maritime Area | 6 |
| OSPAR Maritime Area | 6 |
| Fish Sales | 5 |
| FAO Fishery Statistical Areas | 3 |
| Advisory Councils | 1 |

| ICES Statistical Areas | 1 |
|---|---|
| Telecommunication Landing Stations | 1 |
| Freshwater Production (NEW) | 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 September 2017 to 31st December 2017*

- Aberystwyth University (Environment), UK
- ABP Marine Environmental Research Ltd (Environment), UK
- ABPmer (Environment), UK
- Anatec Limited (Energy), UK
- Architectural Association (Research), UK
- BP Energy (Energy, UK)
- Bretagne Vivante (Environment), FR
- British Oceanographic Data Centre (Research), UK
- C2Wind (Energy), DK
- California State University, Sacramento (Energy), US
- Cerema (Physical planning), FR
- CIEE (Education), DE
- CNR-ISMAR (Research), IT
- Connected2Fiber (Transport), US
- CSGIS (Other), DE
- Deltares (Research), NL
- DHI (Energy), UK
- DNV GL (Energy), UK
- EDF Energies Nouvelles (Environment), FR
- EIFER - European Institute for Energy Research (Energy), DE
- EPFL (Education), CH
- Esri (Environment), US
- Esri France (Research), FR
- Esri UK (Research), UK
- EMSA - European Maritime Safety Agency (Transport), PT
- Finnish Environment Institute (Environment), FI
- Flanders Marine Institute (Research), BE
- Fugro (Other), UK
- Gardline Geosurvey Limited (Environment), UK
- GEOMAR (Research), DE

- Ghent University (Education), BE
- GoBe Consultants Ltd (Energy), UK
- GustoMSC (Energy), NL
- HCMR - Hellenic Centre for Marine Research (Research), GR
- HELCOM (Environment), FI
- Heriot-Watt University (Research), UK
- Historic England (Other), UK
- I.U. ECOAQUA (Research), ES
- IEA - International Energy Agency (Energy), FR
- Ifremer (Research), FR
- Institute for Water of the Republic of Slovenia (Environment), SI
- Intertek (Environment), UK
- ION Concept Systems (Other), UK
- IUAV - Università Iuav di Venezia (Education), IT
- JBA Consulting (Energy), UK
- Joint Nature Conservation Committee (Research), UK
- Klaipeda University (Transport), LT
- Landesamt für Kultur und Denkmalpflege (Environment), DE
- Leiden University Student Sustainable Development (Environment), NL
- Lighthouse Field Station University of Aberdeen (Education), UK
- Manchester Metropolitan University (Research), UK
- Duke University (Education), US
- Marine Institute (Environment), IE
- MARUM (Research), DE
- Metro Network Services, LLC (Other), US
- Microsoft (Education), US
- MMT (Energy), SE
- Munich Re (Other), DE
- National Institute of Biology (Research), SI
- Navy (Other), NL
- Netherlands Hydrographic Office (Research), NL
- NH Data Services Ltd (Other), UK
- Openfabric (Other), NL
- Paul Scherrer Institut (Research), CH
- Pelagian Ltd. (Physical planning), UK
- Planetek Hellas (Environment), GR
- Plymouth Marine Laboratory (Research), UK
- PML - Plymouth Marine Laboratory (Research), UK
- Politecnico di Milano (Environment), IT
- Portuguese Institute for the Sea and Atmosphere (Research), PT
- Royal HaskoningDHV (Environment), NL
- RPS Energy (Energy), UK
- SHOM (Research), FR

- Southern Water (Fisheries and agriculture), UK
- Spanish Institute of Oceanography (Research), ES
- SRTI-BAS - Space Research and Technology Institute (Other), BG
- Technische Universität Berlin (Education), DE
- TEP – The Environment Partnership (Environment), UK
- Territorial Agency (Research), UK
- Thünen Institute of Sea Fisheries (Fisheries and agriculture), DE
- Thales (Other), FR
- The Renewables Consulting Group (Energy), UK
- Total (Energy), FR
- TRAGSATEC (Fisheries and agriculture), ES
- Technische Universität Dresden (Education), DE
- University College Cork (Research), IE
- Ulster University  (Education), UK
- Uniper (Energy), UK
- Universidade Nova de Lisboa (Education), PT
- University Ghent (Research), BE
- University of Cundinamarca (Environment), CO
- University of Cyprus  (Environment), CY
- University of Edinburgh (Research), UK
- University of Malta (Research), MT
- University of Padova (Education), IT
- University of Southampton (Research), UK
- University of Southern Denmark (Education), DK
- University of the Aegean (Environment), GR
- University of Venice (Physical planning), IT
- University of Zurich (Education), CH
- University of Aberdeen (Education), UK
- Wageningen Marine Research (Fisheries and agriculture), NL
- Wind Power LAB (Energy), DK
- Xtera Communications Ltd (Other), UK

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

*1st September 2017 to 31st December 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 |
|-------|-------------------|---------------------------|------------|--------------|----------------|

| Month | | | | | |
|-------|-----|-------|-----|-----|--------|
| Oct-17 | 416 | 02:37 | 590 | 205 | 49.28% |
| Nov-17 | 506 | 03:35 | 705 | 217 | 42.89% |
| Dec-17 | 398 | 03:00 | 567 | 179 | 44.97% |

*Home*

| Month | Unique Page Views | Avg. Time on Page (mm:ss) | Page Views | New Visitors | % New Visitors |
|-------|-------------------|---------------------------|------------|--------------|----------------|
| Oct-17 | 194 | 00:55 | 251 | 78 | 40.21% |
| Nov-17 | 267 | 01:23 | 341 | 99 | 37.08% |
| Dec-17 | 191 | 00:58 | 269 | 66 | 34.55% |

*Search Data*

| Month | Unique Page Views | Avg. Time on Page (mm:ss) | Page Views | New Visitors | % New Visitors |
|-------|-------------------|---------------------------|------------|--------------|----------------|
| Oct-17 | 623 | 01:00 | 1,066 | 296 | 47.51% |
| Nov-17 | 592 | 00:49 | 892 | 272 | 45.95% |
| Dec-17 | 401 | 01:06 | 628 | 187 | 46.63% |

# 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.)

*Users must select their sector when downloading data or requesting web service links.*

| | | |
|----|---------------------------|--------|
| 1 | Research | 23.85% |
| 2 | Education | 17.93% |
| 3 | Environment | 16.28% |
| 4 | Other | 15.13% |
| 5 | Energy | 11.02% |
| 6 | Fisheries and agriculture | 5.92% |
| 7 | Physical planning | 5.10% |
| 8 | Forestry | 1.48% |
| 9 | Demography | 1.15% |
| 10 | Mining | 0.82% |
| = | Transport | 0.82% |
| 11 | Tourism | 0.33% |
| 12 | Health | 0.16% |

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

Both WFS (XML and JSON format) and WMS are now both available for the following datasets:

Aggregate Extraction
- Aggregate Extraction

Aquaculture
- Finfish Production
- Shellfish Production

Cultural Heritage
- Lighthouses

Dredging
- Dredging

Environment
- Protected Areas - Nationally Designated Areas
- Protected Areas - Natura 2000
- State of Bathing Waters

Fisheries
- First Sales of Fish
- Fish Catches by FAO Fishery Statistical Areas - Major Area
- Fish Catches by FAO Fishery Statistical Areass - Sub-area Area
- Fish Catches by FAO Fishery Statistical Areas - Division Area
- Fish Catches by FAO Fishery Statistical Areas - Sub-division Area
- Fish Catches by FAO Fishery Statistical Areas - Sub-unit Area

Hydrocarbon Extraction
- Active Licenses
- Boreholes
- Offshore Installations

Main Ports (WMS)
- Goods Traffic (WFS)
- Passengers Traffic (WFS)
- Vessels Traffic (WFS)

Ocean Energy Facilities
- Project Locations
- Test Sites

Other Forms of Area Management/Designation
- Advisory Councils (WFS)
  - Advisory Councils - Baltic (WMS)
  - Advisory Councils - Long Distance Fleet (WMS)
  - Advisory Councils - Mediterranean (WMS)
  - Advisory Councils - North Sea (WMS)
  - Advisory Councils - North Western Waters (WMS)
  - Advisory Councils - Pelagic Stocks (WMS)
  - Advisory Councils - South Western Waters (WMS)
- Barcelona Convention
- Bucharest Convention
- HELCOM Maritime Area
- ICES Statistical Areas
- Maritime Boundaries
- OSPAR Maritime Area

Pipelines and Cables
- Telecommunication Cables (schematic routes)
- Kis Orca Subsea Cables
- Landing Stations
- SIGCables Submarine Cables Route
- BSH CONTIS Cables

Waste Disposal
- Dredge Spoil Dumping (Points
- Dredge Spoil Dumping (Polygons)
- Dumped Munitions (Points)
  Dumped Munitions (Polygons)

Wind Farms
- Wind Farms (Points)
- Wind Farms (Polygons)

Users are asked to volunteer their organisation name and sector and country when requesting initial web 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 web service links from other sources (e.g. from a shared link) or track an organisation's usage once web services are in use.

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

*1st September 2017 to 31st December 2017*

- BP Energy (Energy, UK)
- British Oceanographic Data Centre (Research), UK
- C2Wind (Energy), DK
- California State University, Sacramento (Energy), US
- CNR-ISMAR (Research), IT
- Deltares (Research), NL
- Flanders Marine Institute (Research), BE
- Gardline Geosurvey Limited (Environment), UK
- Ghent University (Education), BE
- GustoMSC (Energy), NL
- University of Venice (Physical planning), IT
- National Institute of Biology (Research), SI
- Royal HaskoningDHV (Environment), NL
- SHOM (Research), FR
- TEP – The Environment Partnership (Environment), UK
- Territorial Agency (Research), UK

## *Annex 1*

**The Helsinki Convention - minutes from the meeting**

| Meeting no. | Date | Place | Time | Authors |
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| 1 / WP8 | 12-12-2017 | HELCOM headquarters | 11.00am – 12.30am CET | CETMAR (José L. Santiago) |

| Participants: | **HELCOM:** Joni Kaitaranta; Juuso Haapaniemi; Manuel Frias Vega; Florent Nicolas.<br><br>**CETMAR:** José L. Santiago |
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| Agenda: | 1. Introduction of EMODNet – Human activities (HA) dataset.<br>2. Assessment of the portal (overall and for specific datasets)<br>3. Synergies exploration for EMODnet and HELCOM<br>4. AOB |
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| Regarding | Minutes | Action |
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| 1. | The main topics on the agenda were presented to participants. | All attendants accept the agenda. |

| 2. | The datasets of the Human Activities portal were introduced (i.e. aggregate extraction, aquaculture, cultural heritage, dredging, environment, fisheries, hydrocarbon extraction, main ports, ocean energy facilities, other forms of Area Management/Designation, pipelines and cables, waste disposal, wind farms). | Several projects and initiatives carried out by HELCOM are aligned to the EMODnet HA objectives, in particular, the Baltic LINes and the Baltic Sea Pressure and Impact Index. The initiatives and publications regarding the Port Reception Facilities (PRFs) were also identified as useful for gathering data on waste disposal and in main ports. |
| --- | --- | --- |
| | The focus was on the updated datasets and the forthcoming ones; Maritime Spatial Planning, waste disposal in main ports and vessels density. | The dredge and deposit (or disposal) of dredging information is collected annually by HELCOM. This data and the collaboration for a fluent exchange of it was discussed. |
| 3. | The most related datasets to the HELCOM map and data service as well as the most popular (i.e. downloaded) datasets from the HA portal were introduced. | HELCOM identified the wind-farms and cable and pipelines were identified as very interesting for their projects. |
| | | Potential feedback and assessment were also offered for the MSP and vessel density datasets. |
| | | The aquaculture, dredging, hydrocarbon and waste disposal datasets were presented as medium interest. |
| | | Sharing data through WFS services would be HELCOM's preferred method but not many institutions use this OGC standard service yet. The main reason is because this method would make building the prototype MSDI easier for Baltic Lines. HELCOM also shares data in shapefiles in the Map And Data Service (MADS) as well as they use ArcGIS rest interface and INSPIRE compliant OGC WMS Standard: http://helcom.fi/baltic-sea-trends/data-maps |
| 4. | Synergies on how to collaborate were explored, in particular the advertisement of certain updates and the publication of new datasets. | EMODnet HA plans to publish the MSP information in Feb/March 2018. HELCOM will give feedback on this in the frame of the Baltic Lines project. |

| | | Information on dredging is usually published in November by HELCOM, and then HA should update the datasets related.<br><br>HELCOM enhance the use of Web Feature Service (WFS) in order to achieve a real-time data update, in especial for the wind-farms. EMODnet HA will promote these practices as much as possible.<br><br>Some of the information of pipelines and cables is in schematic routes. The encouragement to achieve the exact locations was suggested by HELCOM.<br><br>The HELCOM tools for comparing different datasets (e.g. http://maps.helcom.fi/website/Aisexplorer/) were introduced as a potential data product for EMODnet.<br><br>The metadata catalogue on MSP (http://metadata.helcom.fi/geonetwork/srv/eng/catalog.search#/metadata/aa96bca9-23f5-4e24-bc92-be24cf101d59) is also a potential starting point to find out the data required for HA. |
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| 5. | AOB | |

### *7.1.1.1 Minutes from Meeting*

| Participants: | **BSC[1]:** Prof. Halil Ibrahim Sur - Executive Director, Ms. Irina Makarenko - Pollution Monitoring and Assessment Officer.<br><br>**Eurofish[2]:** Aina Afanasjeva – Director, Toni Bartulin – Project Manager. |
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| Agenda: | 1. Introduction of EMODNet – Human activities (HA) dataset.<br>2. Synergies exploration for EMODnet and Black Sea Commission (BSC)<br>3. Involvement of BSC in EMODnet Human Activities<br>4. Other |
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| Regarding | Minutes | Action |
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| 1. | The general objective of the EMODnet and datasets of the Human Activities portal were presented, while highlighting an importance and objectives to involve the Bucharest Sea Convention into it.<br><br>The focus was on available datasets at HA portal and the ones at the BSC. | The Black Sea Commission is familiar with EMODnet activities and it welcomes EMODnet's mission to provide publicly open data.<br><br>In order to provide dataset available at BSC, the Secretariat needs an approval made by each MS.<br><br>BSC presented its way of collecting data from the Member States (MSs) together with structure and the main obstacles in reporting (incompatibility in reporting relevant data among MSs).<br><br>Data available at BSC is collected by each Member State (Bulgaria, Georgia, Romania, |

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| | | Russian Federation, Turkey and Ukraine) from their respective Ministries of Environment or related institutions – one or two officials in each country are responsible for data (verified by Ministry) delivery on a yearly basis (until August).<br><br>Fisheries data is collected from GFCM.<br><br>BSC is responsible for official data harmonisation they receive. |
| 2. | The most related datasets to the BSC map and data service as well as the most popular (i.e. downloaded) datasets from the HA portal were introduced (ppt presentation shared with participants). | BSC identified the vessel density, waste disposal, and aquaculture together with environment related data as interesting for their future activities.<br><br>The BSC data is open only for registered users, and, in order to make them available to Consortium, Eurofish has to send a request/letter (with required datasets) to BSC with benefits/results of making them available to EMODnet, what then will be presented to each MS. Once (if) the MSs signed agreement to share data, the data will be open to EMODnet Consortium. It has been agreed that Eurofish will send such letter before the next Governing Council in August 2018.<br><br>BSC provided the data and reporting Indicators/Tools they have at disposal http://www.blacksea-commission.org/_bsimap.asp.<br><br>Eurofish has to select indicators of the EMODnet HA interest and to include them in the request/letter to be presented to the MSs.<br><br>On 10th January, BSC delivered to Eurofish the |

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| | | document "BLACK SEA INTEGRATED MONITORING AND ASSESSMENT PROGRAM" for years 2017-2022 with their MSs reporting data. |
| 3. | Synergies on how to collaborate were explored, in particular Eurofish's attendance in the future official meetings/governing council where BSC's Member States will participate, what was recognized as an opportunity to liaise with relevant officials that provide data for BSC. Eurofish has expressed interest to be invited for these events.<br><br>Potential contacts for different various data were suggested by BSC. | It has been agreed that the BSC will send an invitation to Eurofish for their future meeting to be in position to liaise with the main stakeholders relevant for datasets of EMODnet HA interest.<br><br>MSP in not harmonised. **Laura Aleksandrov** has been identified as a contact point for MSP data relevance.<br><br>Other sources of potential datasets relevant for EMODnet HA were presented by BSC:<br><br>• International Commission on the protection of Danube River www.icpdr.org/main/<br>• Danube Commission www.danubecommission.org<br>• Environment Monitoring in the Black Sea http://emblasproject.org/ (cruises research)<br>• International Maritime Organisation (BSC represent it for capacity building). |
| 4. | The general conclusions have been made regarding the cooperation, and further aforementioned steps. | BSC welcomed initiative by EMODnet HA (Eurofish) and is open to cooperate in the future.<br><br>Proposal to publish articles/events about Black Sea and Human Activities on their official channels (social media, website) has been offered by BSC. |