EMODnet Data Ingestion: ‘Wake up your data’

IMDIS 2018 Conference, 5 November 2018, Barcelona - Spain

Dick M.A. Schaap
Sissy Iona
Francis Strobbe

MARIS (NL)
HCMR (GR)
RBINS (BE)
Quality controlled and accurate data of the marine environment are essential for many applications in the Blue Society: research, governance, and industry.

The costs of marine data collection by European organisations is circa **1.4 billion Euro per year**: ~ 1.0 billion for in-situ; ~ 0.4 billion for remote sensing.

A major part is nowadays discoverable and accessible thanks to marine data management infrastructures and activities in Europe, such as national data centres, SeaDataNet, EurOBIS, PANGAEA, EGD1, IHO, CMEMS, EuroGOOS, and others. And EMODnet has given an enormous boost to cooperation and seeking interoperability and harmonization.

However there is still a lot of valuable marine data collected and sitting at public authorities, research communities, and industry, which do not arrive at these national and European repositories.
Aims of EMODnet Ingestion

- To wake up these idle datasets by identifying, encouraging and supporting their data holders
- To launch and operate an extra EMODnet portal with services to facilitate data holders submitting marine data sets for publishing, further processing and safekeeping by expert data centres, and subsequent distribution through EMODnet thematic portals
Welcome to the EMODnet Data Ingestion portal

The European Marine Observation and Data Network (EMODnet) consists of more than 160 organisations that together work on assembling, harmonising and making marine data, products and metadata more available to public and private users. This Data Ingestion portal facilitates additional data managers to ingest their marine datasets for further processing, publishing as open data and contributing to applications for society.

Submit your data files
The online Data Submission service facilitates you to submit marine datasets by completing a form and uploading your data as a file package. The service

Ingest operational data
We are also interested in (Near) Real-Time ((N)RT) data streams from fixed and autonomous ocean observing platforms. This section explains how you

View submissions
View, search and download datasets that have been submitted by data providers using the Data Submission service.

www.emodnet-ingestion.eu
Welcome to the Data Submission service of the EMODnet Data Ingestion portal. This service facilitates you to submit marine datasets by completing a form and uploading your data as a package. Press “Continue” to start.
Dashboard with functions depending on role: Data Submitter; Data Centre; Master
**Dataset Identification**

**DATASET GENERAL INFORMATION**

**Title of dataset**

2011-GEMS, Zone 8 - Bristol Channel Atlantic Array, Metocean assessment

**Narrative summary of dataset**

GEMS Survey Ltd. (GEMS) was awarded a contract by Channel Energy Limited to undertake metocean data collection in the Bristol Channel as part of the Atlantic Array wind farm development project. The scope of work includes the deployment of two acoustic wave and current (AWAC) units and one Directional Wave rider Buoy. Ancillary work includes water and sediment sampling and water profiling. Following non-recovery of AWAC devices, TRIAXYS Directional Wave buoys were utilised for the rest of the survey. This series contains both reports and datasets associated with the Metocean Assessment.

**DATASET FORMATS**

**Dataset format**

Text or Plaintext
Data Submission service

- Distinction between 2 phases in the life cycle of a data submission:
  - **Phase I**: from data submission to publishing ‘as is’
  - **Phase II**: further elaboration and integration (of subsets) in national, European and EMODnet thematic portals.

- **Step 1**: Data submitter completes a number of key fields of the submission form and uploads a zip file with the datasets and related documentation;

- **Step 2**: Data Centre is assigned who reviews and completes the submission form for publishing ‘as is’ in Summary Service

- **Step 3**: Data Centre elaborates, where possible, the data sets, resulting in availability in standard formats in EMODnet thematic portals.
Data processing pathways

EMODnet
European Marine Observation and Data Network

Central Ingestion Portal

External Data Providers
- Progress feedback
- Registration/logon
- Submission Metadata + Data
- Support

Tracking service
- Data wanted service
- Help service

Workflow tracking

Processing:
- QC, formatting, in dialogue with providers, storing, populating EU infrastructures
- Data Centres:
  - Chemistry
  - Physics
  - Geology
  - Bathymetry
  - Biology
  - Human activities

Routing by country and theme

EU structures
- SeaData Net
- EurOBIS
- ICES
- EGDH
- COGEEA

EU infrastructures

EMODnet portals
- Chemistry
- Bathymetry
- Physics
- Biology
- Geology
- Human Activities
Network of data centres ‘recruited’ from EMODnet Ingestion and Thematic portals consortia to act as ‘assigned data centres’

At present 49 Data Centres covering all thematics
View submissions

This service allows users to search and download the datasets that have been submitted via the Submission service and that have been reviewed and completed in metadata by assigned data centers. These datasets are published “as-is” and will be further inspected and elaborated, where possible, for uptake in the national and European Infrastructures supporting EMODnet.

Filter Search

Free search

Input string

Date [yyyyymmdd]

Date from

Date to

Geobox

North

West

South

Search

Reset

Send

Found 204 Show (1 - 20) Prev Next

Results

Aquaculture in Maltese waters
Period: 2018-10-01 - 2025-12-31
Observation type: Administration and dimensions

FinisGlider deployment (EGO glider : bonpland) (Atlantic Ocean), JERICO-NEXT TNA
Period: 2017-06-27 - 2017-08-18
Observation type: Other physical oceanographic measurements,Water column temperature and salinity

MEPA Coastal Water Survey - Pollutants in Biota 2012
Period: 2012-05-30 - 2012-08-07
Observation type: Halocarbons (including freons),Metal and metalloid concentrations,Pollution
Ingesting operational data - NRT

Join the European operational oceanography exchange

EMODnet Ingestion aims at making marine data part of the European data management infrastructures. This concerns marine data from the European seas and coastal waters from diverse governmental, research and private sources. It concerns data that have been collected by all kinds of surveys, campaigns, and projects.

It also concerns operational oceanography data that are collected by fixed and moving platforms such as fixed stations, moorings, buoys, tide gauges, surface drifters, ferryboxes, argo floats, gliders, HF radars and other platforms. These platforms generate Near Real Time (NRT) data streams which should become part of the European operational oceanography data exchange which is promoted and made accessible by means of the EMODnet Physics portal.
Ingesting operational data – NRT and delayed mode time series

European Operators of Operational Oceanography Platforms

Write email to cmems-service@lremer.fr

Instructs to which ROOS platforms should be connected and who to contact

Delayed mode exchange incl additional validation and long term storage in cooperation with NODCs

International Operational Oceanography data hubs

CMEMS-INSTAC service

CMEMS Data Products

NRT & monthly timeseries

EMODnet Physics

SeaDataNet: NODCs network

validated long time series
Marketing and outreach activities

- Identify potential data sources and data providers
- Reach out to potential data providers
- Motivate data providers to participate with their data submissions
- Market and promote the Data Ingestion service and its function in the overall EMODnet scheme
- Data Centres function as EMODnet ambassadors
- Organisation of national EMODnet days in several countries
- Presentations at many conferences
- Promotional material: roll-out, bookmarks, poster, standard presentations, leaflets, video
- Links at all EMODnet portals
Marketing and outreach activities
Marketing and outreach activities
Industry is already using several EMODnet products and services, such as the EMODnet high resolution digital bathymetry for European seas, the harmonised geological maps, NRT physics timeseries, and others. Industry can be motivated to add value to these products and services by their data contributions which might enrich the EMODnet products they are using: **a clear business proposition.**

In addition, government can use its leverage, e.g. in case of licensing for offshore activities, requiring impact assessment monitoring and open access to acquired datasets.
## Portal statistics

<table>
<thead>
<tr>
<th>Month</th>
<th>Unique visitors</th>
<th>Number of visits</th>
<th>Pages</th>
<th>Hits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apr-17</td>
<td>5,617</td>
<td>6,128</td>
<td>9,846</td>
<td>19,068</td>
</tr>
<tr>
<td>May-17</td>
<td>5,935</td>
<td>6,424</td>
<td>15,824</td>
<td>25,282</td>
</tr>
<tr>
<td>Jun-17</td>
<td>5,754</td>
<td>6,206</td>
<td>49,675</td>
<td>53,944</td>
</tr>
<tr>
<td>Jul-17</td>
<td>5,789</td>
<td>6,175</td>
<td>51,582</td>
<td>57,601</td>
</tr>
<tr>
<td>Aug-17</td>
<td>7,121</td>
<td>7,563</td>
<td>53,292</td>
<td>59,510</td>
</tr>
<tr>
<td>Sep-17</td>
<td>8,404</td>
<td>9,048</td>
<td>56,856</td>
<td>71,498</td>
</tr>
<tr>
<td>Oct-17</td>
<td>8,260</td>
<td>9,150</td>
<td>60,049</td>
<td>80,101</td>
</tr>
<tr>
<td>Nov-17</td>
<td>9,271</td>
<td>10,409</td>
<td>58,818</td>
<td>76,237</td>
</tr>
<tr>
<td>Dec-17</td>
<td>8,460</td>
<td>9,370</td>
<td>57,147</td>
<td>64,709</td>
</tr>
<tr>
<td>Jan-18</td>
<td>9,207</td>
<td>10,342</td>
<td>62,154</td>
<td>73,552</td>
</tr>
<tr>
<td>Feb-18</td>
<td>7,653</td>
<td>8,569</td>
<td>60,311</td>
<td>70,556</td>
</tr>
<tr>
<td>Mar-18</td>
<td>8,318</td>
<td>9,279</td>
<td>58,554</td>
<td>71,636</td>
</tr>
<tr>
<td>Apr-18</td>
<td>7,889</td>
<td>9,054</td>
<td>58,163</td>
<td>75,463</td>
</tr>
<tr>
<td>May-18</td>
<td>7,803</td>
<td>9,044</td>
<td>58,264</td>
<td>72,124</td>
</tr>
<tr>
<td>Jun-18</td>
<td>7,950</td>
<td>9,245</td>
<td>54,681</td>
<td>64,393</td>
</tr>
<tr>
<td>Jul-18</td>
<td>7,624</td>
<td>9,043</td>
<td>57,140</td>
<td>65,527</td>
</tr>
<tr>
<td>Aug-18</td>
<td>5,057</td>
<td>5,975</td>
<td>53,504</td>
<td>60,418</td>
</tr>
<tr>
<td>Sep-18</td>
<td>4,159</td>
<td>4,973</td>
<td>51,380</td>
<td>66,515</td>
</tr>
<tr>
<td>Oct-18</td>
<td>4,600</td>
<td>7,815</td>
<td>73,248</td>
<td>94,113</td>
</tr>
</tbody>
</table>
At present >250 submissions recorded in different stages of processing

Of which 204 published at the Viewing Submissions Service, of which 42 as ‘phase II completed’
Published submissions per country
Published submissions per theme

- Physics: 46%
- Chemistry: 25%
- Geology: 5%
- Biology: 5%
- Bathymetry: 15%
- Seabed Habitats: 1%
- Human Activities: 3%
Animation ‘Wake up your data’
Your gateway to marine data in Europe