MyOcean

Products and user interfaces

FIXO³

Bremen 15 April 2015

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MyOcean projects

MyOcean is a series of projects granted by the European Commission within the Copernicus Program (FP7), whose objective is to define and to set up a concerted and integrated pan-European capacity for ocean monitoring and forecasting.

April 2009

Six years

April 2015

- MyOcean 1: April 2009 – March 2012
- MyOcean 2: April 2012 – September 2014
- MyOcean Follow-On: October 2014 – April 2015

THE WORK WILL CONTINUE AS A NEW SERVICE IN:

- Copernicus Marine Service: May 2015 – April 2018
- Continuation 2018-2021 (new procurement)
MyOcean service

Service provided in MyOcean

2014

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MyOcean service

Number of unique registrations
Since Nov 2009, opening of the MyOcean service
MyOcean service

Users’ type of applications

Users’ applications – YEAR 2014

- Scientific Study/Research: 69%
- Public Service: 17%
- Commercial Use: 6%
- Personal Interest/ internal use: 6%
- Other: 2%
Users’ areas of benefit

- Marine Coastal Environment: 32%
- Marine Safety: 27%
- Marine Resources: 11%
- Climate, Seasonal and Weather Forecasting: 30%

Users’ applications – YEAR 2014
MyOcean service

1651 users downloading products over the year

MyOcean - 2014
Number of users per month

<table>
<thead>
<tr>
<th>Month</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>Users</td>
<td>351</td>
<td>366</td>
<td>431</td>
<td>419</td>
<td>391</td>
<td>427</td>
<td>382</td>
<td>332</td>
<td>426</td>
<td>410</td>
<td>410</td>
<td>407</td>
</tr>
</tbody>
</table>

On average: 396 users downloading products per month
MyOcean service

Users per product family

MyOcean - 2014
Number of users per product family (proposed in the catalogue)
MyOcean service

2014 download transactions

MyOcean 2014
Number of download transactions per month

2014: 14,451,444 download transactions
versus 4,790,700 in 2013 + 200%
MyOcean service

2014 volume downloaded:

MyOcean - 2014
Volume downloaded by users (Mb)

2014 volume downloaded: 94,322,820 Mb
versus 53,015,659 in 2013
+ 78%
Where we are, 5 years after opening of service?
MyOcean service

1 integrated service
1 unique catalogue of product
Online download from catalogue

5000 subscribers

1650 users downloading products in 2014
on average 127 users downloading products per day
And 376 regular users downloading 77% of volume

Network of European producers
7 regions: global and 6 European seas
Modelling & observation products
Physical, ice, biogeochemical variables
Forecast, NRT, long time series

The 4 numbers continue to increase
MyOcean products

- Currents
- Temperature & Salinity
- Surface Wind
- Sea Level
- Biogeochemistry

**REANALYSES**
- Global
- Arctic
- Baltic
- NWS
- IBI
- Med Sea
- Black Sea
- 10 to 45 years

**REAL-TIME**
- Daily, hourly

**FORECAST**
- 2 to 10 days

136 products
MyOcean products

OCEAN MONITORING AND FORECASTING
Providing PRODUCTS and SERVICES for all marine applications

ONLINE CATALOGUE

AREA
- All areas
- Global Ocean (0)
- Arctic Ocean (0)
- Baltic Sea (1)
- European North-West Shelf Seas (0)
- Iberia-Biscay-Ireland Regional Seas (0)
- Mediterranean Sea (0)
- Black Sea (0)

PARAMETER
- All parameters

BALTIC SEA - IN SITU NEAR REAL TIME OBSERVATIONS

In-situ-observation, Ocean-chlorophyll, Ocean-chemistry, Sea-level, Salinity, Temperature, Currents, Near-real-time, Baltic-sea

For the Baltic Sea - The In Situ Thematic Assembly Centre (INS TAC) integrates near real-time in situ observation data. These data are collected from the BOOS members and complemented by the observation collected by the Global INS TAC in the area. The data are quality controlled using automated procedures. It is updated continuously and provides observations with 24-48 hours from acquisition in average.
INSTAC Regional Components
Common features in all regions

- In each component 4 functions are implemented:
  1. Acquisition
  2. Real Time Quality Control (RTQC)
  3. Validation
  4. Distribution

- All regions apply the same portal structure and Quality Control procedures

- The Validation of the products will be different in each region because it depends
  - of the amount of data available in the regions
  - the quality of the data available for Validation
  - the oceanographic features of the area
INSTAC Flow of data

Schematic data flow

National data → Acquire data → Data Base

- Real-time and delayed mode
- Flagged data
- Validate Product Monthly
- Real Time Quality Control Daily

Data to the users
Quality control flags

- All regions apply the same Real-Time Quality Control (RTQC) procedures and Quality Flag convention (from SeaDataNet)
- Codes marked in red are mandatory after the RTQC
- It is the responsibility of the final users to read and use these flags

<table>
<thead>
<tr>
<th>Code</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No QC was performed</td>
</tr>
<tr>
<td>1</td>
<td>Good data</td>
</tr>
<tr>
<td>2</td>
<td>Probably good data</td>
</tr>
<tr>
<td>3</td>
<td>Bad data that are potentially correctable</td>
</tr>
<tr>
<td>4</td>
<td>Bad data</td>
</tr>
<tr>
<td>5</td>
<td>Value changed</td>
</tr>
<tr>
<td>6</td>
<td>Below detection limit</td>
</tr>
<tr>
<td>7</td>
<td>In excess of quoted value</td>
</tr>
<tr>
<td>8</td>
<td>Interpolated value</td>
</tr>
<tr>
<td>9</td>
<td>Missing value</td>
</tr>
<tr>
<td>A</td>
<td>Incomplete information</td>
</tr>
</tbody>
</table>
BOOS Data Portal

Integrate Fixed platforms
Integrate Tide gauges
Integrate Moored buoys
Integrate Ferryboxes Vessels

Distribution of In-situ products

ftp.boos.org

Regional portal
BOOS Data Portal

ftp.boos.org

- 10 Fixed Platforms (FP)
- 100 Tide Gauges (TG)
- 10 Moored Buoys (MB)
- 4 Ferry-Box-lines (FB)
- >800 Monitoring stations (CT)

BOOS Oceanographic Stations
BOOS Data Portal structure

- **latest**
  - /root
  - index_latest.txt
  - myo_index_platform.txt

- **index_monthly.txt**
  - monthly

- **index_history.txt**
  - history

- **One directory /day**
  - One file / day / platform
  - Drifters
  - Moorings

- **One directory /month**
  - One file / month / platform
  - Profilers-Gliders
  - Vessels

- **One directory /year**
  - One file / year / platform / data type
  - Profilers-Gliders
  - Moorings
  - Vessels
### Historical data available in the BOOS Data Portal April 2015

<table>
<thead>
<tr>
<th>Data set</th>
<th>Time period</th>
<th>#</th>
<th>Provider</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swedish TS data</td>
<td>1990-2015 NRT</td>
<td>106</td>
<td>SMHI,SMF</td>
<td>QCed data from NODC</td>
</tr>
<tr>
<td>Danish TS data</td>
<td>1990-2010</td>
<td>432</td>
<td>DMU and other</td>
<td>Through SDN and Web</td>
</tr>
<tr>
<td>German TS data</td>
<td>1990-2013</td>
<td>138</td>
<td>BSH,IOW</td>
<td>Through SDN</td>
</tr>
<tr>
<td>Polish TS data</td>
<td></td>
<td></td>
<td>IMWM,IOPAS</td>
<td>“</td>
</tr>
<tr>
<td>Lithuanian TS data</td>
<td>2004-2009</td>
<td>19</td>
<td>EPA</td>
<td>“</td>
</tr>
<tr>
<td>Latvian TS data</td>
<td>2005-2007</td>
<td>60</td>
<td>LHEI</td>
<td>“</td>
</tr>
<tr>
<td>Estonian TS data</td>
<td>1992-2004</td>
<td>33</td>
<td>MSI</td>
<td>“</td>
</tr>
<tr>
<td>Russian TS data</td>
<td></td>
<td></td>
<td>RAS,RIHMI,RUMS</td>
<td>“</td>
</tr>
<tr>
<td>Swedish buoy data</td>
<td>2001-2014</td>
<td>9</td>
<td>SMHI</td>
<td>QCed data from NODC</td>
</tr>
<tr>
<td>German buoy data</td>
<td>1985-2014</td>
<td>7</td>
<td>BSH</td>
<td>“</td>
</tr>
<tr>
<td>Danish buoy data</td>
<td>2001-2011</td>
<td>3</td>
<td>DMI</td>
<td>Aggregated NRT data</td>
</tr>
<tr>
<td>Finnish buoy data</td>
<td>2005-2012</td>
<td>1</td>
<td>FMI</td>
<td>“</td>
</tr>
<tr>
<td>Swedish sea level</td>
<td>1990-2014</td>
<td>23</td>
<td>SMHI</td>
<td>QCed data from NODC</td>
</tr>
<tr>
<td>Danish sea level</td>
<td>1990-2014</td>
<td>30</td>
<td>DMI</td>
<td>“</td>
</tr>
<tr>
<td>Sea level/other countries</td>
<td>2005-2014</td>
<td>50</td>
<td>BSH,IMWM,EPA,LEGMA,MSI,FMI,MSI,NWAHEM</td>
<td>Aggregated NRT data</td>
</tr>
<tr>
<td>Swedish Ferrybox</td>
<td>2009-2014</td>
<td>3</td>
<td>SMHI</td>
<td>QCed data from NODC</td>
</tr>
<tr>
<td>Finnish Ferrybox</td>
<td>1992-2008</td>
<td>1</td>
<td>SYKE</td>
<td>“ (only water samples)</td>
</tr>
<tr>
<td>Finnish Ferrybox</td>
<td>2009-2014</td>
<td>1</td>
<td>SYKE</td>
<td>Aggregated NRT data</td>
</tr>
<tr>
<td>Estonian Ferrybox</td>
<td>2008-2014</td>
<td>3</td>
<td>MSI</td>
<td>“</td>
</tr>
</tbody>
</table>
Number of platforms 2010-2014

[Bar chart showing the number of platforms from 2010 to 2014, with a steady increase over the years.]
Copernicus, previously known as GMES (Global Monitoring for Environment and Security), is the European Programme for the establishment of a European capacity for Earth Observation. The views expressed on this website are those of the authors and do not necessarily represent those of the European Commission.

- Copernicus Marine Service: May 2015 – April 2015
- Procuring entity: MERCATOR OCEAN

**Marine Service**

**Production of Ocean observations, analysis and Forecasts (Models)**

- Maritime Safety
- Marine Resources
- Coastal Environment
- Weather/Climate
INSTAC Copernicus Marine Service

- Copernicus Marine Service: May 2015 – April 2015
- Provide in-situ observations from the European Seas
- The contract was won by the INSTAC group
- Designated by MERCATOR 8th April 2015
  - 16 partners
    - 1 coordinator (IFREMER)
    - 6 region leaders (SMHI, BSH, IMR, ...)
    - 9 other partners (EUROGOOS, ...)
  - Budget of 5 M€ over three years
INSTAC Copernicus Marine Service

Figure 1: Connection of the In-Situ Thematic Assembly Centre with other actors of In-Situ data management in Europe.
Access to the products

- Copernicus registration
  marine.copernicus.eu

- Copernicus Service Desk
  servicedesk.cmems@mercator-ocean.eu
Thanks for your attention!

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