

European Marine Observation and Data Network - BIOLOGY

Background & outline workshop

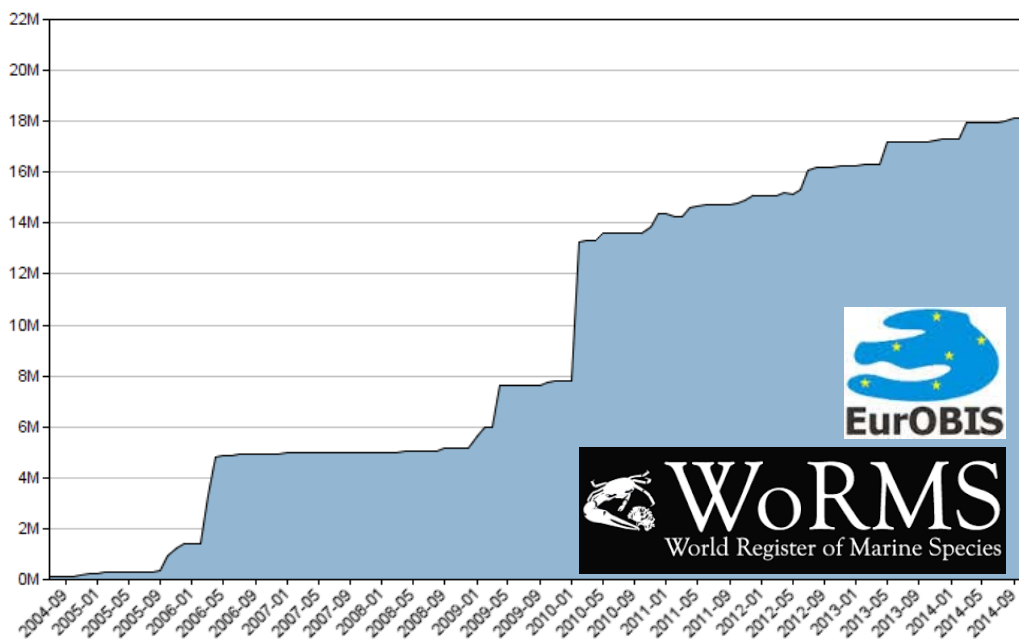
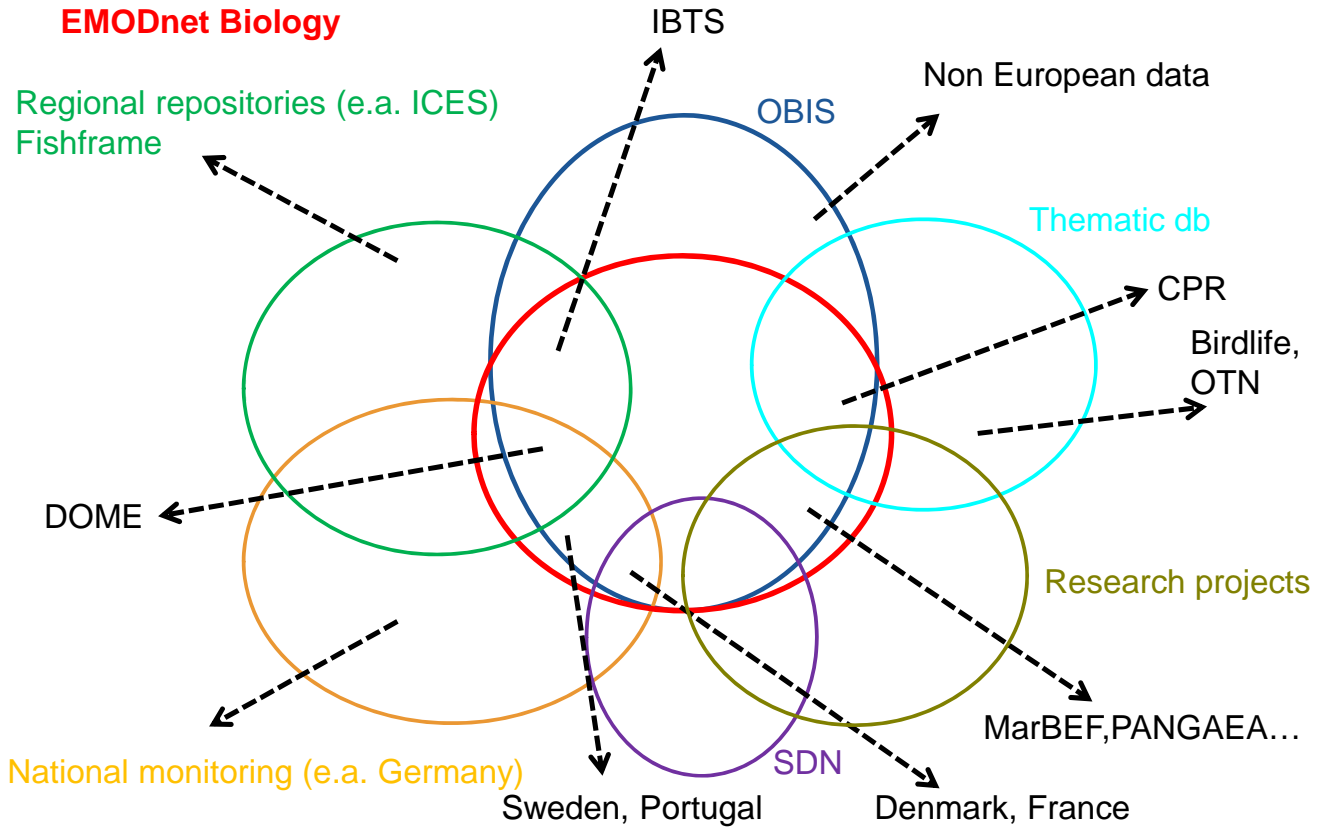
Simon Claus



Status EMODnet Biology

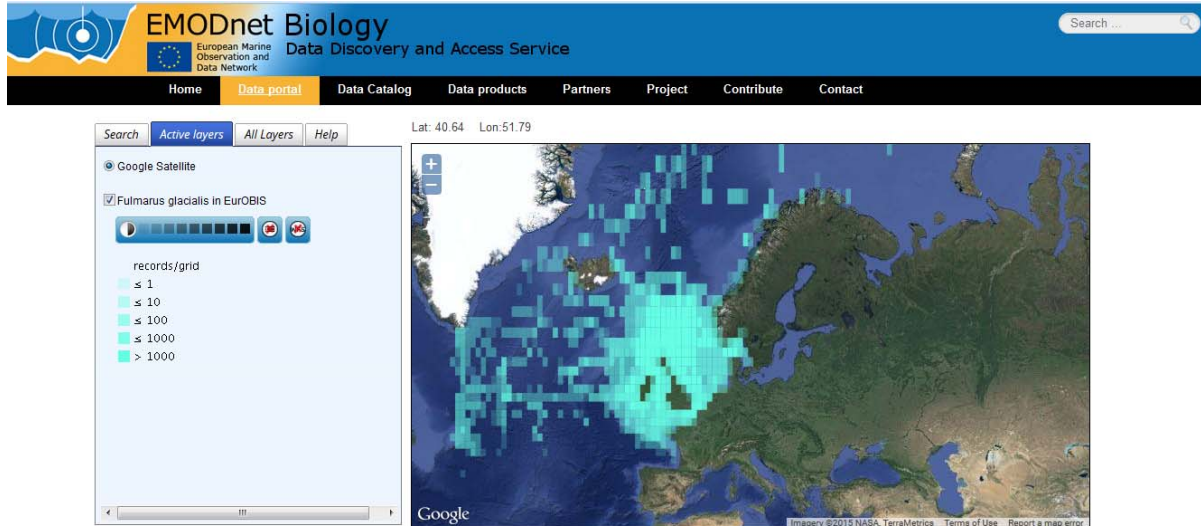
- Status of Biological data within and outside EMODnet
- Updates on Biology Data Portal and issues of common concern
 - New portal
 - Traits, WRIMS and attributes
 - OOPS
 - OBIS-ENV

EMODnet Biology



19,390,270 distribution records - 670 datasets - 55,782 species names

New data portal: access to data and metadata of temporal and spatial distribution of marine species

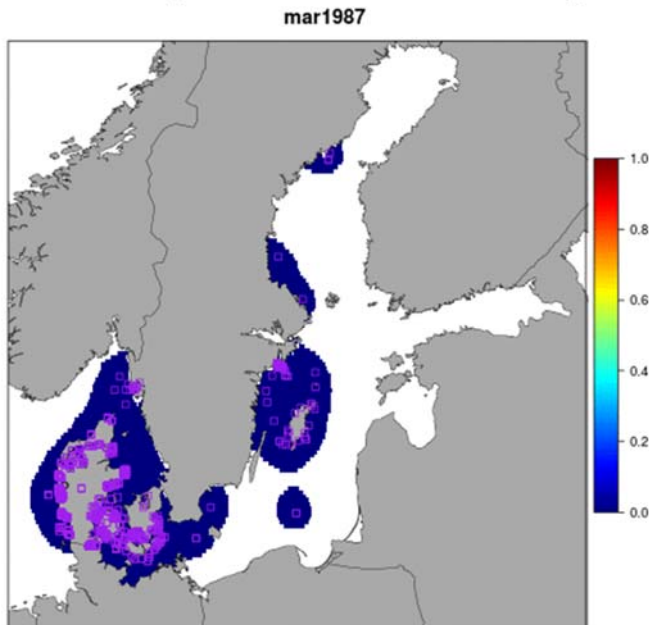


EMODnet <http://www.emodnet-biology.eu/>

8/10/2015



Descriptor 2. Non-indigenous species do not adversely alter the ecosystem



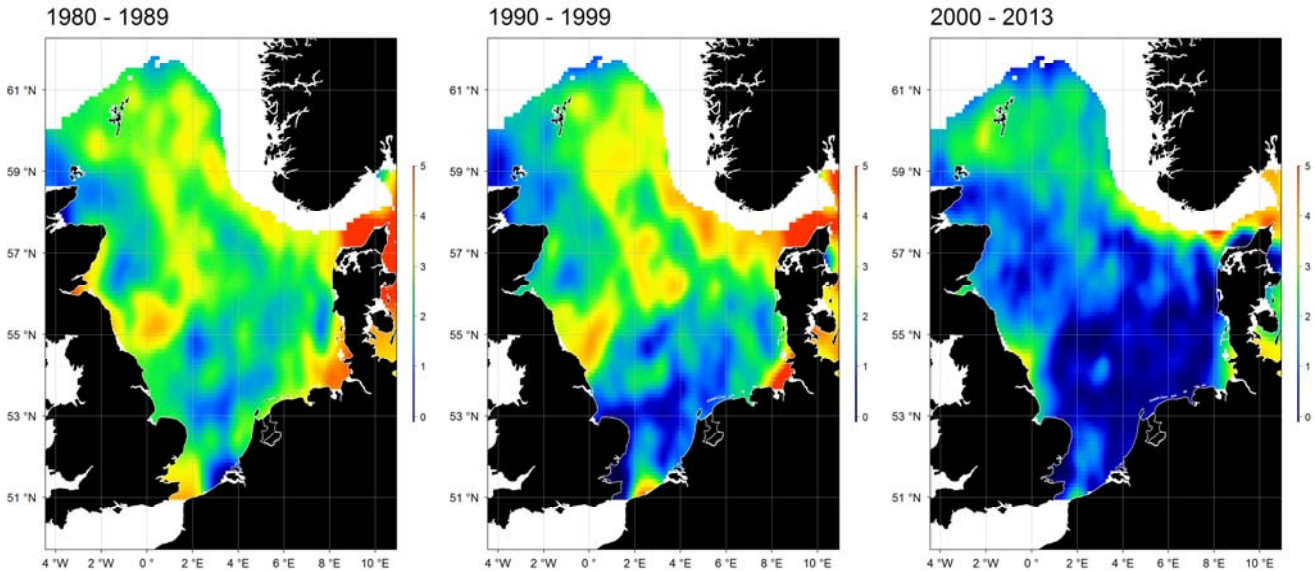
Marenzelleria Baltic Sea

Abundance data from national monitoring activities integrated into EMODnet product



Descriptor 3. The population of commercial fish species

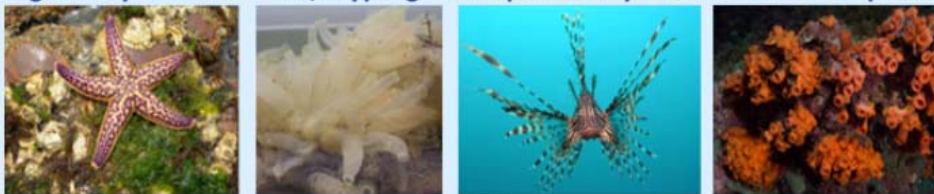
Gadus morhua North Sea (IBTS)



7

World Register of Introduced Marine Species

A gateway to introduced, cryptogenic & previously considered alien species



[Intro](#) | [Search taxa](#) | [Browse taxa](#) | [Distributions](#) | [Terminology](#) | [References](#) | [Statistics](#) | [Online sources](#) | [Log in](#)

WRIMS Distribution

273 matching records, showing records 1-100. Click on one of the taxon names listed below to check details for that taxon. [[new search](#)]

- [Acar plicata](#) (Dillwyn, 1817) (introduced: alien)
- [Acartia \(Acanthacartia\) tonsa](#) Dana, 1849 (introduced: alien)
- [Acartia tonsa](#) Dana, 1849 represented as [Acartia \(Acanthacartia\) tonsa](#) Dana, 1849 (introduced: alien)
- [Acipenser ruthenus](#) Linnaeus, 1758 (introduced: origin unknown)
- [Acrochaetium balticum](#) (Rosenvinge) Aleem & Schulz, 1952 (introduced: alien)
- [Acrochaetium densum](#) (K.M.Drew) Papenfuss, 1945 (introduced: origin unknown)
- [Aeromonas salmonicida](#) (Lehmann & Neumann, 1896) Griffin, Snieszko & Friddle, 1953 (introduced: alien)
- [Agardhiella subulata](#) (C.Agardh) Kraft & M.J.Wynne, 1979 (introduced: alien)
- [Aglaothamnion halliae](#) (F.S.Collins) N.E.Aponte, D.L.Ballantine & J.N.Norris, 1997 (introduced: alien)
- [Alaria esculenta](#) (Linnaeus) Greville, 1830 (introduced: alien)
- [Alexandrium leei](#) Balech, 1985 (introduced: alien)
- [Alexandrium minutum](#) Halim, 1960 (introduced: alien)
- [Alkmaria romijni](#) Horst, 1919 (introduced: alien)
- [Ammothea hilgendorfi](#) (Böhm, 1879) (introduced: alien)
- [Amphibalanus amphitrite](#) (Darwin, 1854) (introduced: alien)
- [Amphibalanus eburneus](#) (Gould, 1841) (introduced: alien)
- [Amphibalanus improvisus](#) (Darwin, 1854) (introduced: origin unknown)
- [Amphibalanus improvisus](#) (Darwin, 1854) (introduced: alien)
- [Amphibalanus reticulatus](#) (Utinomi, 1967) (introduced: alien)
- [Amphibalanus variegatus](#) (Darwin, 1854) (introduced: alien)
- [Anguillicola crassus](#) Kuwahara, Niimi & Itagaki, 1974 accepted as [Anguillicoloides crassus](#) (Kuwahara, Niimi & Itagaki, 1974) (introduced: alien)
- [Anguillicoloides crassus](#) (Kuwahara, Niimi & Itagaki, 1974) (introduced: alien)
- [Anotrichium furcellatum](#) (J.Agardh) Baldock, 1976 (introduced: alien)
- [Antithamnion densum](#) (Suhr) M.A.Howe, 1914 (introduced: alien)
- [Antithamnionella spirographidis](#) (Schiffner) E.M.Wollaston, 1968 (introduced: alien)
- [Antithamnionella ternifolia](#) (J.D.Hooker & Harvey) Lyle, 1922 (introduced: alien)
- [Aphelocheata marioni](#) (Saint-Joseph, 1894) (introduced: alien)

fossil range
 Classification Ecology Trophic level Depth Ecosystem Diet Life history
 Physiology Geography Importance to society Mobility **Biological & ecological traits**
 Habitat **Marine species** body size environment Skeleton
 Distribution Life stage

Intro | Search taxa | Search traits | Pilot Projects | Log in

Traits Attributes search

Enter the attribute you want to look up.

Valid wildcards are '%' and '*' ('%' replaces zero or more characters, '*' replaces a single character; click here for details and examples).

Search: is in full

Taxon rank:

Limit to
taxa belonging to:

- FAO-ASFIS: Species for Fishery Statistics Purposes
- FAO-ASFIS: Species for Fishery Statistics Purposes**
- OSPAR List of Threatened and/or Declining Species and Habitats
- Habitats Directive
- IUCN Red List
- CITES
- MSFD indicators

Website and databases developed and hosted by VLIZ · Page generated 2015-06-02 · contact: info@marinespecies.org

European Marine Observation and Data Network

OOPS product development



OOPS gridded data products

- ICES Operational Oceanographic Products and Services
- Make gridded abundance products for 6 copepod species (*Acartia spp*, *Oithona spp*, *Metridia lucens*, *Temora longicornis*, *Calanus helgolandicus*, *Calanus finmarchicus*), large and small copepods and ratio between the latter
- 188 timeframes per product – Sliding timeframe from 1958 till 2013

Workflow and components

- R: Data preparation: data needs specific format
- DIVA: analysis: make gridded abundance product
- R: Post processing of output
 - Make maps (png, animations)
 - Upload to postgres database
- PostgresDB:
 - Data accessed by Geoserver for web services
 - Data storage
- FTP as sharing point between partners and back up

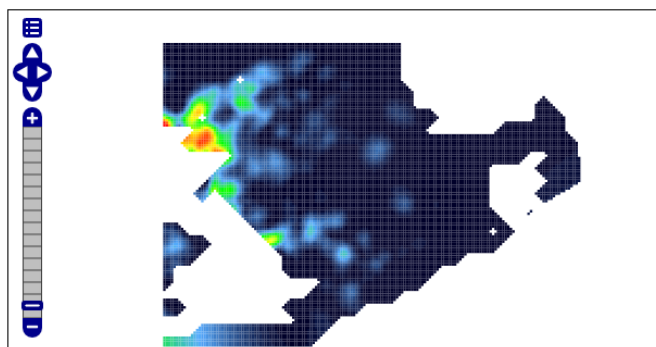
Animations on emodnet webpage

- <http://emodnet-biology.eu/data-products?album=4552>



Web services

- Web Map Services (WMS)
- E.g. with specified parameters
http://geo1dev.vliz.be/geoserver/emodnetbio/wms?service=WMS&version=1.1.0&request=GetMap&layers=emodnetbio:LT_test&styles=&bbox=-80.0,25.0,50.0,85.0&width=715&height=330&srs=EPSG:4326&format=application/openlayers&viewparams=season:2;startYearCollection:1980;endYearCollection:1989;scientificNameID:104878



Scale = 1 : 17M

13.99805, 60.14746

LT_test

fid	meta_id	geom_id	measurementValue	scientificNameID	scientificName	season	startYearCollection	endYearCollection
LT_test.fid-61d260b2_14e2f430adf_6ed71		1309	0.793403	137128	Alca torda	1	1980	1989

Web services

- Web Map Services (WMS)
- E.g. with specified parameters

http://geo1.dev.vliz.be/geoserver/emodnetbio/ows?service=WFS&version=1.0.0&request=GetFeature&typeName=emodnetbio:OOPS_products&maxFeatures=50&outputFormat=application/json&viewparams=oops_gid:18;scientificNameID:106485;season:1

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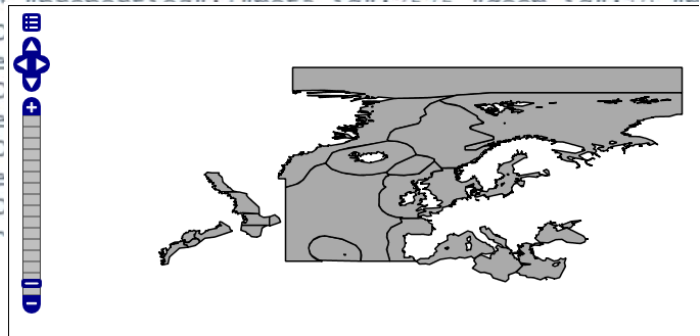
Web services

- Web Map Services (WMS)
- E.g. with specified parameters

http://geo1.dev.vliz.be/geoserver/emodnetbio/ows?service=WFS&version=1.0.0&request=GetFeature&typeName=emodnetbio:OOPS_products&maxFeatures=50&outputFormat=application/json&viewparams=oops_gid:18;scientificNameID:106485;season:1

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      }
    }
  ]
}
```

Retrieve data per OOPS region



Scale = 1 : 113M

OOPS_regions

fid	gid	name	id
OOPS_regions.fid-61d260b2_14e2f440302_-7733 20		Greater North Sea 20	

Current status

- Products are ready (1958 – 2013)
- 90% of data is uploaded to postgresdb
- First web services are in place

To Do

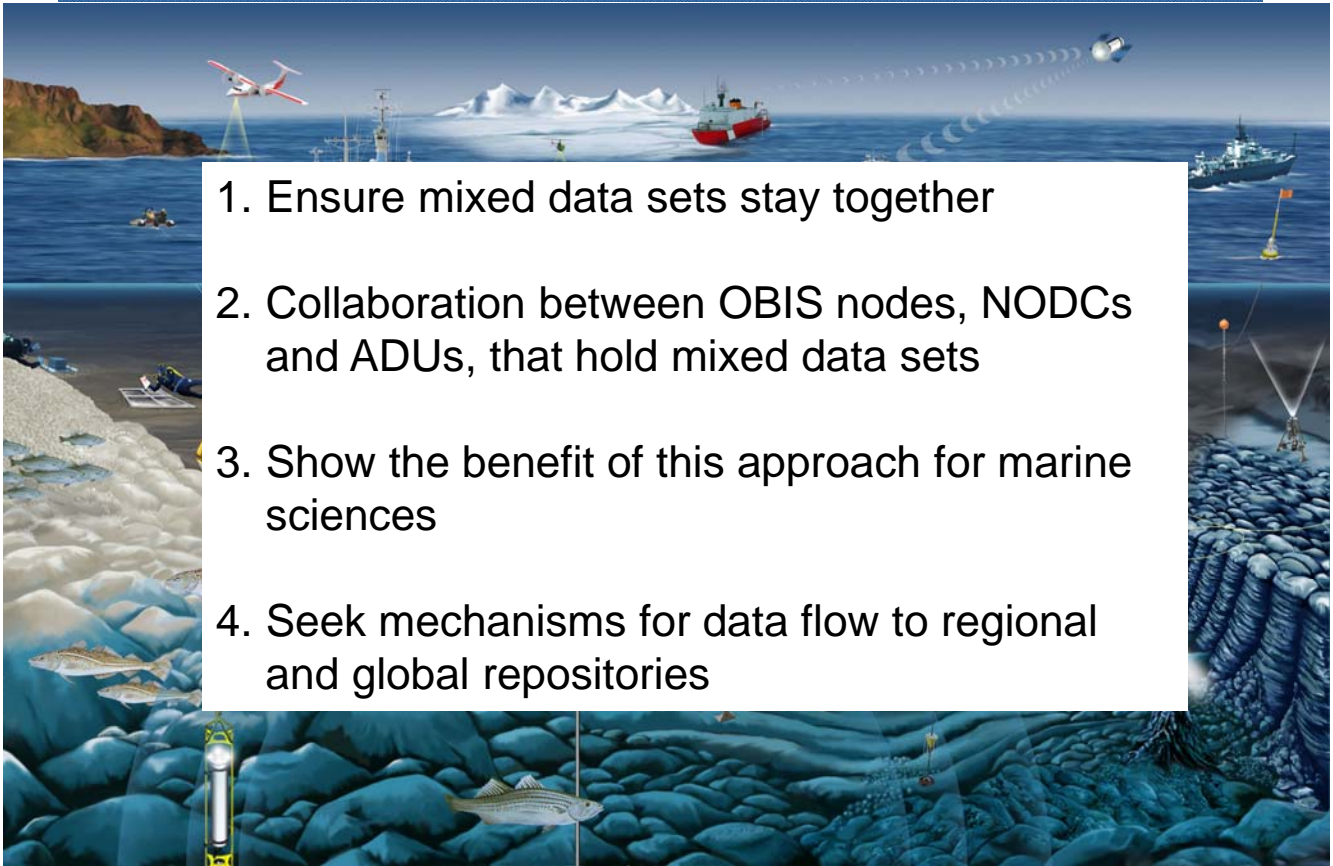
- Calculate average abundance over periods and regions
- Fine tuning of web services

6.2.2.3 OBIS-ENV-DATA

Expanding OBIS with environmental data



EMODnet (I) objectives of the project



1. Ensure mixed data sets stay together
2. Collaboration between OBIS nodes, NODCs and ADUs, that hold mixed data sets
3. Show the benefit of this approach for marine sciences
4. Seek mechanisms for data flow to regional and global repositories



EMODnet

(ii) Expected Outcomes of OBIS-ENV-DATA

- A pilot project showing the feasibility of managing these mixed datasets in OBIS. We aim at involving **at least 5 institutions from at least 3 regional groups**.
- A demonstration of the benefits for biological analysis through scientific publications.
- Procedures, guidelines and recommendations to take this to a next phase, including prospects for financing, and the relationship with other regional and global data systems.

Q.C. Procedures

The data infrastructure of EMODnet Biology is based upon the infrastructure and data flow developed under EurOBIS. Data submitted to EurOBIS go through a series of quality control procedures before being made available online.

- **Metadata:** the data management team will check whether the data and the supplied metadata match and that all necessary fields of the metadata are filled in correctly and as completely as possible.
- **Required data fields:** if the required data fields are not properly filled, a notification will be sent to the data provider. These records will not be uploaded until the required fields are completed.
- **Taxonomy:** all taxon names are linked to the World Register of Marine Species (WoRMS). Unmatched taxa are sent back to the data provider for a secondary check-up.

Q.C. Procedures

- **Geography:** All supplied coordinates are converted to the WSG84 coordinate system and expressed as decimal degrees. Next, these coordinates are checked for possible positioning errors which can include sampling locations on land or in different regions compared to the supplied metadata information.
- **Depth:** Two checks are performed related to depth: (1) Is the documented depth-value possible, if it is compared with the General Bathymetric Chart of the Oceans (GEBCO) and (2) is the documented depth-value possible, if it is compared with the known depth range of the species?
- **Units:** if abundance and/or biomass data are supplied, the presence of the according units is checked. If these units are missing, the data cannot be put to use in comparisons between different datasets.