



# Metadata and data formatting for biogeographical data sets via EurOBIS

*Training Workshop for the Upgrade Black Sea SCENE project*

Flanders Marine Institute  
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# Overview

- ***Why bring data together in EurOBIS?***

- Setting the scene
- What is EurOBIS
- International data flow
- Data availability within EurOBIS
- EurOBIS and the Black Sea

- ***Checking the quality of your data***

- Taxonomic QC
- Geographic QC
- Units & parameters

- ***Preparing data for submission***

- OBIS data scheme

- ***Submitting data to EurOBIS***



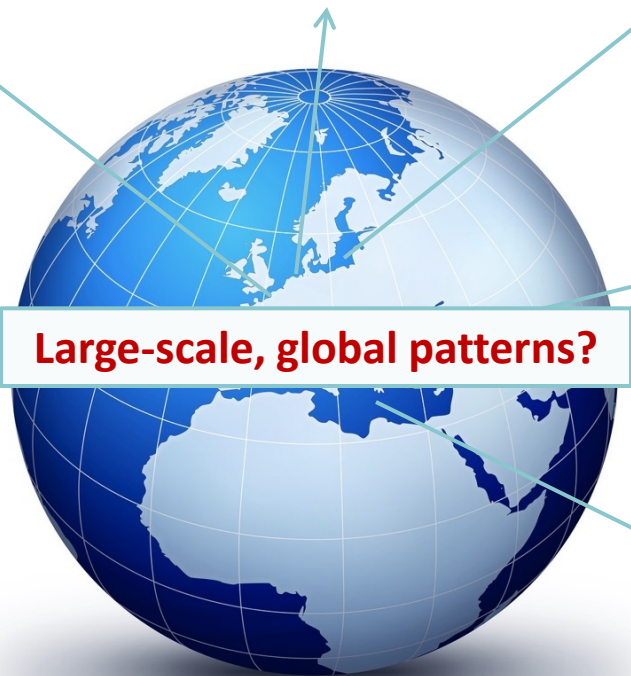


## *Why bring data together in EurOBIS?*





- Research projects / PhD
- Temporal boundaries
- Spatial boundaries
- Financial limitations



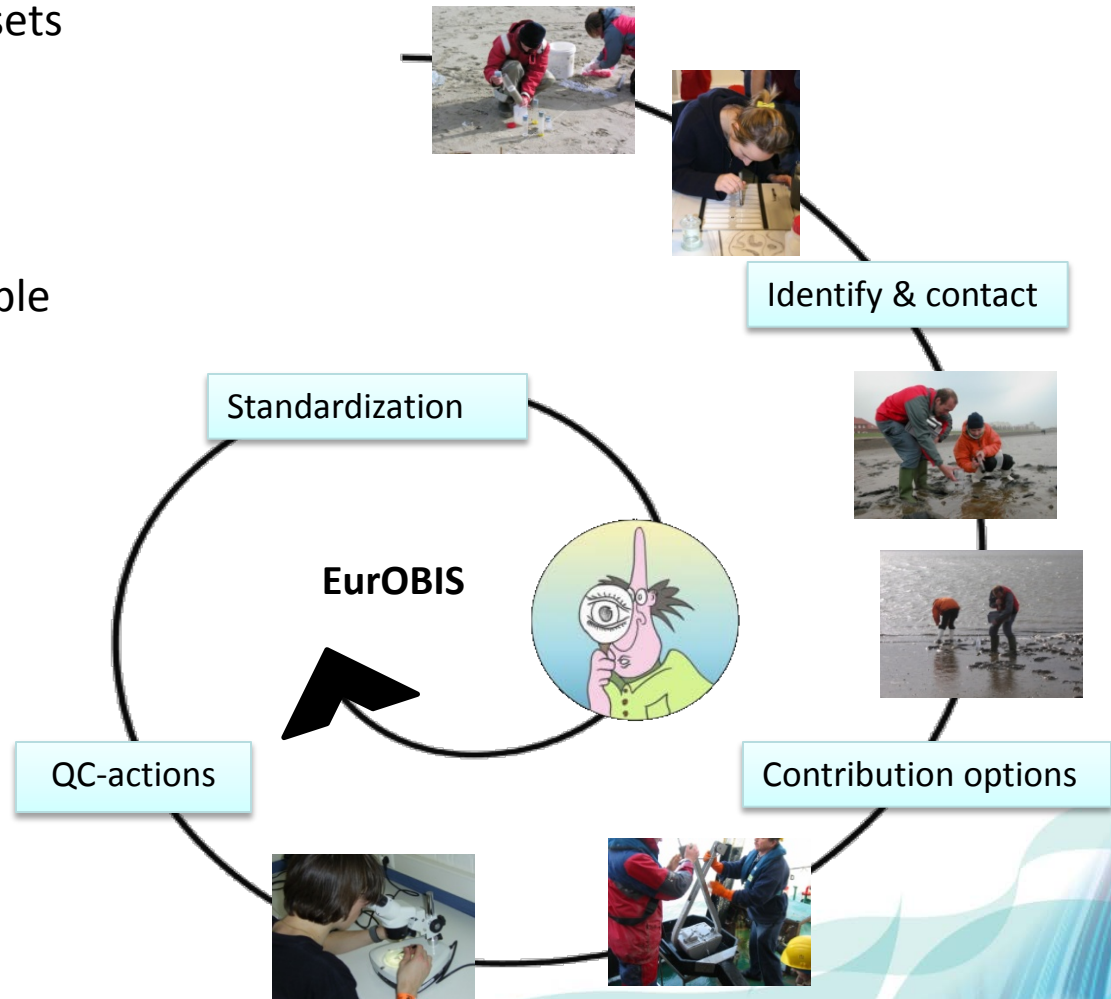
... integrated into EurOBIS

## Standard procedure

- 1) Identify relevant marine datasets
  - 2) Contact data custodians
  - 3) Discuss contribution options
  - 4) QC-actions
  - 5) Make data & metadata available
- => New possibilities

## Data policy

- Cite each used dataset & EurOBIS appropriately
- Contact original data provider when considerable amount of data is used
- Not hold EurOBIS nor provider responsible for errors in the data



# What is EurOBIS?



## European Ocean Biogeographic Information System

- ✓ Biogeographic data on European marine species: taxon name – position (lat-long) – time
- ✓ Freely available online, quality controlled data
- ✓ Distributed system
- ✓ Developed within MarBEF (FP6) (2004-2009)
- ✓ Further maintenance by VLIZ
- ✓ 1 of the 14 regional nodes (RoNs) of OBIS
- ✓ Backbone of EMODnet
- ✓ Standards: Darwin Core & World Register of Marine Species (WoRMS)
  
- ✓ Currently available in EurOBIS (February 2011)
  - 277 datasets
  - 14 360 294 distribution records
  
- ✓ International data flow: EurOBIS <=> OBIS <=> GBIF



- Goal:

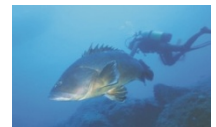
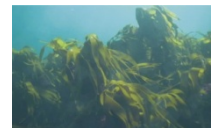
***Allow users to have rapid and free access to the system to search multiple datasets simultaneously for biogeographic information and marine organisms***

- Available data: very mixed

- ✓ Monitoring data
- ✓ Research data
- ✓ Literature data
- ✓ Museum collections
- ✓ All taxonomic groups

- Data gathering: goodwill of scientists & institutes

- ✓ Everyone can contribute
- ✓ Minimum required information: taxon – location – time
- ✓ Additional info: abundance, biomass, depth, ....



# *European Marine Observation & Data Network*

## *EMODnet*



European Commission => set up EMODnet to improve access to high quality marine data for private bodies, public authorities and researchers

### ✓ Objective:

*“create an end-to-end, integrated and inter-operable network of systems of European marine observations and data communications, management and delivery systems, supported by a comprehensive user-oriented toolkit to enable implementation of the Integrated Maritime Policy for Europe”*

### ✓ Proof of concept (2009-2011): Preparatory actions

- Collection of fragmented marine data, integration & making data publicly available
- Identify main challenges, gaps in data availability and knowledge
- Formulate recommendations & develop first components for a permanent EMODnet
- 4 projects:
  - Hydrography, marine geology, chemistry, biology

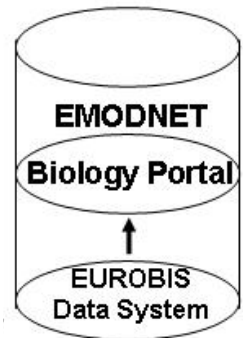




- **EMODnet Biology:**

Delivery of an online data portal for European marine biological data

=> build upon existing systems => EurOBIS

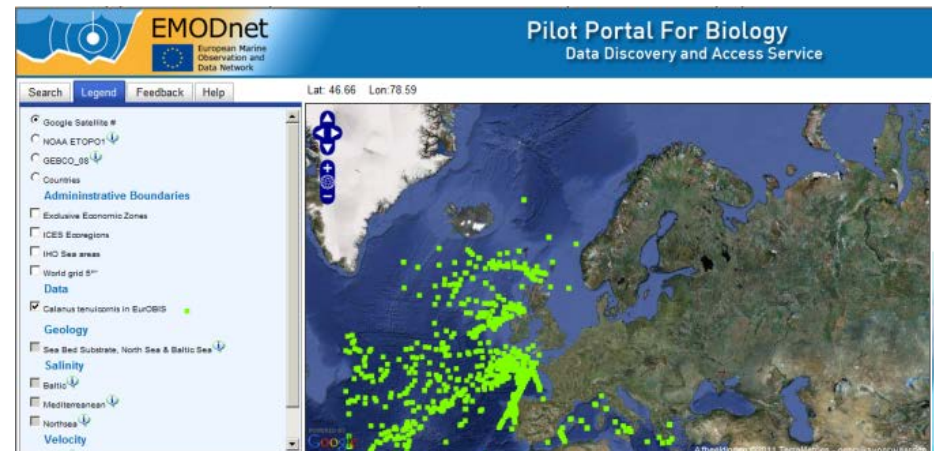


- **Biological lot:**

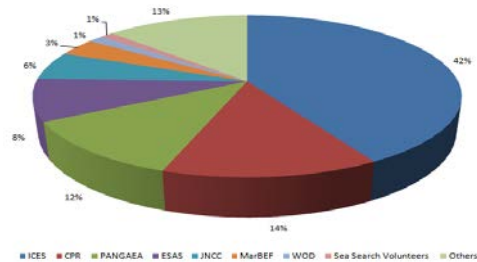
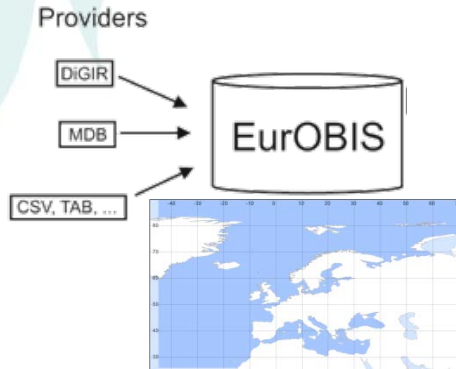
- Focus: temporal/spatial distribution of species composition, abundance and biomass
- Target species: plankton, algae, plants, invertebrates, birds, mammals, reptiles
- Target area: Greater North Sea, Bay of Biscay, Iberian coast
- Responsible & contact: Flanders Marine Institute (VLIZ)

<http://bio.emodnet.eu>

<http://bio.emodnet.eu/portal>



# International data flow

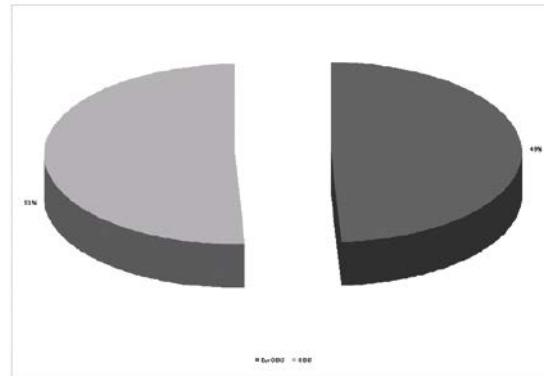


Marine data from

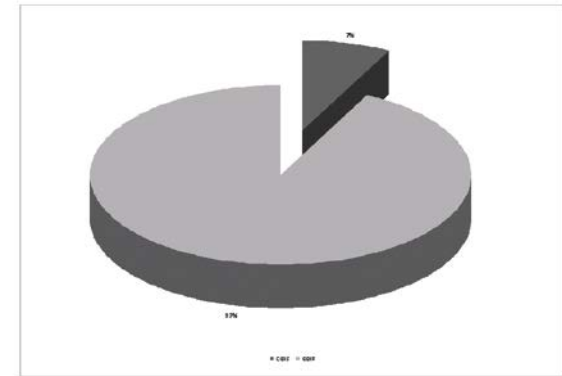
- Europe
- outside Europe, by European institutes

Data delivery:

- Through email: excell, access, CSV, ...
- Through servers: DIGIR, IPT toolkit



EurOBIS: one of the 14 regional nodes of the Ocean Biogeographic Information System (OBIS)

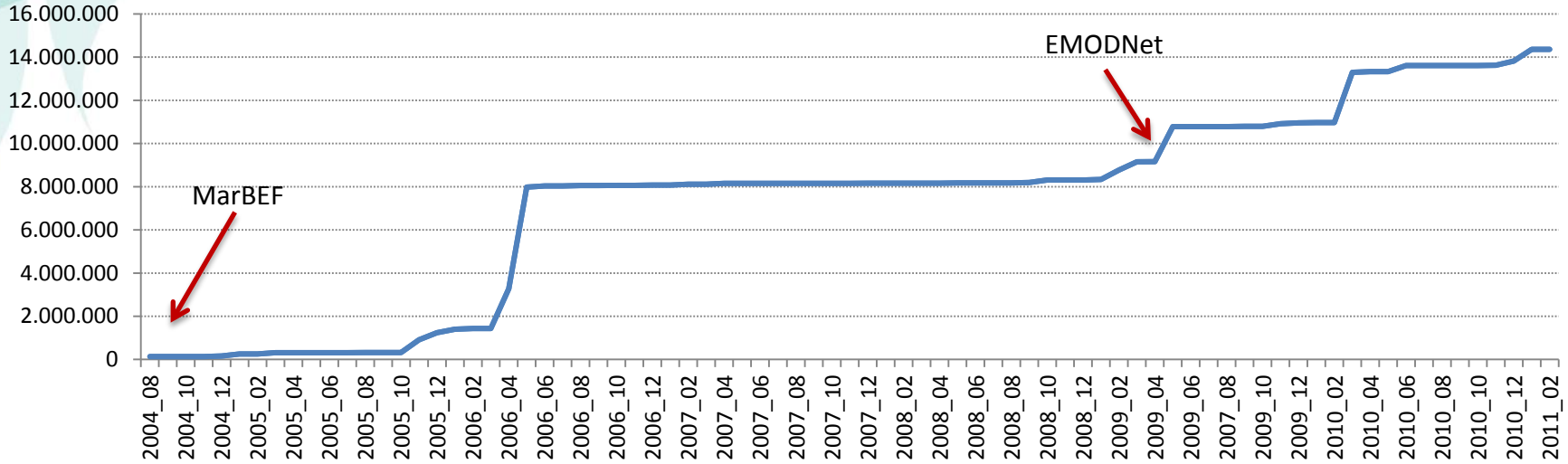


OBIS: marine thematic sub-network of the Global Biodiversity Information Facility (GBIF)

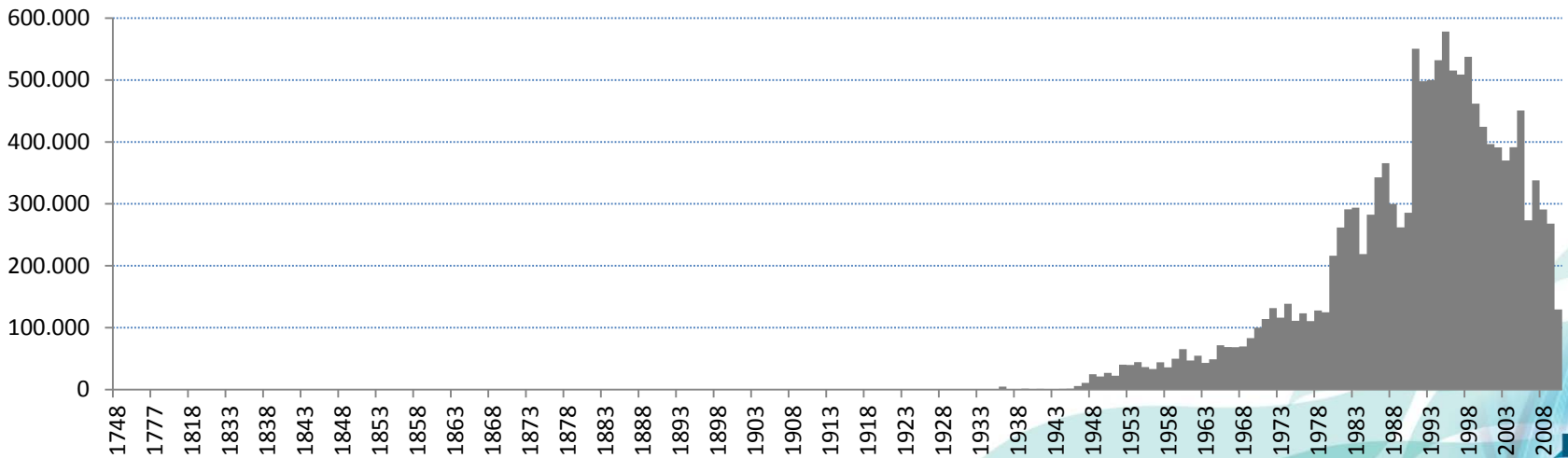


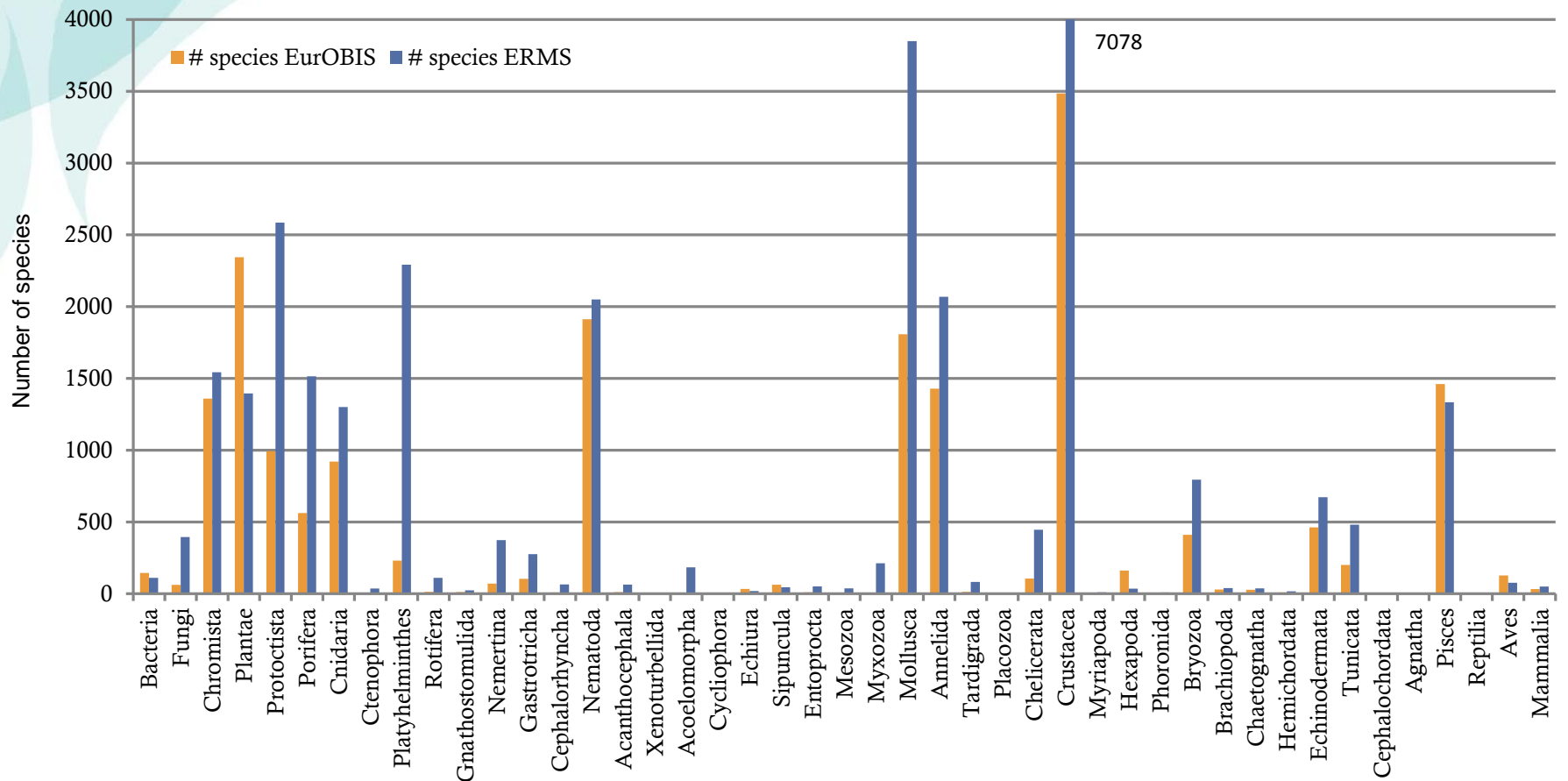
# What is available in EurOBIS?

eurOBIS evolution (available distribution records)



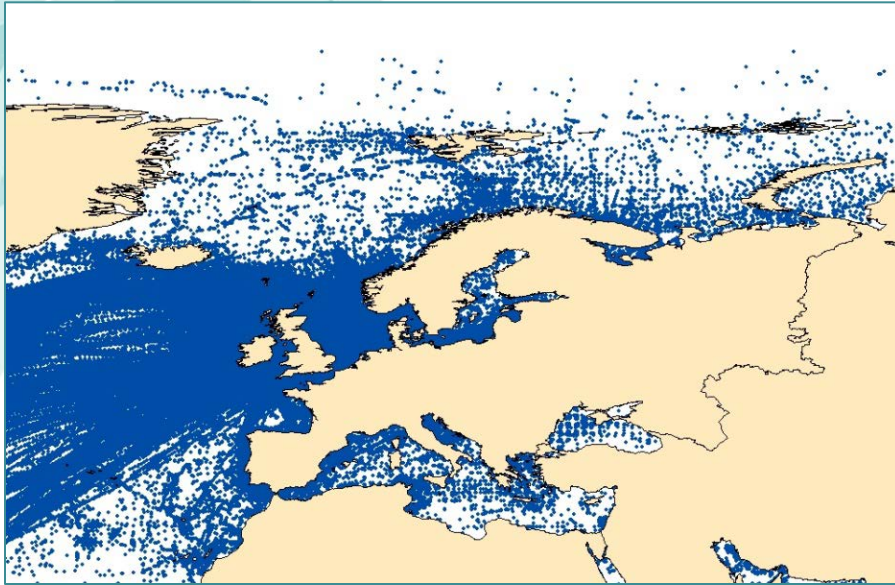
# distribution records per year (situation 15 febr 2011)





Linking the number of documented species per taxon group in EurOBIS to the number of known species in the European Register of Marine Species (ERMS)

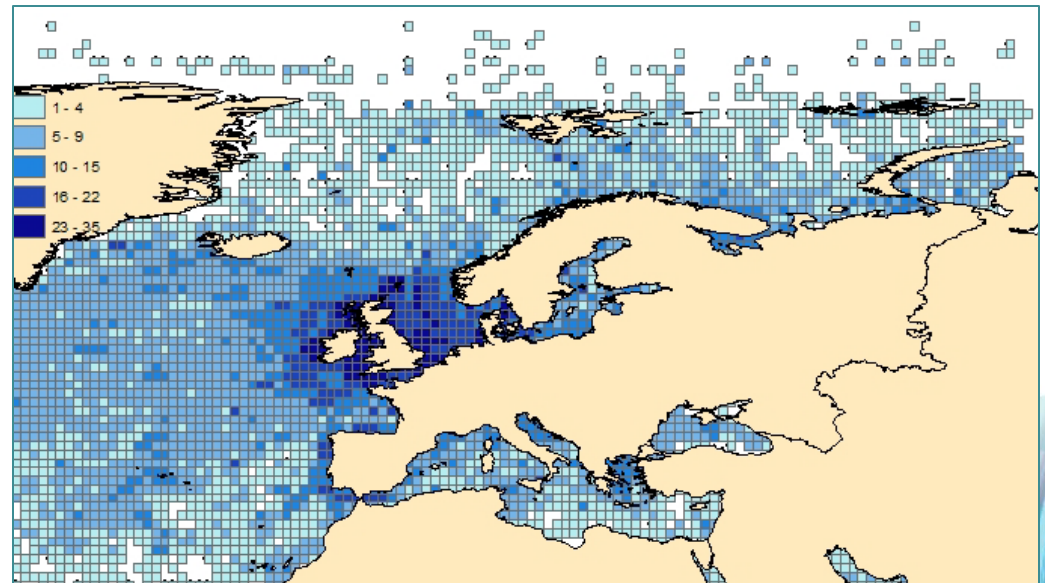




- Overview of all distribution records currently available within EurOBIS
- North Sea, English Channel, North-East Atlantic
  - Mediterranean & Black Sea
  - Arctic region

*Analysis grid representing the number of distinct larger taxonomic groups (Mammals, Aves, Crustacea, Rotifera, Tunicata...) per grid-cell*

**NOT** a representation of the general biodiversity within European marine waters, but merely a representation of where we already have a good data coverage and where data is still lacking (e.g. North Sea versus Mediterranean Sea).



# How well is Black Sea known to EurOBIS?

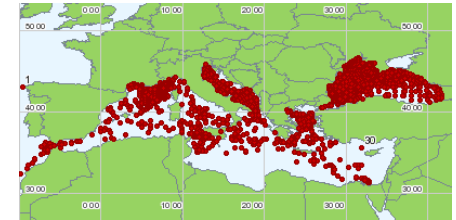
- 53 dataset descriptions related to Black Sea
  - 18 from IBSS & 'Black Sea Marine Biological Network'
  - Others => diverse origins

## Datasets (18)

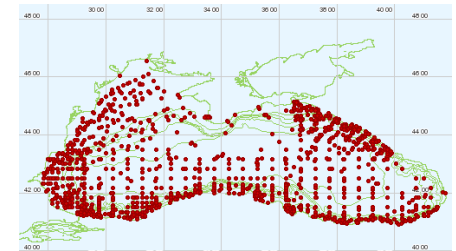
[Top](#) | [Personen](#) | [Instituten](#) | [Projecten](#) | [URLs](#)

- Black Sea *Mnemiopsis leidyi* and *Beroe ovata* database, [details](#)
- Black Sea historical phytoplankton database, [details](#)
- Black Sea phytoplankton, [details](#)
- **CeStrABS**: Cetacean strandings in the northern Black Sea and the Sea of Azov, [details](#)
- Database of the Sevastopol Bay phytoplankton monitoring, [details](#)
- Database of the Sevastopol Bay zooplankton monitoring, [details](#)
- Historical zooplankton records from the Black Sea, [details](#)
- IBSS historical data from different cruises, [details](#)
- Macroalgae of the Crimean coastal zone (Black Sea, 1997-2007), [details](#)
- Multidiscipline historical database of the Black Sea (version III), [details](#)
- **NATO-TU**: Historical database of the Black Sea (NATO-TU Black Sea Database) - version I, [details](#)
- Phytoplankton data collected in the Black Sea during 107 cruise of the R/V "Kovalevskiy", [details](#)
- Phytoplankton data collected in the Black Sea during 33 cruise of the R/V "Professor Vodyanitskiy", [details](#)
- Phytoplankton data collected in the Black Sea during 37 cruise of the R/V "Professor Vodyanitskiy", [details](#)
- Phytoplankton data collected in the Black Sea during a cruise of the R/V "Experiment", [details](#)
- Phytoplankton data collected in the Black Sea during the 5th cruise of the R/V "Kiev", [details](#)
- Seagrasses of the Crimean coastal zone (Black Sea, 1980-2009), [details](#)
- Species composition of meso- and macrozooplankton of the Black Sea, [details](#)

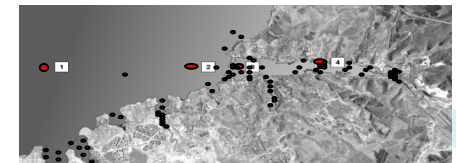
**Only limited data from Black Sea availability to EurOBIS!**



IBSS historical data (EurOBIS)



Mnemiopsis & Beroe database



Sevastopol Bay plankton database



# Black Sea in EurOBIS

- Less than 10 datasets with Black Sea data already available

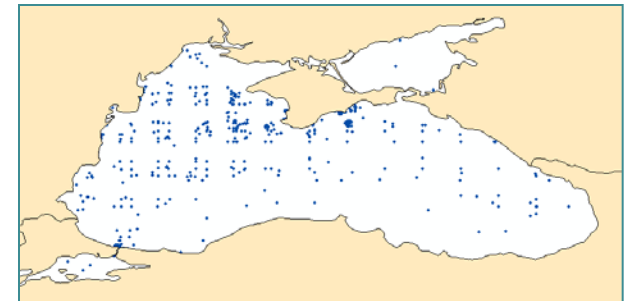
- Available datasets:

- Majority plankton!
- Some benthos, fish

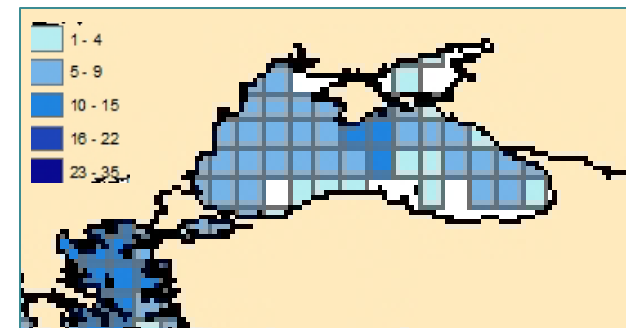
- 15 datasets “in progress”:

- Digitization
- QC & format
- ≠ institutes

- Institute of Biology of the Southern Seas (IBSS)
- Ukrainian Scientific Centre of Ecology of the Sea (UkrSCES)
- Brema Laboratory
- Odessa National University
- Southern Scientific Research Institute of Marine Fisheries and Oceanography (YugNIRO)
- Russian Academy of Sciences
- ...



Sampling locations (=stations)



Taxonomic coverage



***Checking the quality of your data before submission:  
how and why***





# Biodiversity Informatics

## Managing taxonomic names

Ward Appeltans



# Taxonomic quality control

- Link taxon names with World Register of Marine Species
- WoRMS:
  - ✓ Standard list of marine taxon names
  - ✓ First authoritative list of names of all marine & brackish water taxa worldwide
  - ✓ Managed by VLIZ, directed by taxonomic experts
  - ✓ Taxonomic backbone for (Eur)OBIS
  - ✓ Marine contribution to Species2000 & ITIS' Catalogue of Life
- If no link possible:
  - ✓ Consult with data provider(s)
  - ✓ Consult with taxonomic expert(s)
- Originally delivered name is always saveguarded!



[www.marinespecies.org](http://www.marinespecies.org)



## Some examples

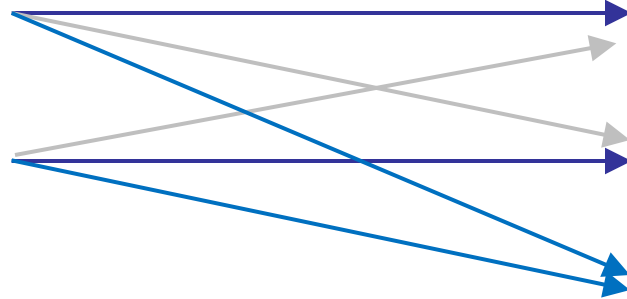
Dataset	Before tax. check
1	<i>Amphiura sunderali</i>
2	<i>Amphiura sundevali</i>
3	<i>Amphiura sundvali</i>
4	<i>Amphiura sundevalli</i>



### Dataset A (Spain)

*Acantholaimus* sp. 1

*Acantholaimus* sp. 2



### Dataset B (Greece)

*Acantholaimus* sp. 1

*Acantholaimus* sp. 2

?

- Which equals which?
- Specimen comparison!?
- Reduction of information till genus level (*Acantholaimus*)  
= loss of biodiversity, but underestimation is preferred to overestimation



**Table 3** Diversity indices for rocky shore and pelagic data, per geographic region

	Species names before quality control		Species names after quality control	
	# Species	# Rare species	# Species	# Rare species
Rocky shore data				
ANE	219	15	187	11
Arctic	646	69	378	44
Mediterranean	1,120	238	834	159
North Sea	251	29	163	25
Pelagic data				
ANE	288	7	180	4
Baltic	592	94	483	82
Mediterranean	420	103	249	66
North Sea	118	15	64	9

# Species = number of distinct species; # Rare species = number of distinct species with only 1 distribution record;  $H'$  = Shannon's diversity index;  $1 - D$  = Simpson's diversity index; ES(50) = Hurlbert's diversity index for 50 individuals. ANE = North-East Atlantic

*“... In total, 6,172 unique taxon names were submitted... After a thorough quality control, however, this number was reduced to 4,525, mostly due to spelling variations and synonymy. Such [taxonomic] quality control is highly needed, since a misspelled or obsolete name could be compared to the introduction of a rare species, with adverse effects on further (biodiversity) calculations...”*

**Source:** Vandepitte *et al.* (2010). Data integration for European marine biodiversity research: creating a database on benthos and plankton to study large-scale patterns and long-term changes. *Hydrobiologia*.



# Geographic quality control

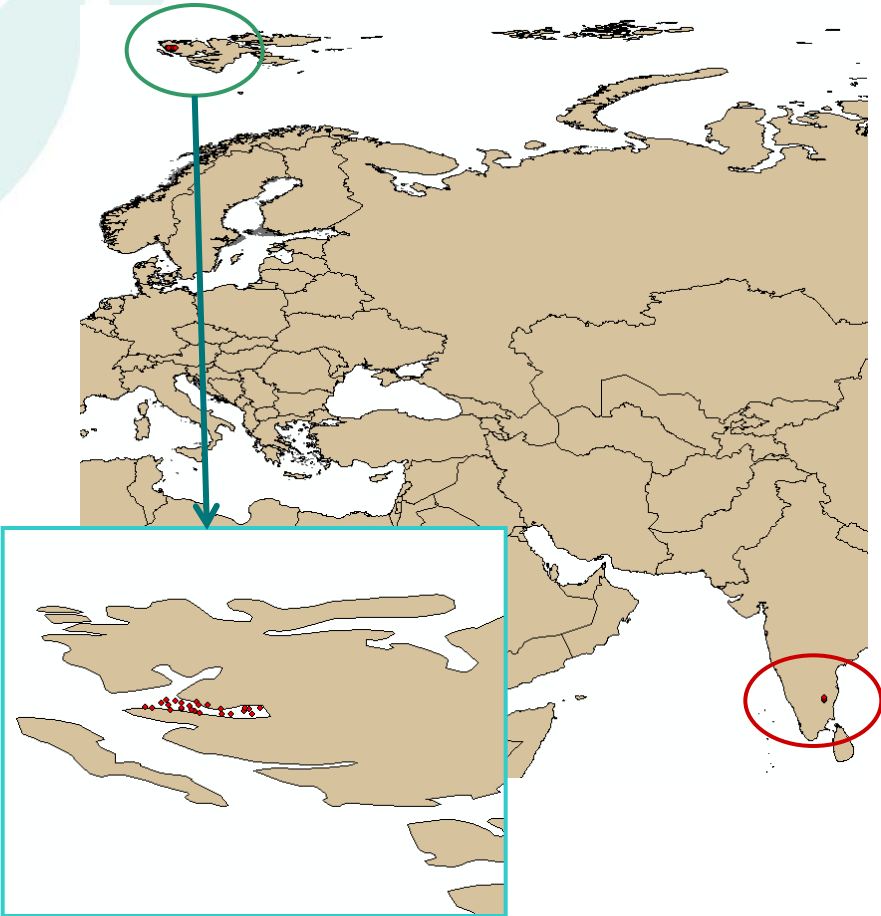
<b>2. Level: Quality control of geographic information</b>			
Transformation of all given geographic information into WGS 84 decimal degrees			
Checking the correctness of georeference by plotting and comparison with meta data			
Correct location after conversion and plotting?			
NO		YES	
Latitude and Longitude were switched?			
NO		YES	
Signs for North/South/West/East were wrong?		Latitude and Longitude data were switched as correction	
NO		YES	
Communication with provider	northern Latitude = + southern Latitude = - eastern Longitude = + western Longitude = -		
		Record was used as correct	

Before quality control	After quality control
18°30'25"N – 5°15'E	18.51 ; 5.25
54,23N – 16.5S	54.23 ; -16.5

WGS84 = World Geodetic System 1984; most used geographical reference system  
 Decimal degrees => easy to work with

## Some examples

“Monitoring in Kongsfjorden area”



Latitude & longitude switched

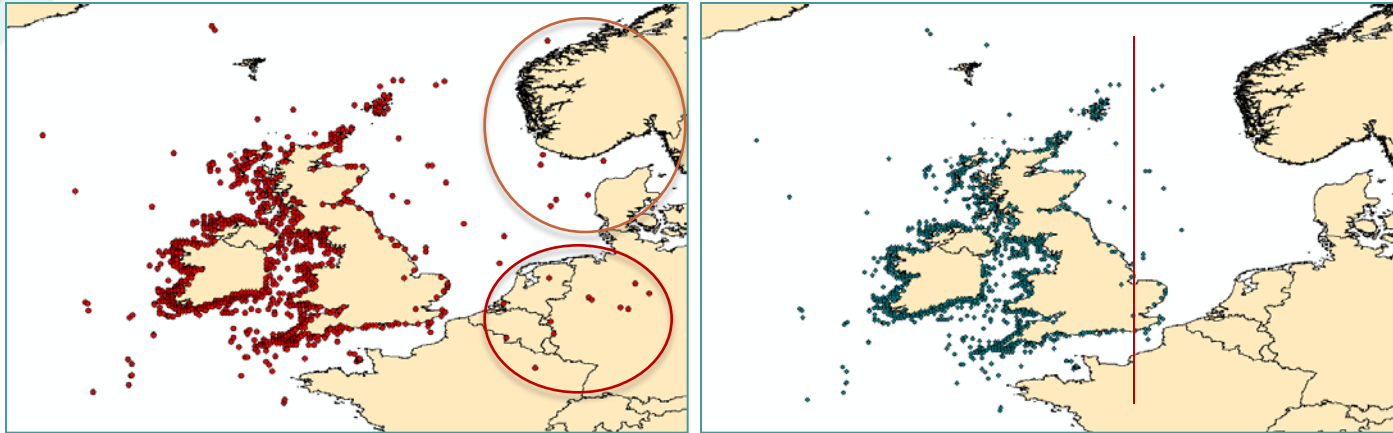
“Monitoring in Belgian part of the North Sea”



“+” & “-” signs switched

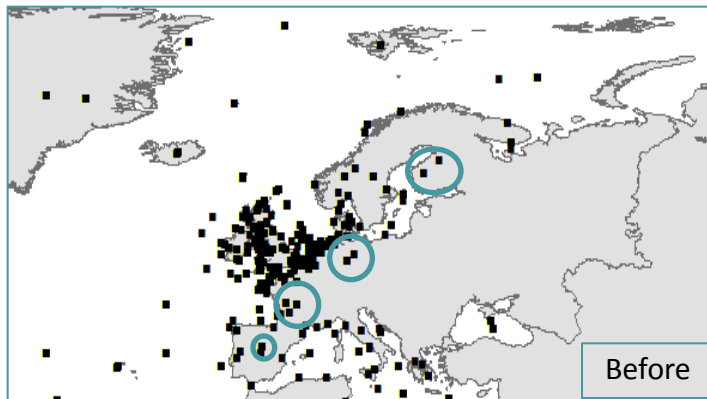


## Sightings and strandings of marine turtles around the coast of UK and Ireland

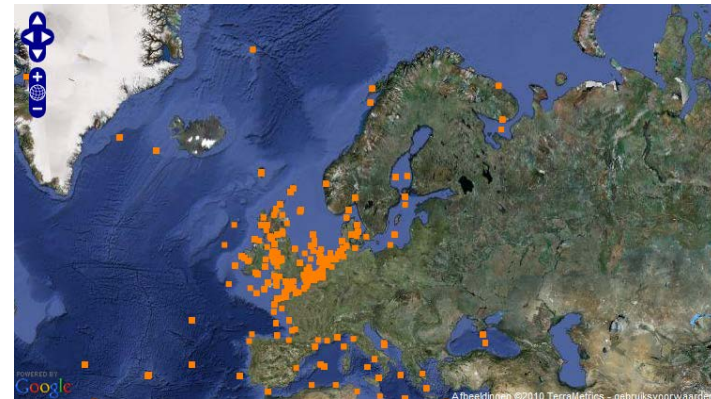


Left: coordinates as received; right: corrected. Errors due to missing minus sign

## Taxonomic Information System for the Belgian coastal area (Tisbe)



Information as cited in literature  
“appearing in the Netherlands” => coordinates on land



Information converted to marine locations  
=> “appearing in the Exclusive Economic Zone of the Netherlands”  
=> less accurate  
=> indicated in ‘coordinate precision’ and ‘note’



# VLIZ Marine Gazetteer



- = Standard, relational list of geographic names
- Coupled with information and maps of the geographic location
- Improve access and clarity of the different geographic, mainly marine names such as seas, sandbanks, ridges and bays

A screenshot of the VLIMAR website's search interface. The header includes the VLIMAR logo and the text 'The VLIZ Marine Gazetteer'. A navigation menu on the left lists 'Home', 'Search VLIMAR', 'Browse VLIMAR', 'Log in', 'About', 'Download', and 'Contact us'. The main content area is titled 'VLIMAR geographic name search' and features an alphabetical search bar with letters A through Z. Below this is a text input field for the geographic name, a dropdown menu for 'Place type' set to 'Any', and input fields for 'Latitude' and 'Longitude', each with a 'Radius' of 5. A 'Search' button is located at the bottom right of the form.

VLIMAR  
The VLIZ Marine Gazetteer

Home > VLIMAR geographic name search  
Search VLIMAR >  
Browse VLIMAR >  
Log in >  
About >  
Download >  
Contact us >

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z  
(alphabetical search)

Enter the geographic name you want to look up. Valid wildcards are '%' and '\_' ('%' replaces zero or more characters, '\_' replaces a single character; click [here](#) for details and examples).

Use the combobox to search for a certain placetype.

Geographic name   
*leave blank for a complete list of geographic names*

Place type

Latitude  Radius:

Longitude  Radius:

<http://www.vliz.be/vmdcdata/vlimar/>







Fish species "A" present in Ukraine

Marine species on land?

Link with adjacent sea area: EEZ

**VLIMAR**  
The VLIZ Marine Gazetteer

**VLIMAR Placedetails**

Name	Language Name	Source
	English	Black Sea (preferred)
		Ukrainian Exclusive Economic Zone (preferred) VLIZ-team

**PlaceType** Sea

**Latitude** 44° 4' 52.7" N (44.0813°)  
**Longitude** 34° 36' 46.2" E (34.6128°)  
**Precision** 670724 meter

**Min. Lat** 40° 54' 37" N (40.9103°)  
**Min. Long** 27° 26' 58.5" E (27.4496°)  
**Max. Lat** 47° 15' 8.5" N (47.2524°)  
**Max. Long** 41° 46' 33.9" E (41.7761°)

**Source** IHO 23-3rd: Limits of Oceans and Seas, Special Publication 23, 3rd Edition 1953, published by the International Hydrographic Organization.

**Relation** Part of [Mediterranean Sea Area \(General Sea Area\)](#) [\[View Hierarchy\]](#)

**Map**

**VLIMAR**  
The VLIZ Marine Gazetteer

**VLIMAR Placedetails**

Name	Language Name	Source
	English	Ukrainian Exclusive Economic Zone (preferred) VLIZ-team

**PlaceType** EEZ

**Latitude** 44° 56' 43.7" N (44.9455°)  
**Longitude** 33° 36' 6.5" E (33.6018°)  
**Precision** 409552 meter

**Min. Lat** 43° 11' 17" N (43.1881°)  
**Min. Long** 29° 35' 35" E (29.5931°)  
**Max. Lat** 47° 15' 8.5" N (47.2524°)  
**Max. Long** 38° 19' 23.8" E (38.3233°)

**Source** VLIZ-team

**Links** <http://www.vliz.be/vmcd/data/marbound/details.php?area=75>

**Relations** Part of [Black Sea \(Sea\)](#) [\[View Hierarchy\]](#)  
 Adjacent to [Ukraine \(Nation\)](#) [\[View Hierarchy\]](#)

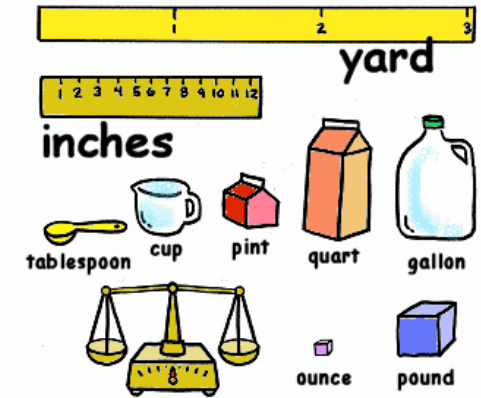
**Map**

Indicate precision!!!!



# Quality control on units & parameters

- EurOBIS can capture
  - ✓ Abundance
  - ✓ Biomass
  - ✓ Depth
  - ✓ Temperature
- Are units defined?
  - ✓ Densities: individuals per  $m^2$ ,  $cm^2$ , liter,  $m^3$ , ...
  - ✓ Biomass: wet weight, dry weight, ash free dry weight?
  - ✓ Depth: meter, centimeter?
- Significance:
  - ✓ Needs thorough documenting
  - ✓ Know what you are dealing with
  - ✓ Comparison



## Length Conversion

kilometer (km)	→	miles (mi)
kilometer (km)	→	feet (ft)
meter (m)	→	feet (ft)
centimeter (cm)	→	inches (in)
millimeter (mm)	→	inches (in)
inches (in)	→	centimeter (cm)
inches (in)	→	millimeter (mm)
feet (ft)	→	meters (m)
yards (yd)	→	meters (m)
yards (yd)	→	kilometers (km)
miles (mi)	→	kilometers (km)



## *Preparing your data for submission to EurOBIS*



## OBIS data scheme

- List of data fields with names, descriptions and format notes
- Extension to the Darwin Core version 2 standard
  - = > number of additional fields
- Implementing OBIS scheme = being compliant with both Darwin Core and OBIS standard
  
- 74 data fields
  - 6 required
  - 15 highly recommended
  - 53 optional

<http://www.iobis.org/data/schema-and-metadata>



WHAT?

Scientific Name	Required	Text	The full name of lowest level taxon the Cataloged Item can be identified as a member of, includes genus, specific epithet, and subspecific epithet (zool.) or infraspecific rank abbreviation, and infraspecific epithet (bot.) Use name of suprageneric taxon (e.g., family name) if Cataloged Item cannot be identified to genus, species, or infraspecific taxon.
Basis of record	Highly Recommended	Text	An abbreviation indicating whether the record represents an observation (O) (this can include a visual observation, a survey catch, a commercial landing record, etc), a collected living organism, such as a tree in a botanical garden (L), a specimen in a collection/museum (S), a collected germplasm/seed (G), a photo (P), or derived from literature, where original basis unknown (D).

+

WHERE?

Latitude	Required	Numeric	The latitude of the location from which the specimen was collected. This value should be expressed in decimal degrees (East & North = +; West & South = -). GPS-derived data must use the WGS 84 geodetic reference system ( <a href="http://www.wgs84.com/">http://www.wgs84.com/</a> ).
Longitude	Required	Numeric	The longitude of the location from which the specimen was collected or in which the sample/observation/record event occurred. This value should be expressed in decimal degrees (East & North = +; West & South = -). GPS-derived data should be referenced to the WGS/84 datum.
Coordinate Precision	Highly Recommended	Numeric	An estimate of how tightly the locality was specified in the Latitude and Longitude fields; expressed as a distance, in meters, that corresponds to a radius around the latitude-longitude coordinates. Use NULL where precision is unknown, cannot be estimated, or is not applicable.

+



BY WHO?

Institution Code	Required	Text	A "standard" code identifier that identifies the institution to which the collection belongs, if there is one. Use the code that is "standard" in your discipline, if there is one (no global registry exists for assigning institutional codes). If not, use a short version of the name of the institution. (e.g. "NMNH" for Smithsonian National Museum of Natural History or "Duke" for Duke University).
Collection Code	Required	Text	A unique alphanumeric value which identifies the collection within the institution (e.g. "FishBase").
Catalog Number	Required	Text / Numeric	A unique alphanumeric value which identifies an individual record within the collection, i.e. the key. It is recommended that this value provides a key by which the actual specimen/observation can be identified. If the specimen/observation has several items such as various types of preparation, this value should identify the individual component of the specimen.

+

WHEN?

Year Collected	Highly Recommended	Numeric	The year (expressed as an integer) the sample/observation/record event occurred. The full year should be expressed (e.g. 1972 must be expressed as "1972" not "72"). Must always be a four digit integer. Where the event covers a range of values for year, indicates the mid-point of that range.
Month Collected	Highly Recommended	Numeric	The month of year the sample/observation/record event occurred in the field. Where the event covers a range of values for month, indicates the mid-point of that range. Leave blank if even spans multiple years.
Day Collected	Highly Recommended	Numeric	The day of the month the sample/observation/record event occurred in the field. Possible value ranges from 01..31 inclusive. Where the event covers a range of values for day, indicates the mid-point of that range. Leave blank if event spans multiple months.

= Presence of taxon at certain place and time, observed by someone



# CLASSIFICATION

Kingdom	Highly Recommended	Text	The kingdom to which the organism belongs.
Phylum	Optional	Text	The phylum (or division) to which the organism belongs
Class	Optional	Text	The class name of the organism
Order	Optional	Text	The order name of the organism
Family	Optional	Text	The family name of the organism

Scientific name: *Chondracanthus*, unknown species



Kingdom Plantae (Rhodophyta)



Kingdom Animalia (Crustacea)

Scientific name: *Alcyonium*, unknown species



Phylum Porifera  
*Alcyonium* accepted as *Tethya*



Phylum Cnidaria



Phylum Cnidaria



## CLASSIFICATION

Scientific  
Name Author

Optional

Text

The author of a scientific name. Author string as applied to the accepted name. Can be more than one author (concatenated string). Should be formatted according to the conventions of the applicable taxonomic discipline. Parentheses should be applied as appropriate for the relevant rules of Nomenclature (ICZN/ICBN) for the name. For example, if the name of an animal has undergone a genus revision, the authority and year should be placed in parentheses. Example: (Hastings, 1986)

Scientific name: *Alebion*

*Alebion* Krøyer, 1863

=> Animalia, Crustacea, parasitic copepods



*Alebion* Gray, 1867

=> Animalia, Porifera

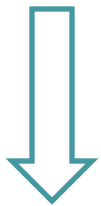
=> Accepted as *lophon* Gray, 1867



Dirk Schories <http://www.gulamarina.com>



## DETAILS ON "WHERE?"



Can give confirmation of latitude & longitude values or help find possible errors in the values

Continent Ocean	Optional	Text	The continent or ocean from which a specimen was collected or in which the sample/observation/record event occurred. OBIS recommends that ocean names follow the NASA Global Change Master Directory list of <a href="#">Bodies of Water</a>
Country	Optional	Text	The country or major political unit from which the specimen was collected or in which the sample/observation/record event occurred. ISO 3166-1 values should be used. Full country names are currently in use. A future recommendation is to use ISO3166-1 two letter codes or the full name when searching
State Province	Optional	Text	The state, province or region (i.e. next political region smaller than Country) from which the specimen was collected or in which the sample/observation/record event occurred. There is some suggestion to use the values described in ISO 3166-2, however these values are in a continual state of flux and it appears unlikely that an appropriate mechanism (by ISO) will be in place to manage these changes. Hence it is recommended that where possible, the full, unabbreviated name should be used for storing information. The server should optionally handle abbreviations as an access point. Note: this is a recurring theme (country and state) abbreviations. Check the existence of an attribute type to deal with abbreviations from the bib-1 profile
County	Optional	Text	The county (or shire, or next political region smaller than State / Province) from which the specimen was collected
Locality	Optional	Text	The locality description (place name plus optionally a displacement from the place name) from which the specimen was collected or in which the sample/observation/record event occurred. Where a displacement from a location is provided, it should be in un-projected units of measurement (e.g. "7 miles north of Hawaii"). It is strongly recommended that Locality be used, to allow cross-checking of the latitude and longitude fields

## HOW MANY?

Individual Count	Optional	Numeric	The number of individuals present in the lot or container. Not an estimate of abundance or density at the collecting locality.
SampleSize	Highly Recommended	Text	SampleSize: the size of the sample from which the collection/observation was drawn. It can be a volume (e.g. for a phytoplankton sample), a linear distance (e.g. for a visual transect or net haul), a surface area (e.g. for a benthic core), etc. This field must also include the units, e.g. ?200 m? for a transect, or ?0.25 m <sup>2</sup> ? for a benthic grab (use ^ to denote a superscript). Note that when multiple collections/observations are reported from the same physical sample, a code identifying the sample can be placed in the Field_Number field to allow all collections/observations from a single sample to be connected.
Observed Individual Count	Highly Recommended	Numeric	The number of individuals (abundance) found in a collection/record event.
Observed Weight	Optional	Numeric	The total biomass found in a collection/record event. Expressed as kg.

**Individual Count:** the number of specimens that were saved (museum collections) (Darwin Core)

**Observed Individual Count:** the total number per species that were caught (OBIS addition)

**Observed weight:** biomass

**Sample Size:** indication of the size of the studied sample (area, volume, distance)

=> Without this, the 'count' values are almost meaningless...



Minimum Depth	Highly Recommended	Numeric	The minimum distance in meters below the surface of the water at which the collection/record was made; all material collected was at least this deep. Positive below the surface, negative above (e.g. collecting above sea level in tidal areas).
Maximum Depth	Highly Recommended	Numeric	The maximum distance in meters below the surface of the water at which the collection/record was made; all material collected was at most this deep. Positive below the surface, negative above (e.g. collecting above sea level in tidal areas).

Sex	Optional	Text	The sex of a specimen or collected/observed individual(s). The domain should be a controlled set of terms (codes) based on community consensus. Proposed values: M=Male; F=Female; H=Hermaphrodite; I=Indeterminate (examined but could not be determined); U=Unkown (not examined); T=Transitional (between sexes; useful for sequential hermaphrodites); B = Both Male and Female
Life Stage	Optional	Text	Indicates the life stage present. Will require developing a controlled vocabulary. Can include multiple stages for a lot with multiple individuals.

Notes	Optional	Text	Free text notes attached to the specimen record
-------	----------	------	---

- coordinates come from VLIMAR, approximate coordinates as exact sampling location is unknown
- *AphiaID:234038*

...



## *Submitting your data to EurOBIS*



# Why?

- Archival
  - ✓ Prevent corruption & loss
- Online metadata
  - ✓ Thorough description
  - ✓ Citation available => can be cited like publication upon use
  - ✓ Searchable
- Longer life-span ('second life')
- Quality control
  - ✓ Quality enhancement of data
  - ✓ Communication with provider
- Greater visibility of researchers & institutes



*Who owns research data?*



# How?

- Send data by email to VLIZ
  - Formats: excel, access, text, ...
- Link up with EurOBIS through
  - DiGIR (Distributed Generic Info Retrieval; <http://digir.sourceforge.net/>)
  - IPT (Integrated Publishing Toolkit; <http://marinemetadata.org/references/ipttool>)
- Online submission of data
  - <http://www.marbef.org/data/submit.php>
  - <http://bio.emodnet.eu/metasubmit>
- Provide metadata
  - = description of your dataset



## General

Full name of the dataset\* [i](#)

Person filling in this form\* [i](#)

Institute [i](#)

Contact email\*

Dataset version [i](#)

Dataset date [i](#)

Abstract\* [i](#)

Extensive description of the dataset [i](#)

Keyword(s) [i](#)

[\[lookup\]](#)

Habitat [i](#)

Marine waters

Fresh waters

Brackish waters

Total number of distribution records in the database (approx.) [i](#)

Status of the data collection [i](#)

Basis of the distribution records [i](#)

Access Constraints [i](#)

How's the quality of the dataset? [i](#)

## People involved [i](#)

Name and contact of person

Institution

Role

[Remove](#)

[Add](#)



## Taxonomic cover

Taxonomic scope [i](#)

[\[lookup in ERMS\]](#)

Total number of species included (approx.) [i](#)

The taxonomic names have been matched with ERMS names [i](#)

What type(s) are the data points? [i](#)

presence

counts

biomass

density

other- specify:

Any other parameter(s) measured? [i](#)

## Geographical cover

Geographical scope\* [i](#)

[\[lookup\]](#)  Min. lat  Min. lon  Max. lat  Max. lon

Geographical resolution [i](#)

Total number of localities/stations included (approx.) [i](#)

## Temporal cover

Date of first record [i](#)

year	month	day
<input type="text"/>	<input type="text"/>	<input type="text"/>

Date of last record [i](#)

year	month	day
<input type="text"/>	<input type="text"/>	<input type="text"/>

Temporal resolution [i](#)

Unknown





## Reference

Preferred citation of the dataset: how should this dataset be referred to in scientific publication? [i](#)

Reference(s) of publication(s) that was based on this dataset (one reference per textfield) [i](#)

Remove

Add

Reference(s) of publication(s) that describe this dataset in detail (one reference per textfield)

Remove

Add

Format in which the dataset is available [i](#)

## EurOBIS

Will the dataset be made available to EurOBIS? [i](#)

How will the dataset be transferred to EurOBIS? [i](#)

Upload dataset file (max. 10MB) [i](#)

Browse...

## Comments

Any additional comments? [i](#)

Submit



## IBSS historical data from different cruises

### Details:

[Responsibles](#) | [Parameters](#) | [Instances](#) | [URLs](#)

**Type:** Monitoring  
**Status:** In Progress  
**Access constraint:** Unrestricted  
**Version:** 1.0  
**Size reference:** 3005 distribution records  
**Citation:** Historical dataset of marine biological records, Institute of Biology of the Southern Seas, NAS Ukraine

**Abstract:** Data of the Institute of Biology of the Southern Seas, NAS Ukraine

**Habitat:** Marine  
**Themes:** Biology, Biology > Phytoplankton, Biology > Zooplankton  
**Keywords:** Biological surveys, Phytoplankton, Zooplankton

### Description:

Institute of Biology of the Southern Seas has huge amount of different multidisciplinary datasets collected since 1871. At the moment only part of them is digitized and put to the integrated data and information management system of the institute. This dataset presents biological data such as zooplankton and phytoplankton samples data from different scientific cruises performed by the IBSS ships and from cruises of other organizations where IBSS group worked. The database is being populated with newly digitized and obtained data on the permanent basis.

These data were put to the institute's information system and were made available for the scientific community with the support of the Flemish Government within the OceanUkraine project (<http://www.vliz.be/projects/ocean-ukraine>)

### Responsible:

[Top](#) | [Parameters](#) | [Instances](#) | [URLs](#)

- **IBSS:** National Academy of Sciences of Ukraine; Institute of Biology of the Southern Seas, [details](#), data manager, data manager, database developer, data manager, database developer
  - [Vladymyrov, Vladimir](#), data manager

### Geographical cover:

- ANE, Atlantic [\[gazetteer\]](#)
- Mediterranean [\[gazetteer\]](#)
- MED, Black Sea [\[gazetteer\]](#)

### Parameters:

[Top](#) | [Responsibles](#) | [Instances](#) | [URLs](#)

- **Parameter:** Counts
- **Parameter:** Density
- **Parameter:** Presence

### Parent dataset:

- European Ocean Biogeographic Information System, [details](#)

### Instances (2)

[Top](#) | [Responsibles](#) | [Parameters](#) | [URLs](#)

**Medium:** Server  
**Location:** MS SQL Server  
**Storage insitute:** **IBSS:** National Academy of Sciences of Ukraine; Institute of Biology of the Southern Seas, [details](#)

**Medium:** Internet  
**Contact:** [Gorbunov, Vladimir](#) **IBSS:** National Academy of Sciences of Ukraine; Institute of Biology of the Southern Seas, [details](#) |  
**URL:** DiGIR: [digir.ibss.org.ua/digir/DiGIR.php](http://digir.ibss.org.ua/digir/DiGIR.php)

### URLs (3)

[Top](#) | [Responsibles](#) | [Parameters](#) | [Instances](#)

- [data.ibss.org.ua](http://data.ibss.org.ua), Online dataset
- <http://bio.emodnet.eu/portal/index.php?dasis=1675>, Online dataset
- <http://www.marbef.org/data/eurobissearch.php?dataproducer=56>, Online dataset



## Questions?

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