

# International networking VLIZ data center - FUST

*Francisco Hernandez*  
*VLIZ Flanders Marine Institute*





## Flanders Marine Institute (VLIZ)

- Ostend, Belgium
- Since 1999
- Funded by Flanders government and province of West Flanders
- Mission: Support and facilitate marine sciences
- [www.vliz.be](http://www.vliz.be)



The VLIZ Data Centre provides assistance, technologies and tools to scientists and policymakers to support marine data management. Within international networks VLIZ participates in the development of data infrastructures and promotes the flow of marine data from Belgium.



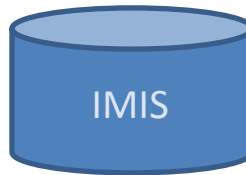
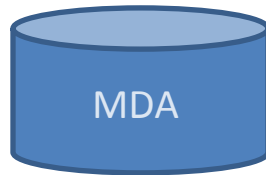
Staff of the Datacentre division - anno August 2017 VLIZ



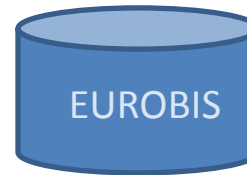
# Manage FAIR and OPEN data



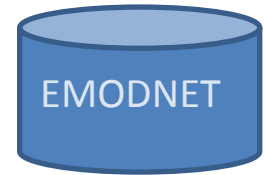
## Marine Data Archive



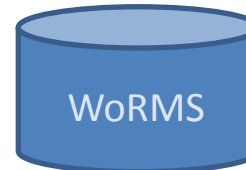
## Data system



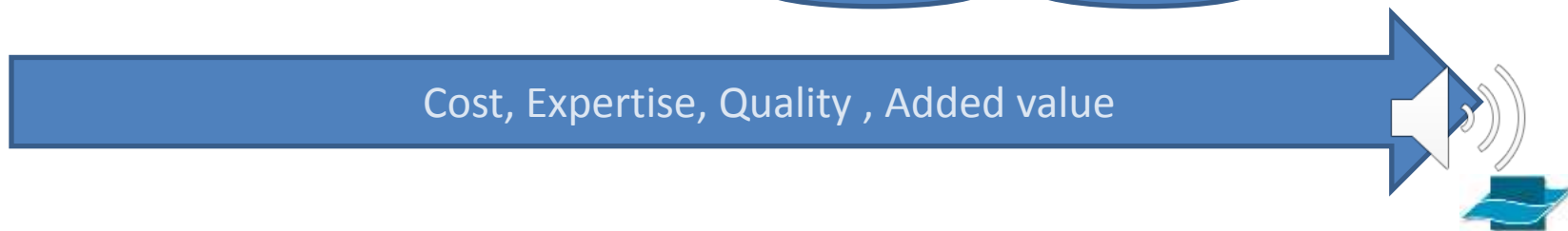
## Data products Atlases



## Taxonomic

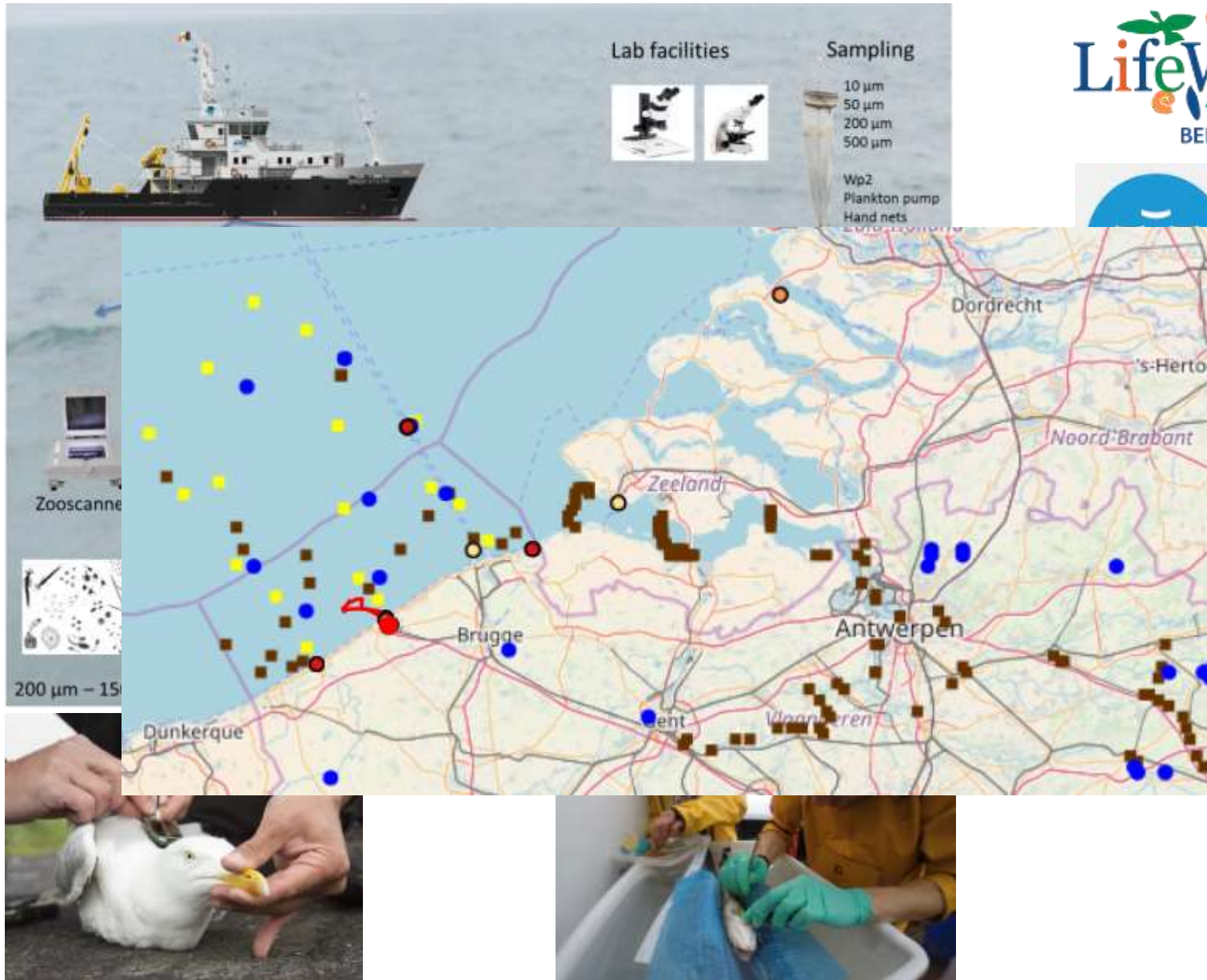


## Geographic





# Automate marine observations



INTEGRATED  
CARBON  
OBSERVATION  
SYSTEM

TER  
urope



# Build Virtual Research Environments



\* Resource



Access



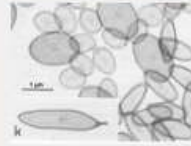
[marine.lifewatch.eu](http://marine.lifewatch.eu)

[www.lifewatch.be/data-services/](http://www.lifewatch.be/data-services/)

[www.lifewatch.be/en/e-lab](http://www.lifewatch.be/en/e-lab)







Global effort to register all marine species names  
370 taxonomic editors, 185 institutions, 38 countries

554,084 species names

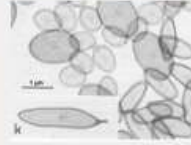
Standard for OBIS, IODE, ICES, BODC, SeaDataNet..

> 40 global or regional lists

<http://www.marinespecies.org>









## WoRMS taxon details

### ★ *Aphrodita aculeata* Linnaeus, 1758

<b>AphiaID</b>	129840 (urn:lsid:marinespecies.org:taxname:129840)	 <p>★ colour figure from ...</p>
<b>Classification</b>	Biota > ★ Animalia (Kingdom) > ★ Annelida (Phylum) > ★ Polychaeta (Class) > ★ Errantia (Subclass) > ★ Phyllodocta (Order) > ★ Aphroditiformia (Suborder) > ★ Aphroditidae (Family) > ★ Aphrodita (Genus) > ★ <i>Aphrodita aculeata</i> (Species)	
<b>Status</b>	accepted	
<b>Rank</b>	Species	
<b>Typetaxon of</b>	★ <i>Aphrodita</i> Linnaeus, 1758	
<b>Parent</b>	★ <i>Aphrodita</i> Linnaeus, 1758	
<b>Orig. name</b>	★ <i>Aphrodita aculeata</i> Linnaeus, 1758	
<b>Synonymised names</b>	★ <i>Aphrodita borealis</i> Johnston, 1840 (subjective synonym) ★ <i>Aphrodita nitens</i> Johnston, 1865 (subjective synonym) ★ <i>Aphrodite aculeata</i> (Linnaeus, 1761) (lapsus calami) ★ <i>Aphroditella pallida</i> Roule, 1898 (subjective synonym) ★ <i>Eruca echinata</i> Barrelier, 1714 (pre-Linnaean, not a binominal, subjective synonym) ★ <i>Eruca marina</i> Ruysch, 1721 (pre-Linnaean name, subjective synonym) ★ <i>Halithea aurata</i> Risso, 1826 (subjective synonym) ★ <i>Halithea sericea</i> Lamarck, 1818 (subjective synonym) ★ <i>Hystrix marina</i> Redi in Claparède, 1868 (subjective synonym) ★ <i>Milnesia nuda</i> Quatrefages, 1866 (subjective synonym) ★ <i>Mus marinus</i> [Linnaeus, informal 1756] (unavailable pre-Linnaean name, subjective synonym) ★ <i>Vermis aureus</i> Claparède, 1868 (subjective synonym)	
<b>Environment</b>	marine, brackish, fresh, terrestrial	
<b>Fossil range</b>	recent only	
<b>Original description</b>	Linnaeus, C. (1758). Systema Naturae per regna tria naturae, secundum classes, ordines, genera, species, cum characteribus, differentiis, synonymis, locis. Editio decima, reformata. Laurentius Salvius: Holmiae. ii, 824 pp., available online at <a href="http://www.biodiversitylibrary.org/item/10277#page/3/mode/1up">http://www.biodiversitylibrary.org/item/10277#page/3/mode/1up</a> page(s): 655 <a href="#">[details]</a>	
<b>Type data</b>	★ Note Unknown ("in oceano"-Linnaeus, 1758: 655)., No... <a href="#">ⓘ</a>	
<b>Taxonomic citation</b>	Read, G.; Fauchald, K. (Ed.) (2018). World Polychaeta database. <i>Aphrodita aculeata</i> Linnaeus, 1758. Accessed through: World Register of Marine Species at: <a href="http://www.marinespecies.org/aphia.php?p=taxdetails&amp;id=129840">http://www.marinespecies.org/aphia.php?p=taxdetails&amp;id=129840</a> on 2018-05-11	

Sources (39)

Documented distribution (40)

Notes (2)

Attributes (9)

Vernaculars (18)

Links (16)

Images (10)



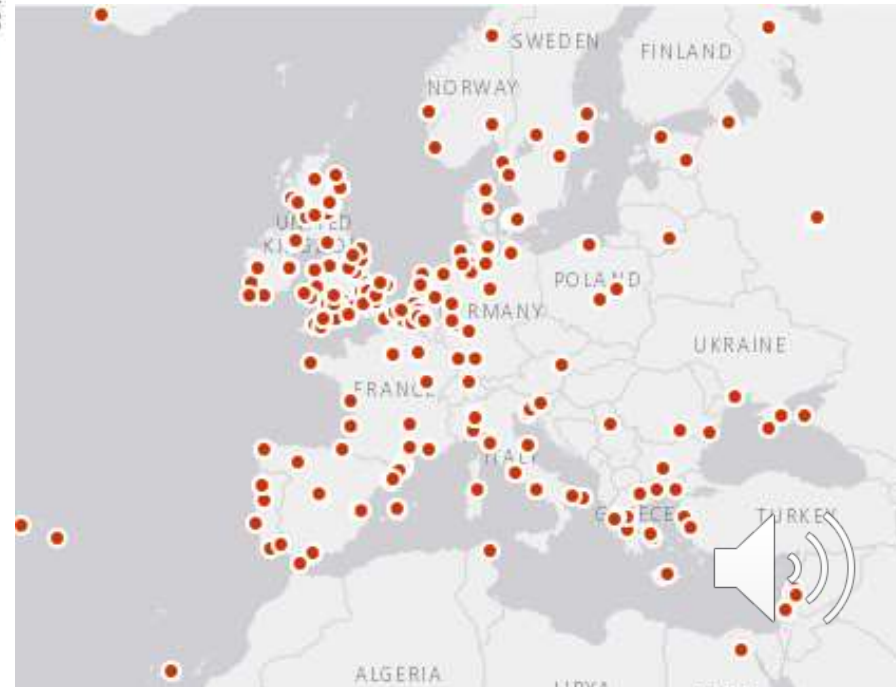
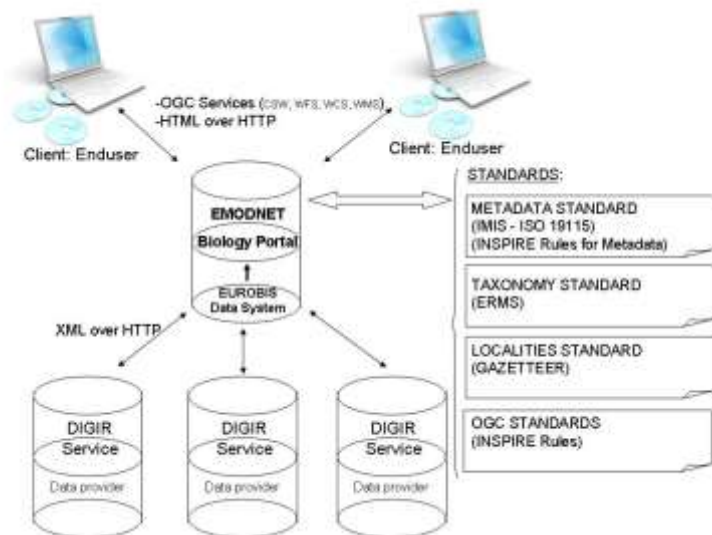
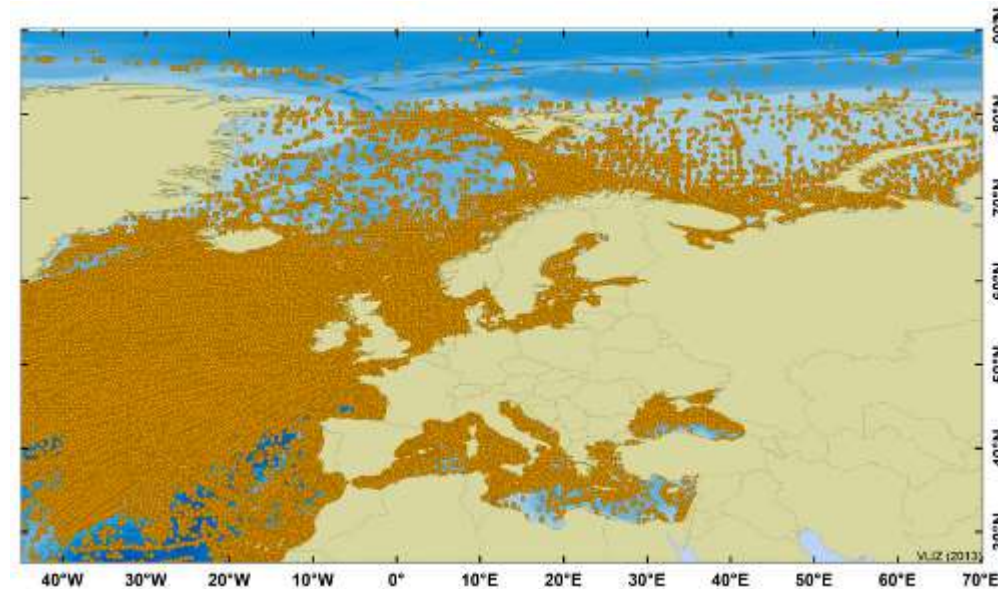




- Species observations and specimen collections
- 875 datasets
- 77,733 species linked to WoRMS
- 24 million records (87% QC)

<http://www.eurobis.org/>

<http://www.emodnet.eu/>







# Marineregions.org

towards a standard for georeferenced marine names

[About](#)[Gazetteer](#)[Maritime Boundaries](#)[Sources](#)[Statistics](#)[Downloads](#)

## About Marine Regions

Marine Regions is a standard list of marine georeferenced place names and areas. It integrates and serves geographic information from the VLIMAR Gazetteer and the MARBOUND database and proposes a standard of marine georeferenced locations, boundaries and regions.

[Read more...](#)

## Statistics

48,910 marine georeferenced places  
62,731 marine place names  
27,972 polygons of geographic places  
12 marine geographic regional/global classifications  
Maritime Boundaries (EEZ) of the world


## News

### New release: version 10 of the Maritime Boundaries

Added on: 2018-02-21 18:03:56 by Oset Garcia, Paula

MarineRegions.org is proud to launch version 10 of the Maritime Boundaries Geodatabase. ...

## Tweets by @marineregions

 Marine Regions Retweeted

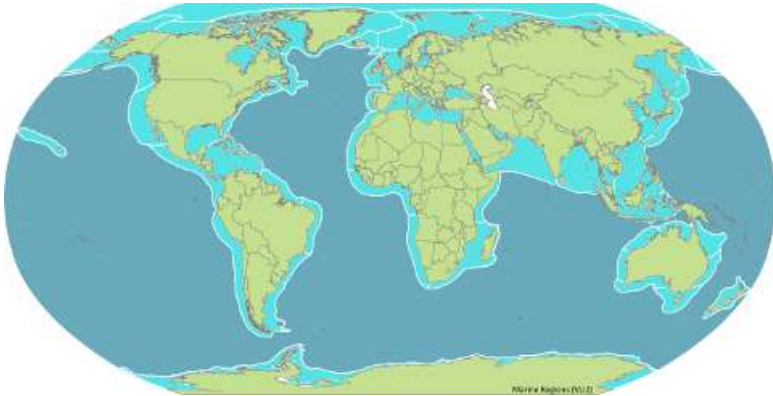
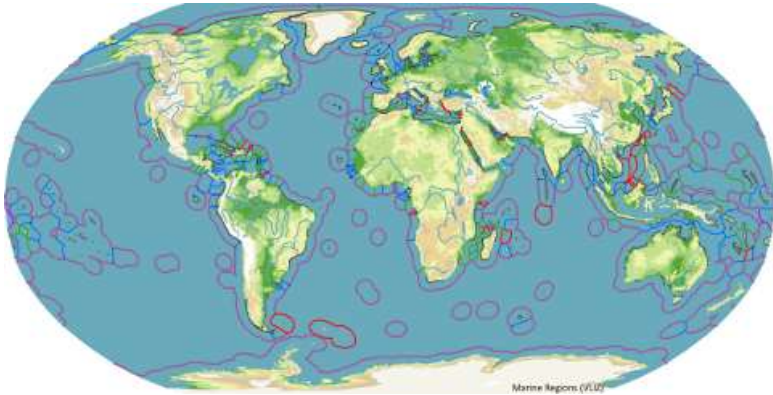


EuropeanAtlasOfSeas  
@EuropeAtlasSeas



# Marineregions.org

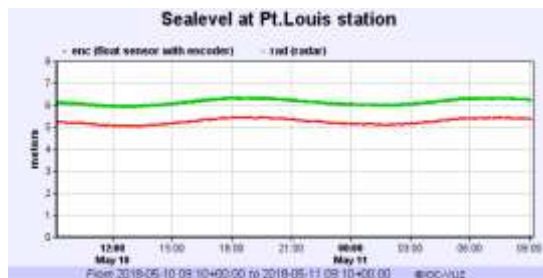
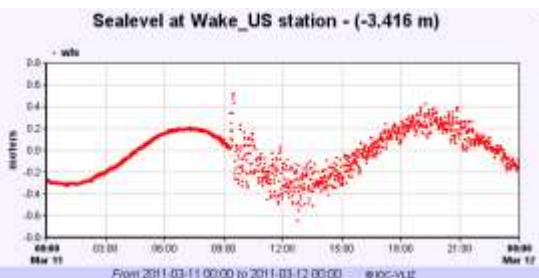
towards a standard for georeferenced marine names



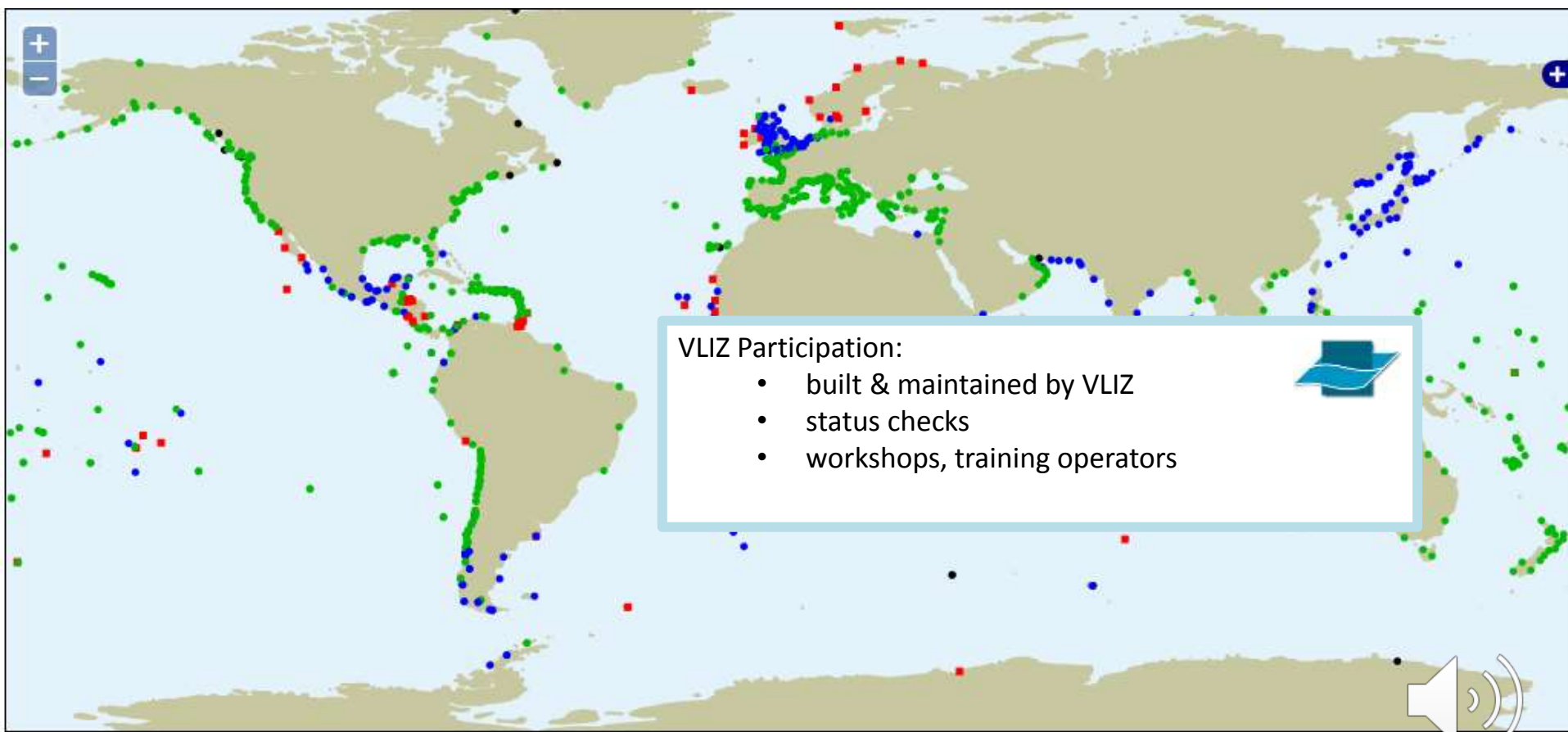
- Important for data analysis & data archeology
- Used by OBIS, WoRMS, EMODNET..
- Where is the Canarian current LME, and what species do we find there?
- In what sea or ocean is Inhaca Island?
- Where do we find seagrass fields, mangroves, coral reefs?
- Where are the marine world heritage sites?
- Marine protected area's..



# SEA LEVEL STATION MONITORING FACILITY



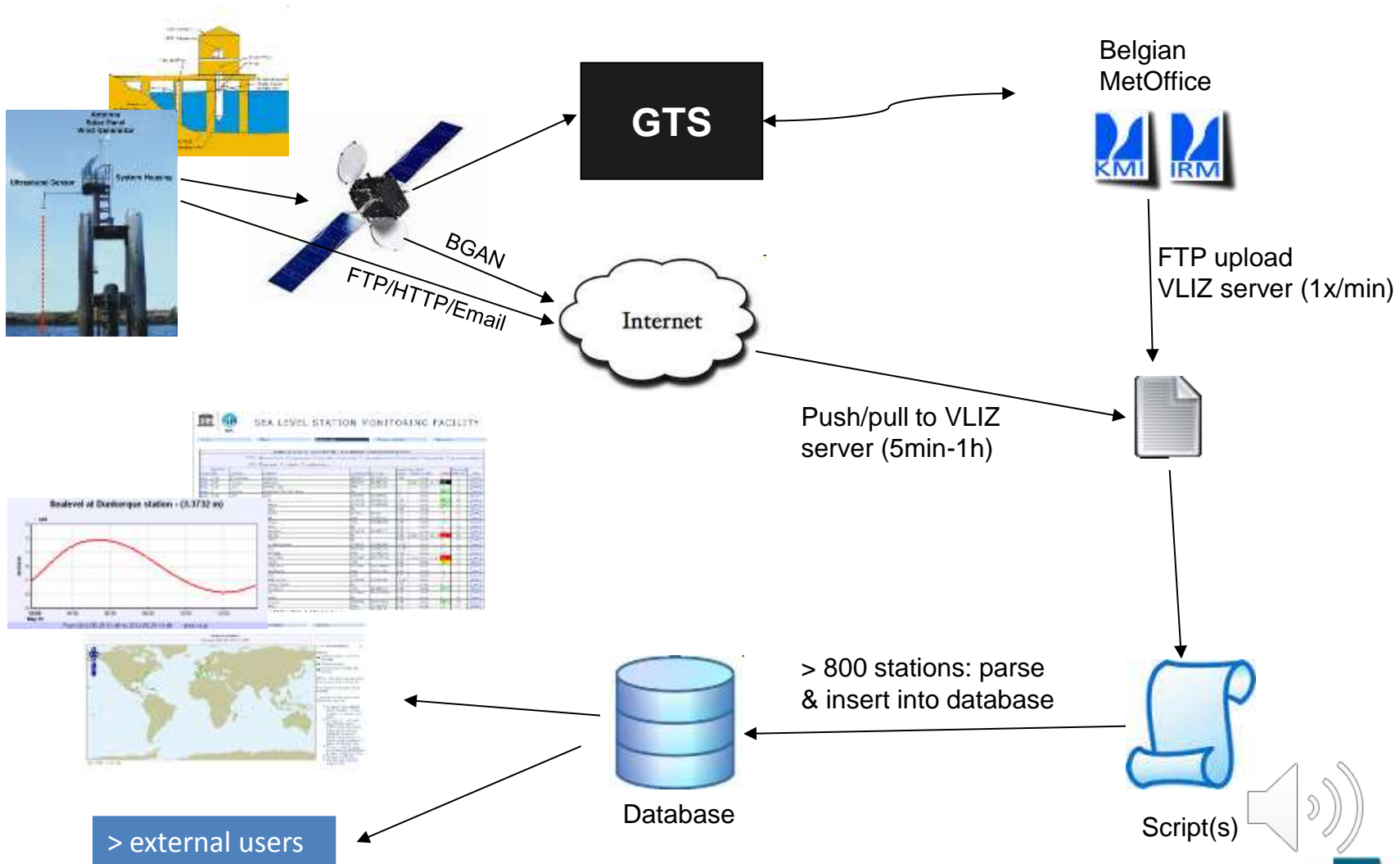
- Tsunami disaster 2004
- 991 stations, 158 operators
- realtime sealevel data
- tsunami & storm surge mitigation
- 58 realtime data users





# SEA LEVEL STATION MONITORING FACILITY

- 991 stations
- 158 operators
- realtime sealevel data
- tsunami & storm surge mitigation





Intergovernmental Oceanographic Commission of UNESCO  
International Oceanographic Data and Information Exchange

- 144 member states
- share data & expertise
- guidelines & standards
- global and regional projects



ASFA Data Publishing GODAR JSPSP GOSUD JCOMM OBIS OceanDocs OceanExpert WIGOS ICAN Ocean Data  
Portal OceanTeacher OpenScienceDirectory SeaDataNet Data Standards  
ODINAFRICA ODINCARSA ODINCINDIO ODINECET ODINWESTPAC ODINBLACKSEA African Sea Level Data  
Regional Atlases ODIN-PIMRIS

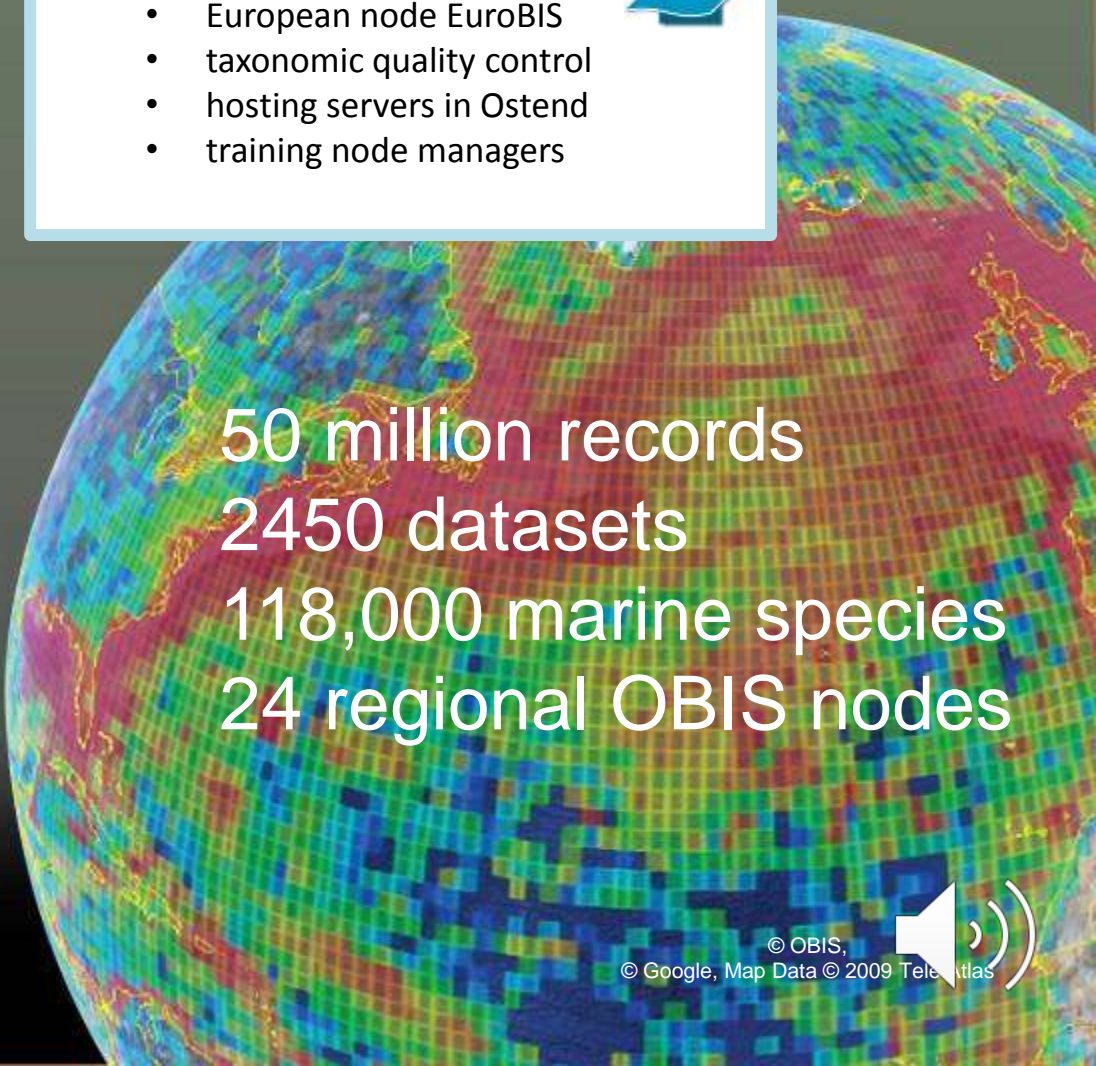



## Marine species distributions Census of marine life

<http://www.iobis.org>

### VLIZ Participation:

- European node EuroBIS
- taxonomic quality control
- hosting servers in Ostend
- training node managers



50 million records  
2450 datasets  
118,000 marine species  
24 regional OBIS nodes





# VLIZ + ODINAFRICA

- Same age : °1999
- MASDEA : Marine species directory of East Africa
  - RECOSCIX-WIO project, KMFRI – VLIZ
  - ODINAFrica AfreMAS : African Marine Species list (WoRMS)
  - EurOBIS - MedOBIS - AfrOBIS workshops
  - Historical Kenyan-Belgian research datasets [1873-1999]
- Odinafrica Sealevel stations Monitoring website
  - > GLOSS Sealevel Station Monitoring Facility



# VLIZ + FUST

- Biodiversity databases
  - Regional lists : Europe, Africa, Mexico, Canada, Antarctic, Black Sea, China, Belgium
  - Common biogeography regions: Mediterranean , West – Africa , Atlantic
  - Images, distributions, common names, literature references, MPA checklists
- Sea levels
  - More stations, better coverage & faster telecommunication
  - Data products
- Technology
  - Training workshops (OTGA)
  - Shared IT systems : marine data archive, marine VRE (FAIR, BIG)
  - Automating observations (IoT, AI, fish tracking )

Thank you

