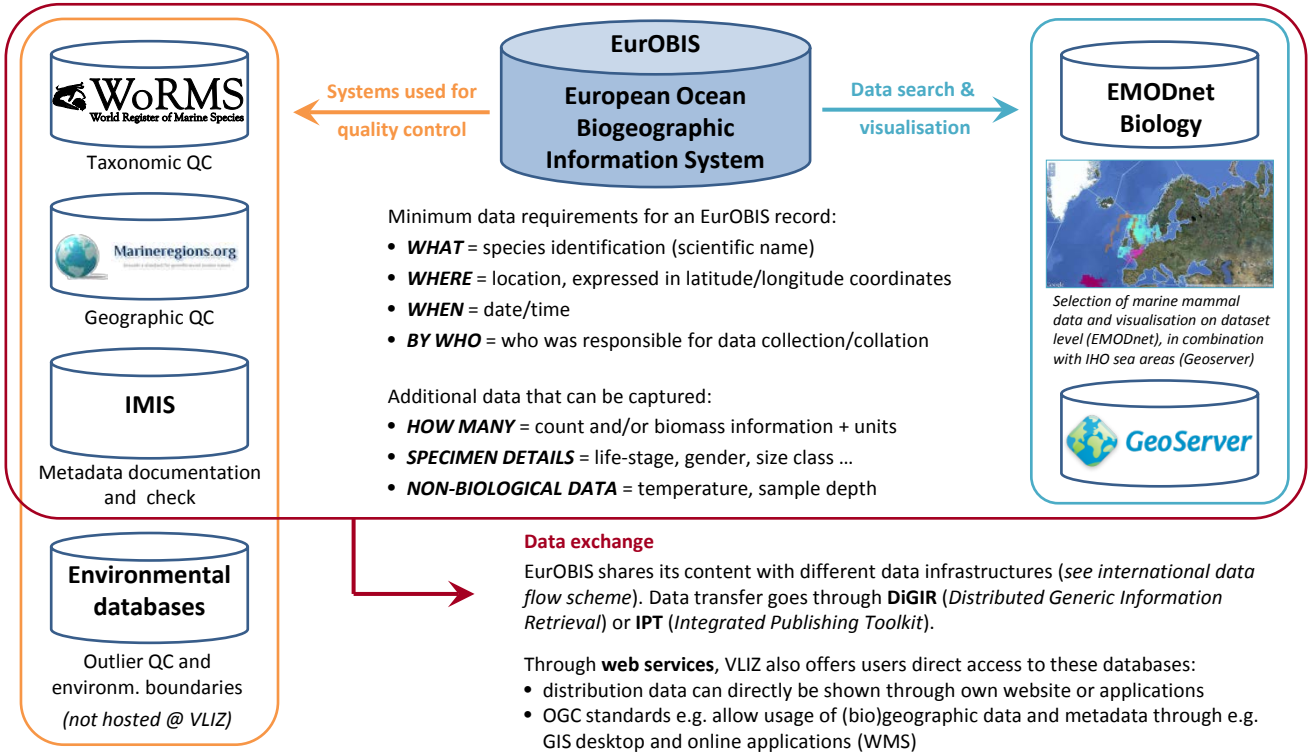# The biogeographic data infrastructure at VLIZ and how it relates to other international data systems
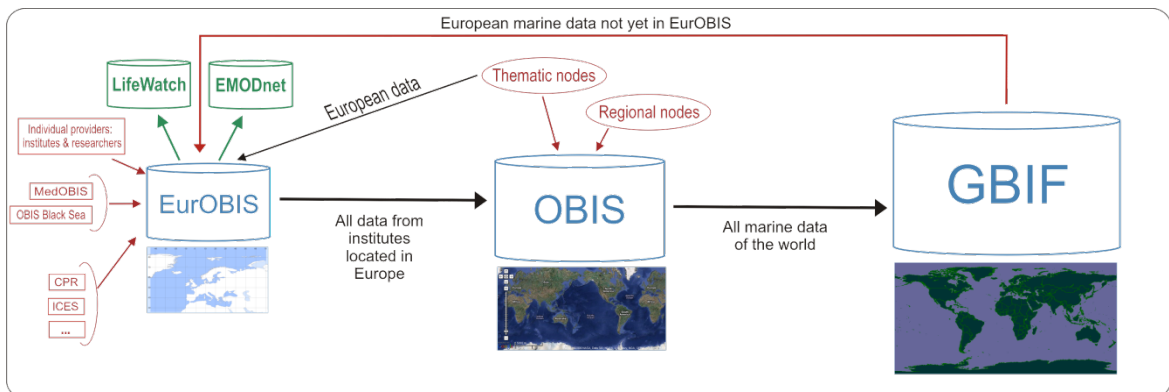
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Biogeographic data infrastructure @ VLIZ and its links

WoRMS — World Register of Marine Species
Taxonomic QC

Marineregions.org
Geographic QC

IMIS
Metadata documentation and check

EurOBIS — European Ocean Biogeographic Information System

Systems used for quality control

Data search & visualisation

EMODnet Biology

Selection of marine mammal data and visualisation on dataset level (EMODnet), in combination with IHO sea areas (Geoserver)

GeoServer

Minimum data requirements for an EurOBIS record:
- *WHAT* = species identification (scientific name)
- *WHERE* = location, expressed in latitude/longitude coordinates
- *WHEN* = date/time
- *BY WHO* = who was responsible for data collection/collation

Additional data that can be captured:
- *HOW MANY* = count and/or biomass information + units
- *SPECIMEN DETAILS* = life-stage, gender, size class …
- *NON-BIOLOGICAL DATA* = temperature, sample depth

Environmental databases
Outlier QC and environm. boundaries
(not hosted @ VLIZ)

Data exchange

EurOBIS shares its content with different data infrastructures (*see international data flow scheme*). Data transfer goes through **DiGIR** (*Distributed Generic Information Retrieval*) or **IPT** (*Integrated Publishing Toolkit*).

Through **web services**, VLIZ also offers users direct access to these databases:
- distribution data can directly be shown through own website or applications
- OGC standards e.g. allow usage of (bio)geographic data and metadata through e.g. GIS desktop and online applications (WMS)

International data flow

VLIZ – as host and manager of EurOBIS – has committed to a continuous support of OBIS. This support is visible on several levels:

- Make distribution information from EurOBIS available to OBIS
- Host the OBIS database and website on VLIZ servers
- Assist in the data harvest
- Develop (semi-)automated quality control procedures
- Take responsibility for the taxonomic quality control and liaise with the World Register of Marine Species (WoRMS) on this
- Write a manual for the node managers, explaining how to process the received data and metadata

EurOBIS: European Ocean Biogeographic Information System

OBIS: Ocean Biogeographic Information System

GBIF: Global Biodiversity Information Facility

EMODnet: European Marine Observation and Data Network

MedOBIS: Mediterranean node of OBIS (EurOBIS sub-node)

OBIS Black Sea: Black Sea node of OBIS (EurOBIS sub-node)

CPR: Continuous Plankton Recorder data

ICES: International Council for the Exploration of the Sea

Flanders marine institute