



EMODnet

European Marine
Observation and
Data Network

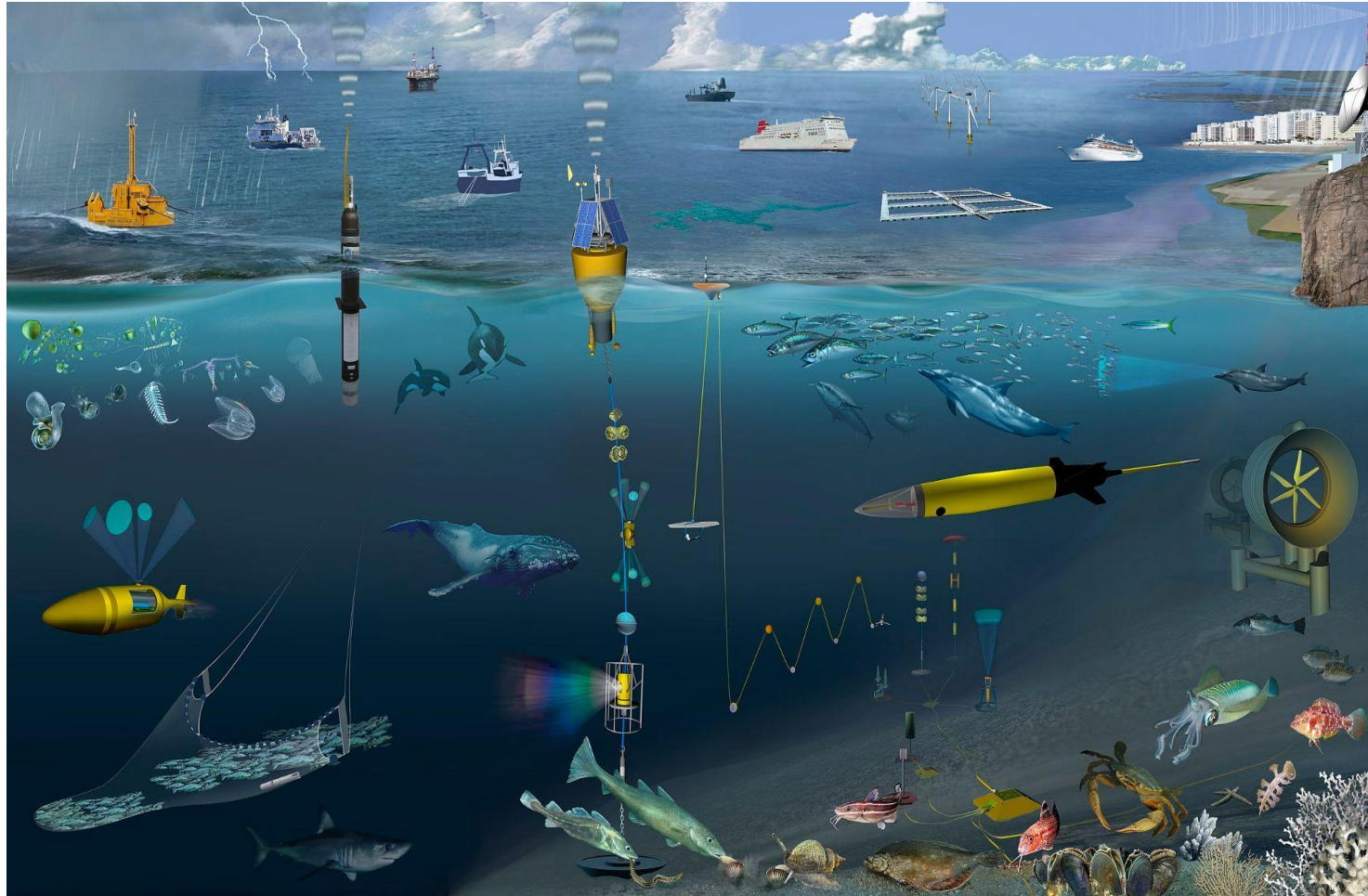
Data Ingestion



Overview of EMODnet and activities of EMODnet Ingestion

Dick M.A. Schaap – MARIS
Coordinator EMODnet Ingestion

Marine and Ocean Observation

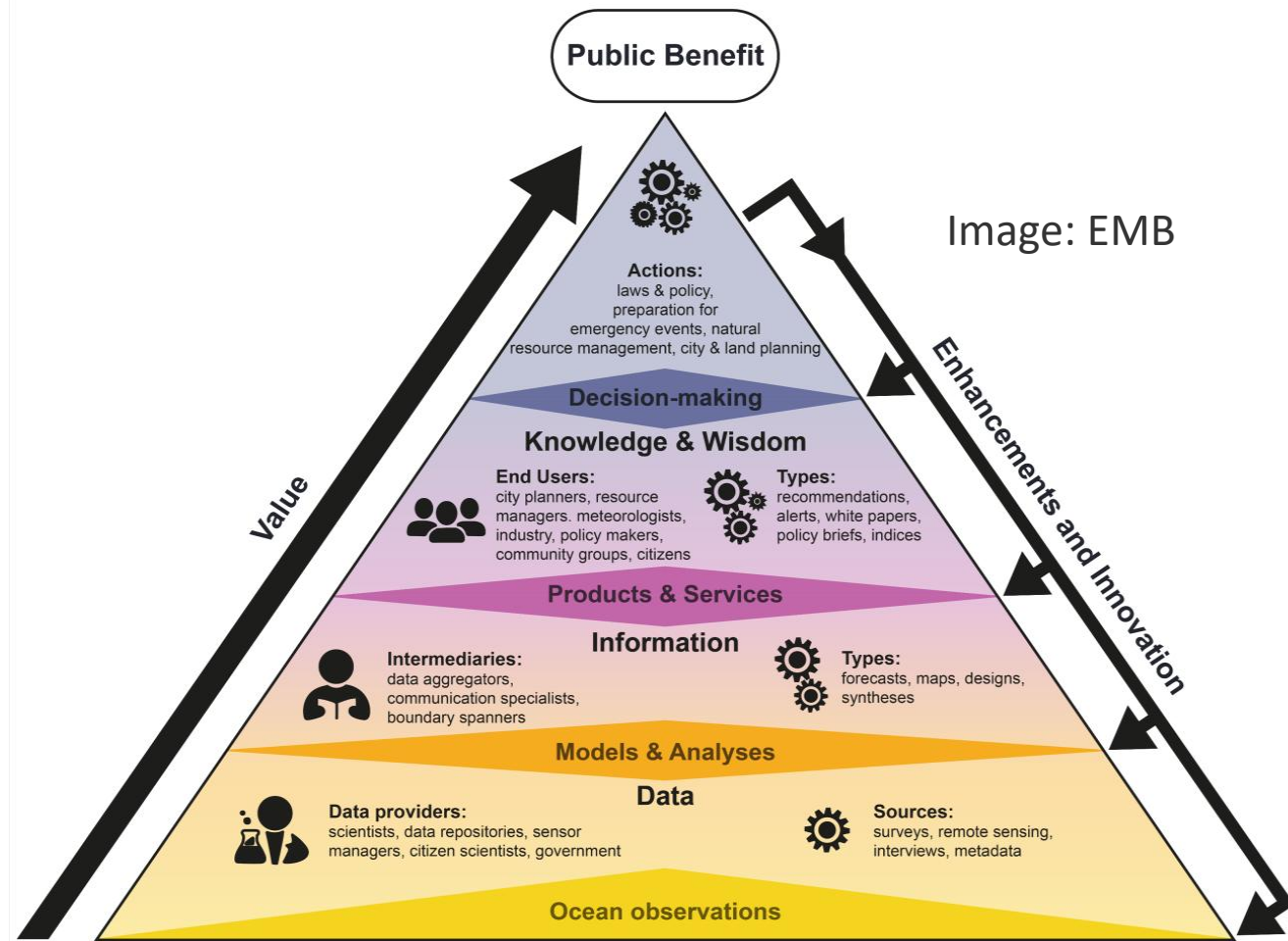


- Scientific Research to gain knowledge and insight
- Modelling (including hindcast, nowcast, forecast)
- Economic activities: shipping, offshore industry, dredging industry, fisheries, tourism, engineering ..
- Environmental Management: monitoring and assessment (water quality, climate status, stock assessment)
- Marine Conventions and Directives, in Europe: Water Framework Directive (WFD), Marine Strategy (MSFD), Marine Spatial Planning (MSP), Coastal Zone Management
- EU Strategies, such as Green Deal, Blue Environment, Blue Economy



Marine Knowledge Value Chain

- **In situ:** data and samples collected for atmosphere, water, seabed, fauna and flora, with diverse instruments and platforms. Samples are further analysed. In situ data are complemented by remote sensing observations.
- **Observations:** ocean, seas, coastal waters, estuaries, river mouths; physics, chemistry, biology, bathymetry, geophysics, and geology
- **Value chain:** steps from sensor data and samples to information to knowledge and benefits - with feedback loops
- **Public Benefit:** Accessible data, High Quality data products, and Knowledge of use for Blue Economy, Resource Management, Ocean Health, Hazards, and Advancing Science



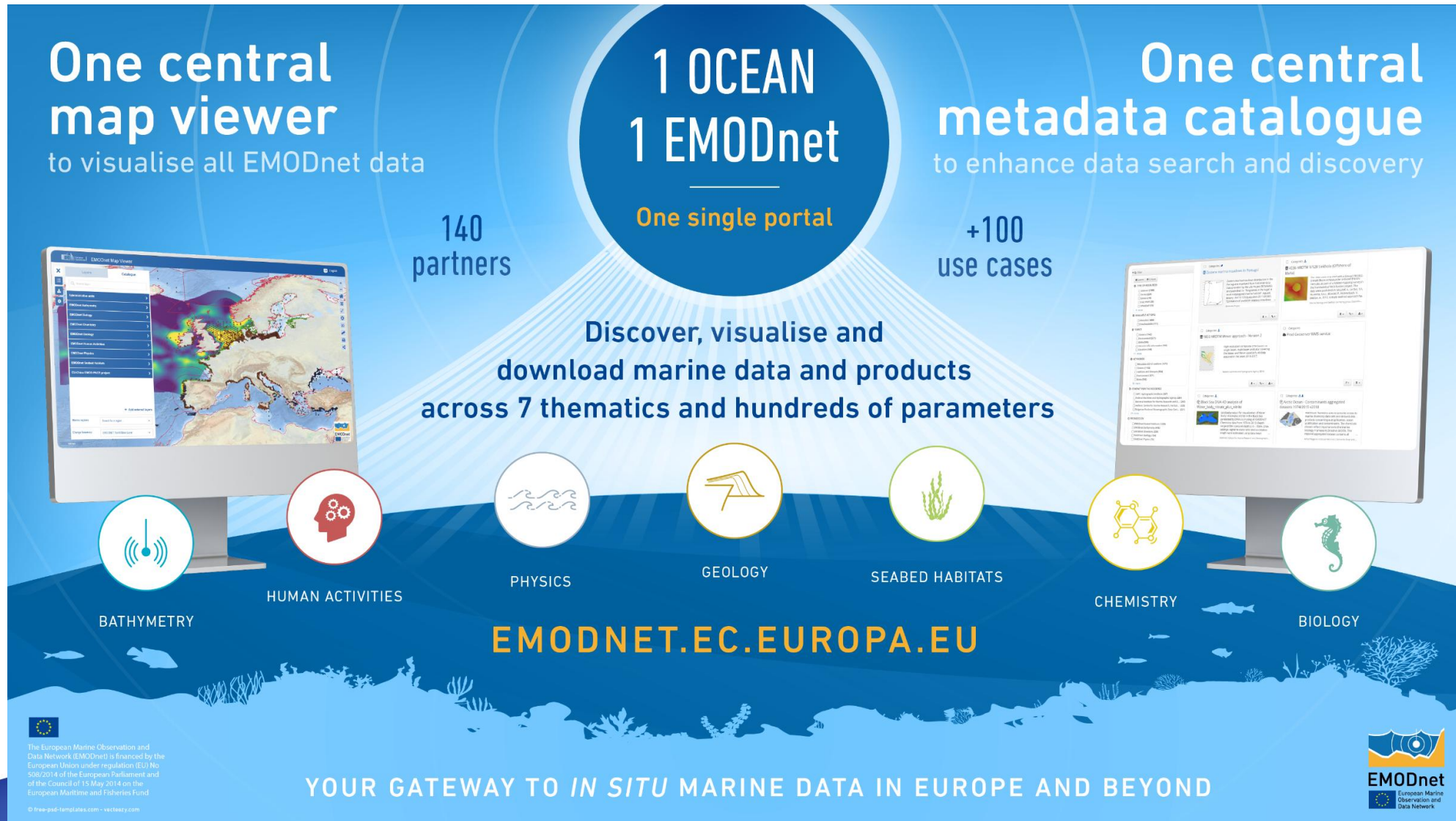
European Marine Observation and Data Network (EMODnet)



- Data from the marine environment are a **valuable asset**. Rapid access to reliable and accurate marine data and information is vital in addressing threats to the marine environment, in the development of policies and legislation to protect vulnerable areas of our coasts and oceans, in supporting research with the evidence-base to understand the complexity of marine ecosystems, trends, and in forecasting future changes.
- Likewise, better quality and more easily accessible marine data is a prerequisite for further sustainable economic development, so-called '**blue growth**', and to achieve the ambitious targets of the **EU Green Deal** and **EU Mission: Restore our Ocean and Waters**.
- In 2008 EC DG MARE initiated the **European Marine Observation and Data Network (EMODnet)** which has developed itself into the **European Commission *in situ* marine data service**, complementary to **Copernicus Marine**. EMODnet is one of the main Marine Knowledge Initiatives of the European Union.



EMODnet provides access to European marine data and derived data products across seven discipline-based themes and its Ingestion service



The graphic features a central blue circle with the text '1 OCEAN 1 EMODnet' and 'One single portal'. To the left, a computer monitor displays a map viewer interface. To the right, another monitor shows a metadata catalogue. Below the central text, seven circular icons represent different marine science disciplines: Bathymetry (sonar), Human Activities (head with gears), Physics (waves), Geology (stratigraphic layers), Seabed Habitats (seaweed), Chemistry (molecular structure), and Biology (seahorse). The background is a stylized ocean scene with fish and coral.

One central map viewer
to visualise all EMODnet data

**1 OCEAN
1 EMODnet**
One single portal

One central metadata catalogue
to enhance data search and discovery

140 partners

+100 use cases

Discover, visualise and download marine data and products across 7 thematics and hundreds of parameters

BATHYMETRY

HUMAN ACTIVITIES

PHYSICS

GEOLOGY

SEABED HABITATS

CHEMISTRY


BIOLOGY

EMODNET.EC.EUROPA.EU

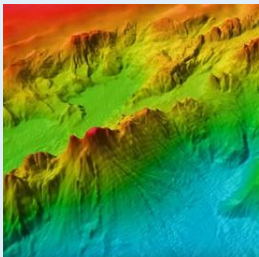






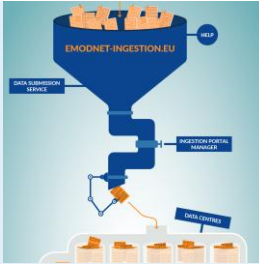
YOUR GATEWAY TO *IN SITU* MARINE DATA IN EUROPE AND BEYOND

The European Marine Observation and Data Network (EMODnet) is financed by the European Union under regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund

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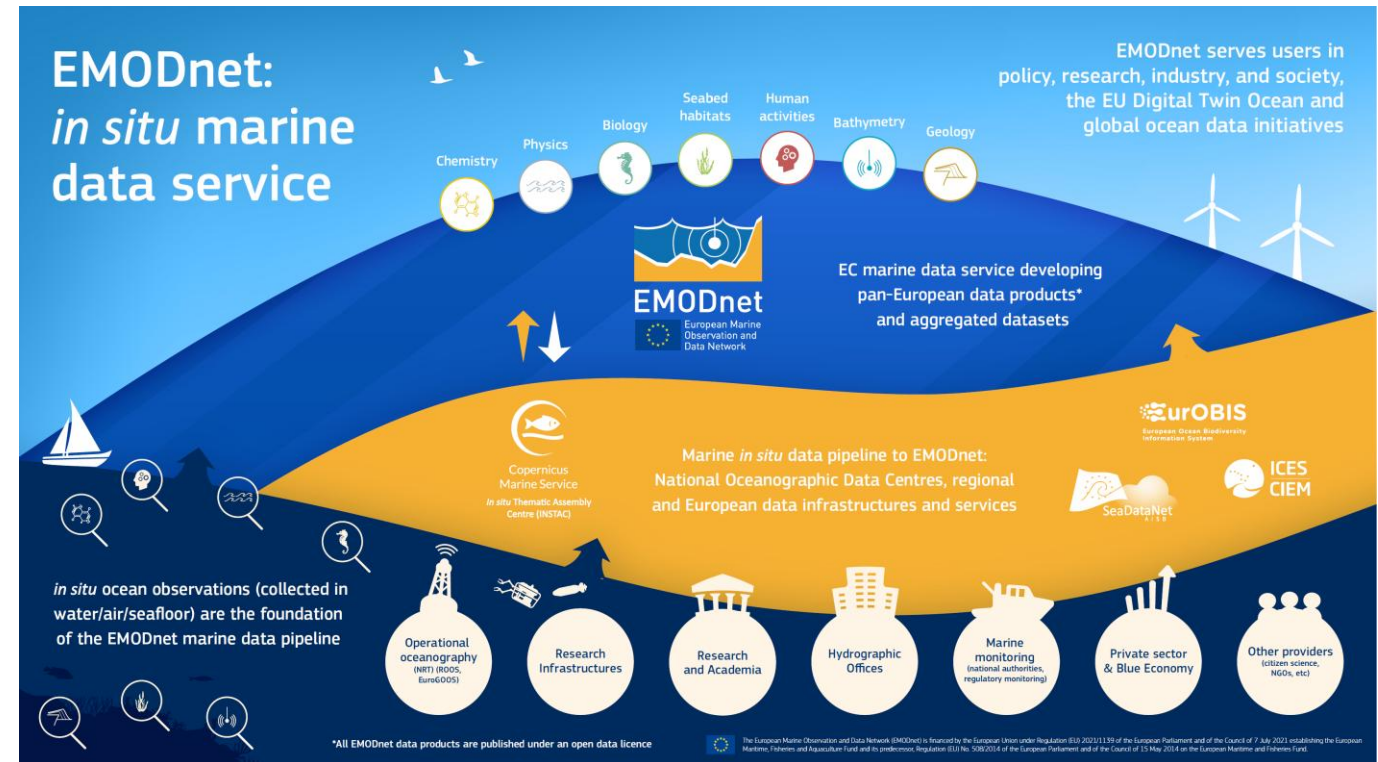
EMODnet thematic products and services

Bathymetry	Biology	Chemistry	Geology
			
<p>Data and maps on bathymetry (water depth), and coastlines, e.g., Digital Terrain Model</p>	<p>Data and maps on temporal and spatial distribution of species abundance and biomass from several taxa.</p>	<p>Data and maps on the concentration of nutrients, organic matter, contaminants, and marine litter in water, sediment and biota.</p>	<p>Data and maps on seabed substrate, sea-floor geology, coastal behaviour, geological events, minerals, and submerged landscapes.</p>
Human Activities	Physics	Seabed Habitats	Ingestion
			
<p>Data and maps on the intensity and spatial extent of human activities at sea, e.g., Vessel Density maps and National Maritime Spatial Planning</p>	<p>Data and maps on salinity, temperature, waves, winds, currents, sea-level, light attenuation, ice, river outflow, underwater noise.</p>	<p>Data, maps on the spatial distribution and extent of seabed habitats and communities, e.g., EUSeaMap broad-scale seabed habitat map for European seas</p>	<p>Reaching out to potential new data providers and operating services and support for uptake of their data assets, for ingestion into relevant EMODnet thematics and data/data products.</p>



EMODnet Thematic groups develop high-quality European data products and services based upon many national, regional, and European sources and infrastructures

- The EMODnet Thematic groups rely and interact with European marine data infrastructures such as **SeaDataNet**, **EurOBIS**, **EGDI**, **ICES**, and others.
- These infrastructures have established nodes in many European countries.
- Their data centres offer validation, long term stewardship, and FAIR documentation, following agreed community standards.
- Currently, data from more than a thousand data originators from public, research and private sector in the European marine data landscape are managed.



However, still, a lot of valuable marine data does not arrive in these infrastructures, preventing its distribution through EMODnet and limiting its use.

EMODnet Data Ingestion

A key pillar of the European Marine Observation and Data Network for sharing data



Overarching goal:

- To **facilitate** the data flow and the ingestion process from data providers to leading European marine data management infrastructures that are feeding EMODnet, for making their data open and FAIR

Approach:

- **Identifying new data holders** in the data collection landscape (from public and private sectors) :
 - who are not connected to their national focal points that are contributing data to the EU data infrastructures and EMODnet, or,
 - are often unaware of how to connect
- **Motivating**, and **supporting data holders** to become partners in the EU data management infrastructures for data exchanges and **share their data** EMODnet
- **Training data holders** in the **use of standards & best** practices for easier and faster integration of their data
- **Cooperating** with EU Programmes, Projects, Initiatives, Networks
- **Promotion activities** (webinars, workshops) for raising awareness about EMODnet Ingestion offer



EMODnet Ingestion ambassadors

Promotion and interaction with new data providers from multiple sectors

Network of 50 National Data Centres, specialized marine centres, and all EMODnet thematic coordinators ensuring provision of trustable data and products

BATHYMETRY



BIOLOGY



CHEMISTRY



GEOLOGY



HUMAN ACTIVITIES



PHYSICS



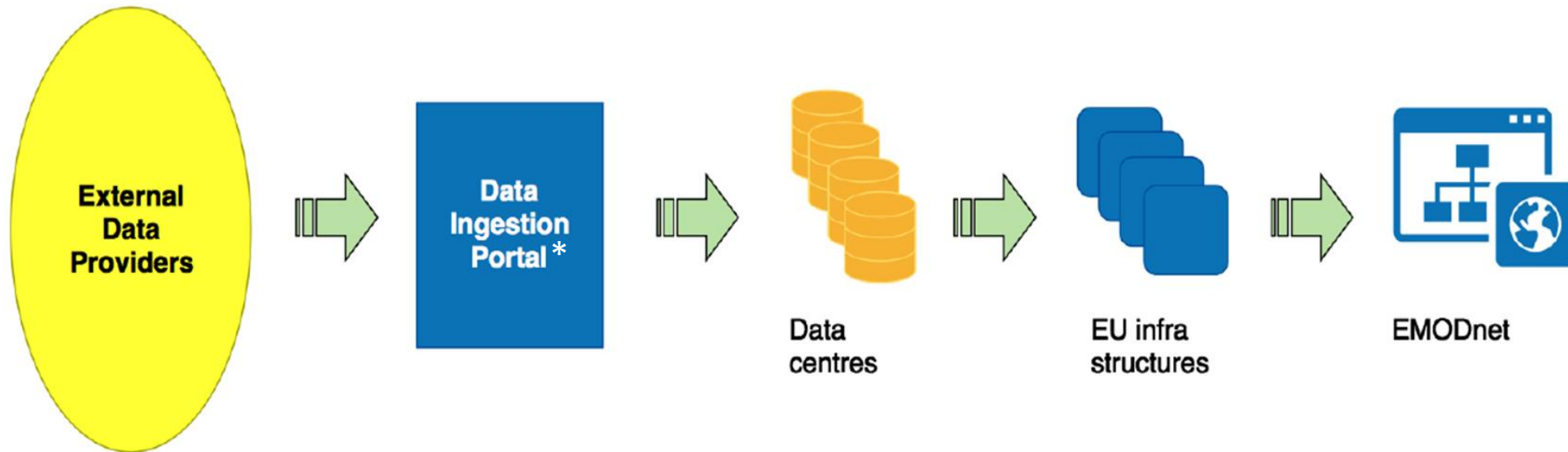
SEABED HABITATS



Data Ingestion process

A free and open public service for long-term stewardship, free distribution and publishing via EMODnet

Use is made of standards, best practices, and existing marine data management infrastructures, data centres and pathways towards the EMODnet



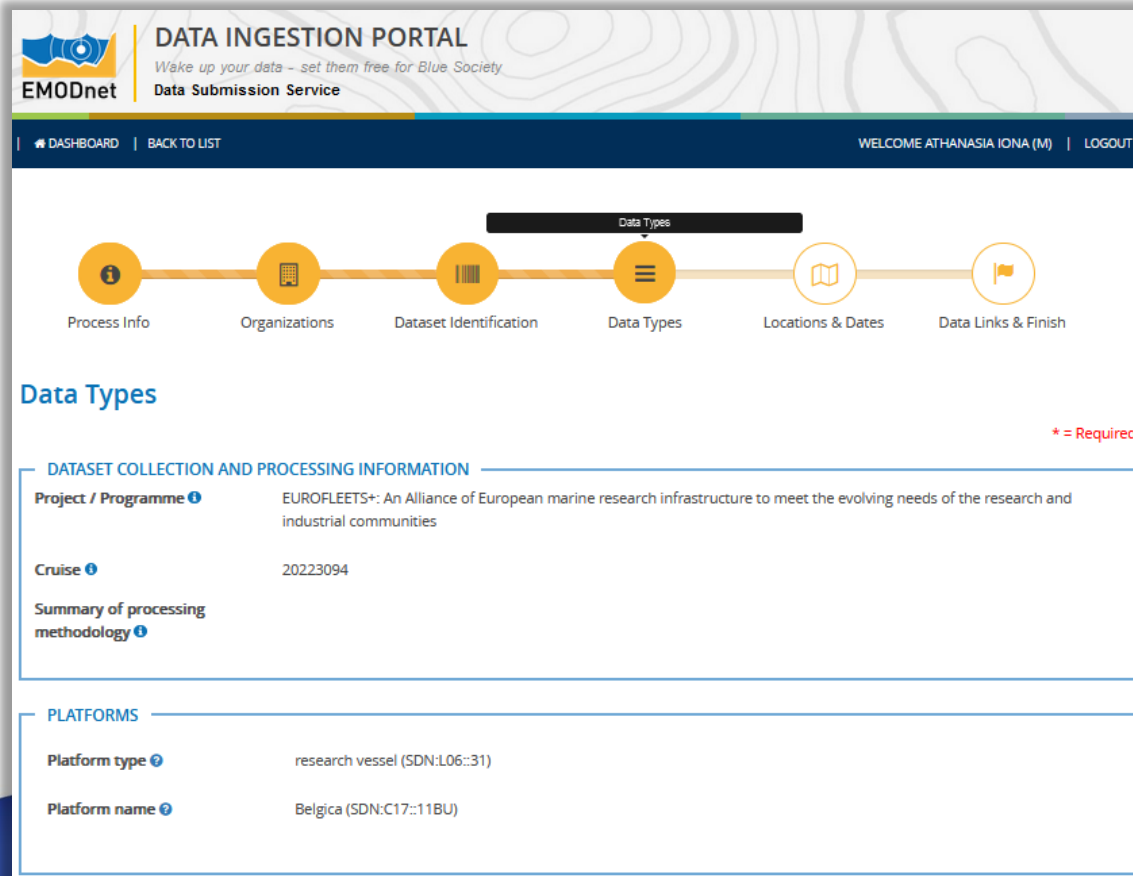
Workflow from submission to elaborating and processing for publishing in EMODnet

On line submission form

A step by step approach

Distinction between 2 phases in the life cycle of a data submission:

- **Phase I:** from data submission to publishing *'as is'*
- **Phase II:** data that fit for use by EMODnet and its stakeholders are further elaborated and integrated by the expert data centers in national, European infrastructures and EMODnet for publishing and sharing with the wider community



DATA INGESTION PORTAL
Wake up your data - set them free for Blue Society
Data Submission Service

DASHBOARD | BACK TO LIST | WELCOME ATHANASIA IONA (M) | LOGOUT

Process Info | Organizations | Dataset Identification | **Data Types** | Locations & Dates | Data Links & Finish

Data Types

* = Required

DATASET COLLECTION AND PROCESSING INFORMATION

Project / Programme	EUROFLEETS+: An Alliance of European marine research infrastructure to meet the evolving needs of the research and industrial communities
Cruise	20223094
Summary of processing methodology	

PLATFORMS

Platform type	research vessel (SDN:L06::31)
Platform name	Belgica (SDN:C17::11BU)

- 5 conceptually similar groups of **ISO/INSPIRE** compliant **metadata elements**, extended use of **vocabularies**
- The **ownership** of the data is **transparent and clear** throughout the process, giving **proper acknowledgments** and **credits** to the originating **Organizations and scientists**:
 - tagging Projects, Cruise Summary Reports, Organizations, and using DOIs ↔ ORCID iDs

On-line Summary service

A viewing & downloading service for publishing the datasets and making them findable and accessible

View submissions

This service allows users to search and download the datasets that have been submitted via the Submission service and that have been reviewed and completed in metadata by assigned data centers. These datasets are published "as-is" and will be further inspected and elaborated, where possible, for uptake in the national and European infrastructures supporting EMODnet. Once elaborated and included, users can also find the URLs of the European data infrastructures. See also [Conditions of Use](#).

Filter Search Found 1476 Show (21 - 40) < Prev Next >

Free search

Date [yyyymmdd]

Date from

Date to

Geobox

Stage of processing

Phase 1 - Published 'as-is' (821)

Phase 2 - Elaborated (655)

Sea areas

North Atlantic Ocean (315)

Black Sea (301)

Northeast Atlantic Ocean (4... (210)

Atlantic Ocean (197)

Mediterranean Sea, Wester... (79)

North Sea (75)

Mediterranean Sea (73)

Adriatic Sea (63)


Mediterranean Sea, Easter... (56)

Baltic Sea (49)


Data Theme

Results


Sea Level I 2022 Poti Sea Port Tide Station
Period: 2022-01-01 - 2022-01-31
Observation type: Currents, sea level and waves




Sea Level II 2022 Poti Sea Port Tide Station
Period: 2022-02-01 - 2022-02-28
Observation type: Currents, sea level and waves



Bottom Water Temperature collected in Real-Time from Commercial Fishing Gear in Gulf of Maine and Southern New England Shelf
Period: 2020-06-13 - 2020-07-30
Observation type: Water column temperature and salinity



Marine Aquaculture Areas in Slovenian Territorial Waters
Period: 2015-06-02 - 2018-04-06
Observation type: Aquaculture



MBB sea water chemical data 2022
Period: 2022-07-05 - 2022-07-27
Observation type: Carbon, nitrogen and phosphorus, Dissolved gases, Pigments, Suspended particulate material





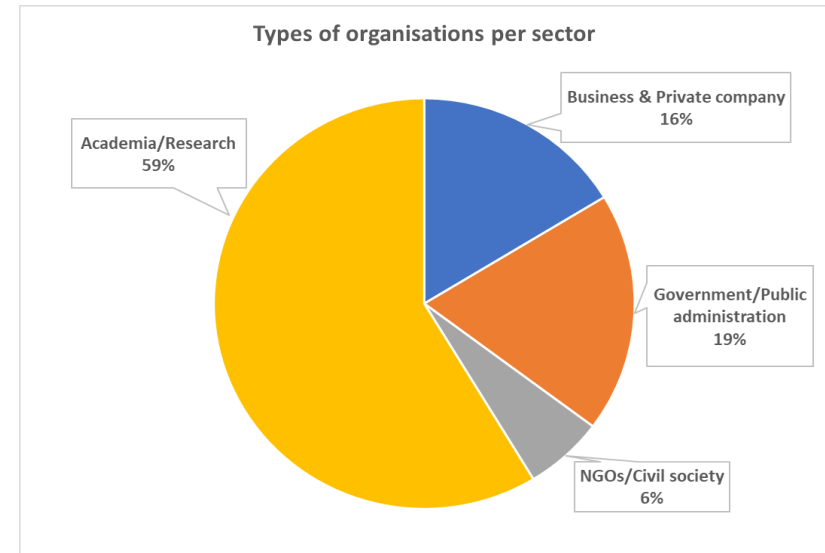
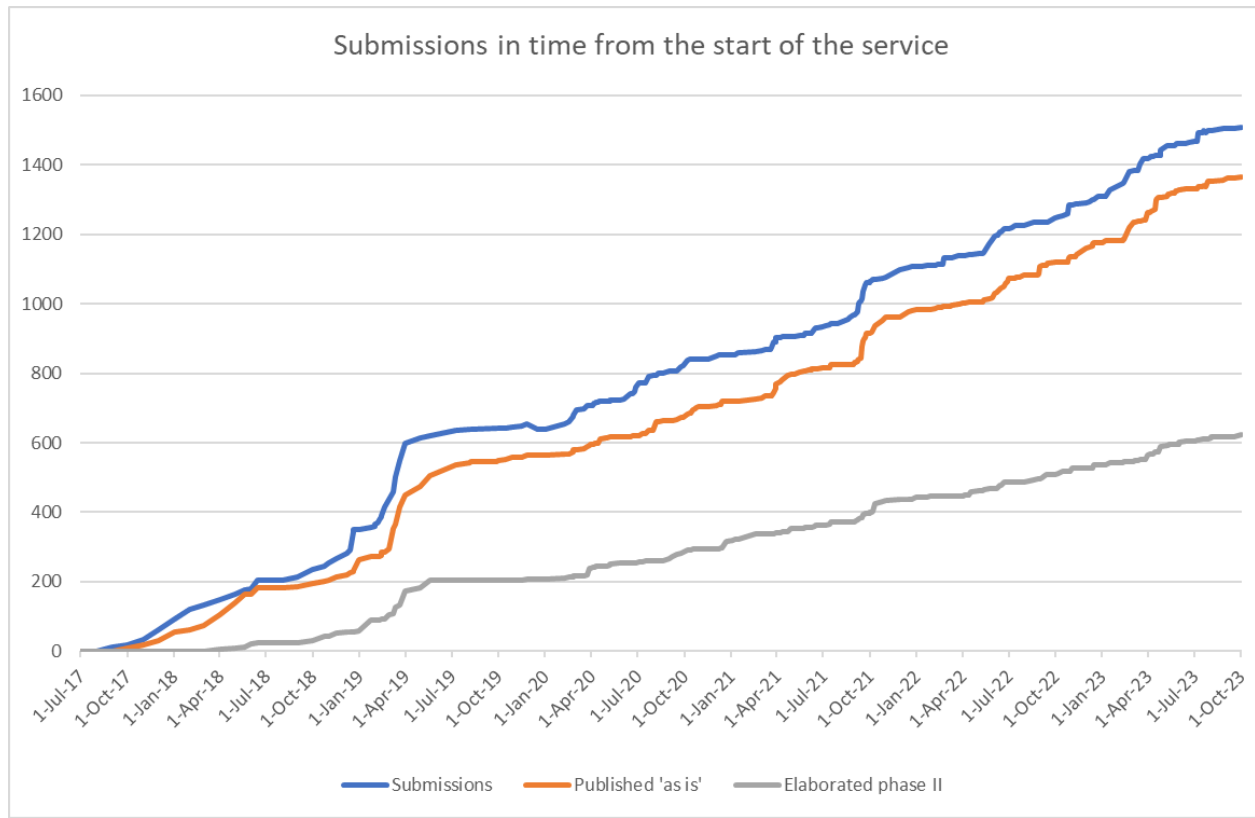
FIGURE-CARING 2022 EUROFLEETS+ cruise - CTD and bottle data
Period: 2022-07-23 - 2022-07-26
Observation type: Dissolved gases, Other physical oceanographic measurements, Pigments, Water column temperature and salinity



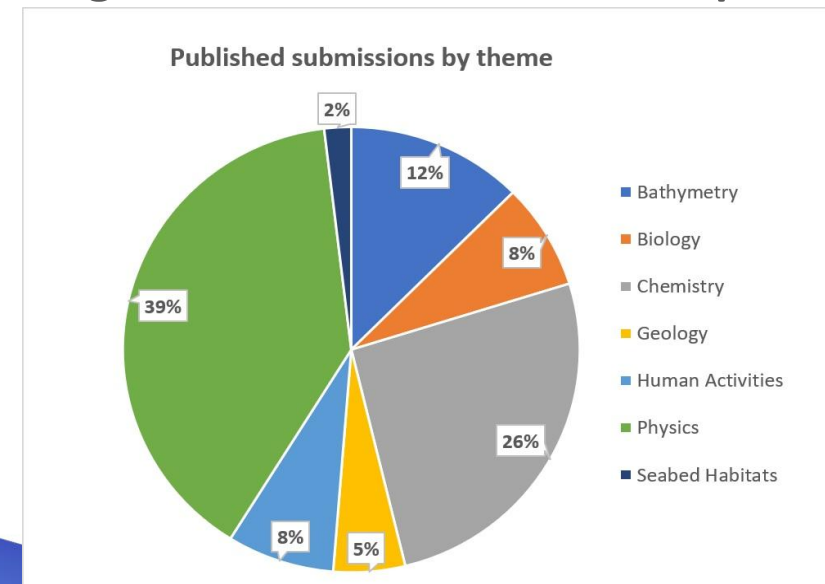
Synthesis of our data providers and data content

>1550 submissions from 200 Organizations from Academic, Governmental, Business, NGOs sectors

Increasing submissions in time



Wide range of marine environmental parameters





EMODnet



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Observation and
Data Network

emodnet.ec.europa.eu

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the latest news

