EMODnet for Horizon Europe and EU Mission: Restore our Ocean and Waters projects

Co-organised by EMODnet Secretariat, EMODnet Data Ingestion and Thematics, in collaboration with EC DG MARE and CINEA

28/02/2024

The European Marine Observation and Data Network (EMODnet) is financed by the European Union under Regulation (EU) 2021/1139 of the European Parliament and of the Council of 7 July 2021 establishing the European Maritime, Fisheries and Aquaculture Fund.

Housekeeping rules

- **Welcome! Please update your zoom participant name with Name & EU project /Oganisation you represent**

- **All participants have their video and audio turned off as default, to avoid unnecessary background noise for the plenary presentations. During interactive Q&A sessions, or to take a photo for promotional purposes, the participants' video and audio will be enabled by the hosts.** The hosts reserve the right to mute/stop video if there is any disruption.

- **Use the Chat Function to introduce yourself, and for reporting and technical issues. We use Slido for content questions**

- **Slido:** We will be using slido for pollings and to gather audience questions. Where possible, these questions will be answered during the Q&A. In addition, all questions submitted to Sli.do will be saved and a document with answers/responses from EMODnet experts will be produced after the webinar, circulated to participants for information

- **Raise Hand Feature**: If you have a question or would like to speak during the Q&A sessions, please use the "Raise Hand" feature. The moderator will invite you to unmute yourself when it's your turn to speak. Please ensure your background noise is kept to a minimum

- **Recording Disclaimer**: Please be aware that the webinar will be recorded and made publicly available after the event/. By participating in the webinar, you consent to being recorded. If you do not wish to be seen/heard in the recording you are advised to keep your video and audio off.

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Agenda

28 February 2024, 11:00-12:30 CET

11:00-11:03 **Welcome**

11:03-11:13 **Opening address**

11:13-11:16 **Ice-breaker (poll)**

11:16-11:30 **EMODnet in a nutshell**

11:30-11:40 **Q&A and structured discussion on EMODnet**

11:40-11:47 **EMODnet Data Ingestion**

11:47-12:00 **EMODnet, Guidelines for Data Submission and European Marine Data Management community practices**

12:00- 12:10 **EMODnet Data Submission Tools and Good Practices**

12:10-12:25 **Q&A and open floor**

12:25-12:30 **Closing words**

Opening address EC DG MARE

Zoi Konstantinou

Ice-breaker Questions

Slido

Which EU project are you representing today?
(word cloud: acronym/2-3 words max)

ⓘ Start presenting to display the poll results on this slide.

Are you familiar with EMODnet and its services?
(multiple-choice question. More than one answer is possible)

ⓘ Start presenting to display the poll results on this slide.

slido

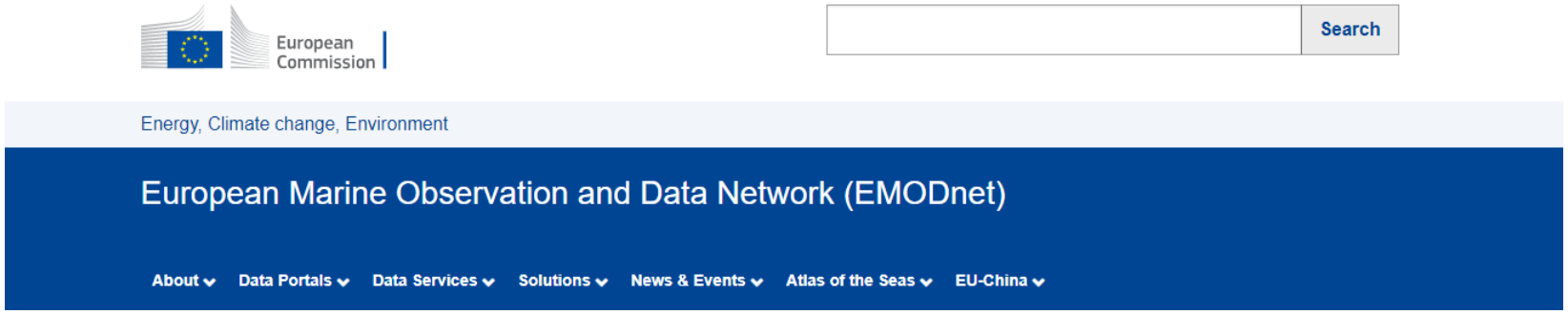
Audience Q&A Session

ⓘ Start presenting to display the audience questions on this slide.

EMODnet in a nutshell

Kate Larkin and Conor Delaney, EMODnet Secretariat

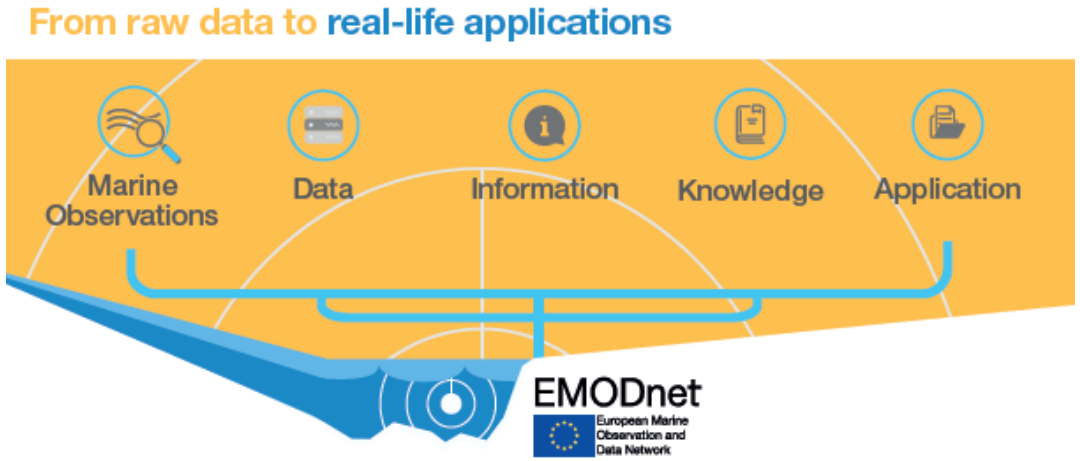
What is EMODnet?



The European Marine Observation and Data Network (EMODnet) is:

- **An EC marine data service,** funded by the **European Commission (DG MARE);**
- **European authority and regional best practice in the marine data domain;**
- **Delivered by a network of > 120 leading organisations, working in collaboration with national, regional and EU marine data management initiatives and infrastructures;**
- **Key marine knowledge initiative working with Copernicus Marine Service provides the back-bone for the European marine data space, the European Digital Twin Ocean and a key contributor to the Global Ocean Data Ecosystem and digital commons.**

EMODnet | Added value



- ❑ Collect data once, use many times.
- ❑ Assemble, standardise, harmonise, quality control, integrate.
- ❑ Visualize and make data come alive.
- ❑ reduce uncertainty;
- ❑ increase productivity and cost-effectiveness;
- ❑ add value and impact to your data;
- ❑ stimulate innovation.

One central map viewer

to visualise all EMODnet data

1 OCEAN 1 EMODnet

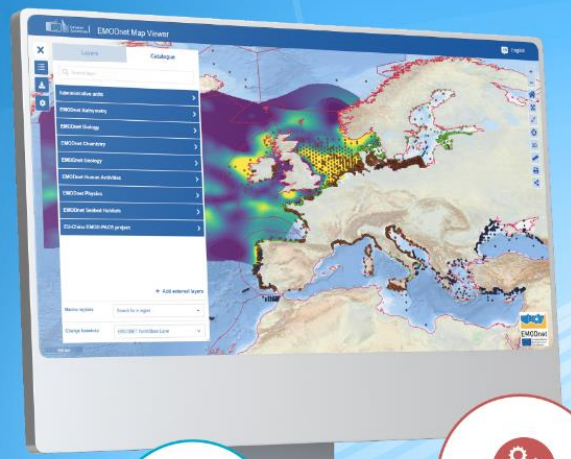
One single portal

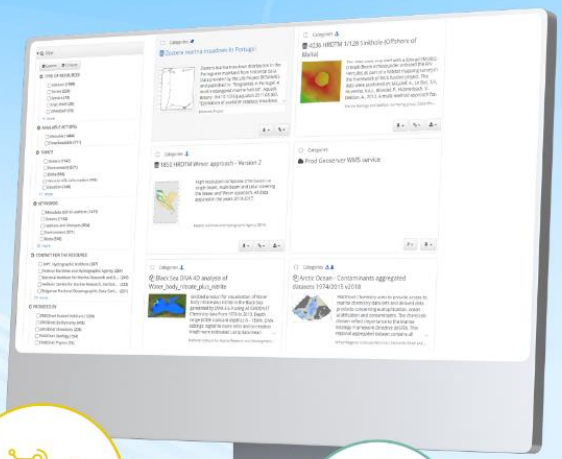
One central metadata catalogue

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

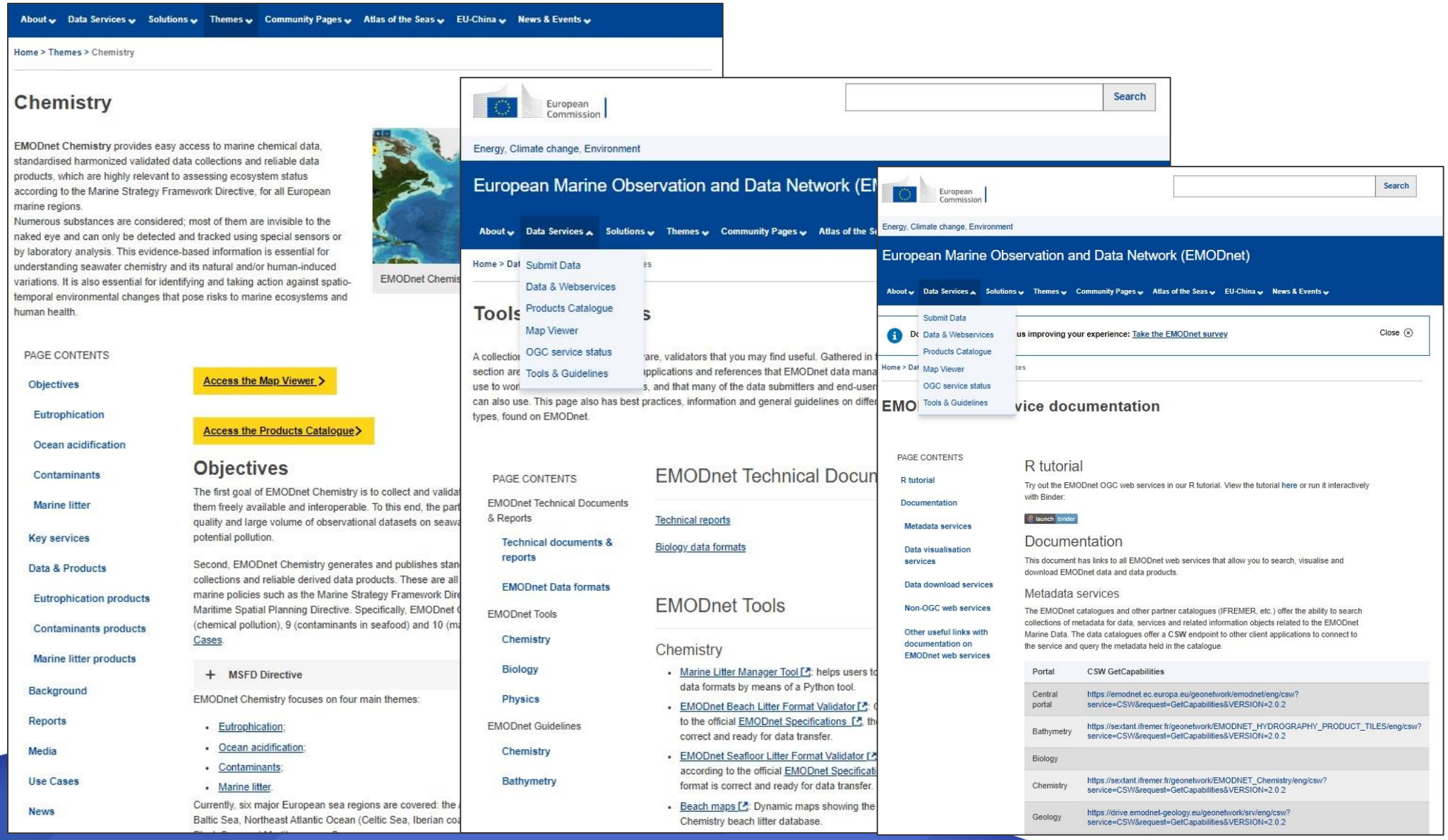
EMODNET.EC.EUROPA.EU

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

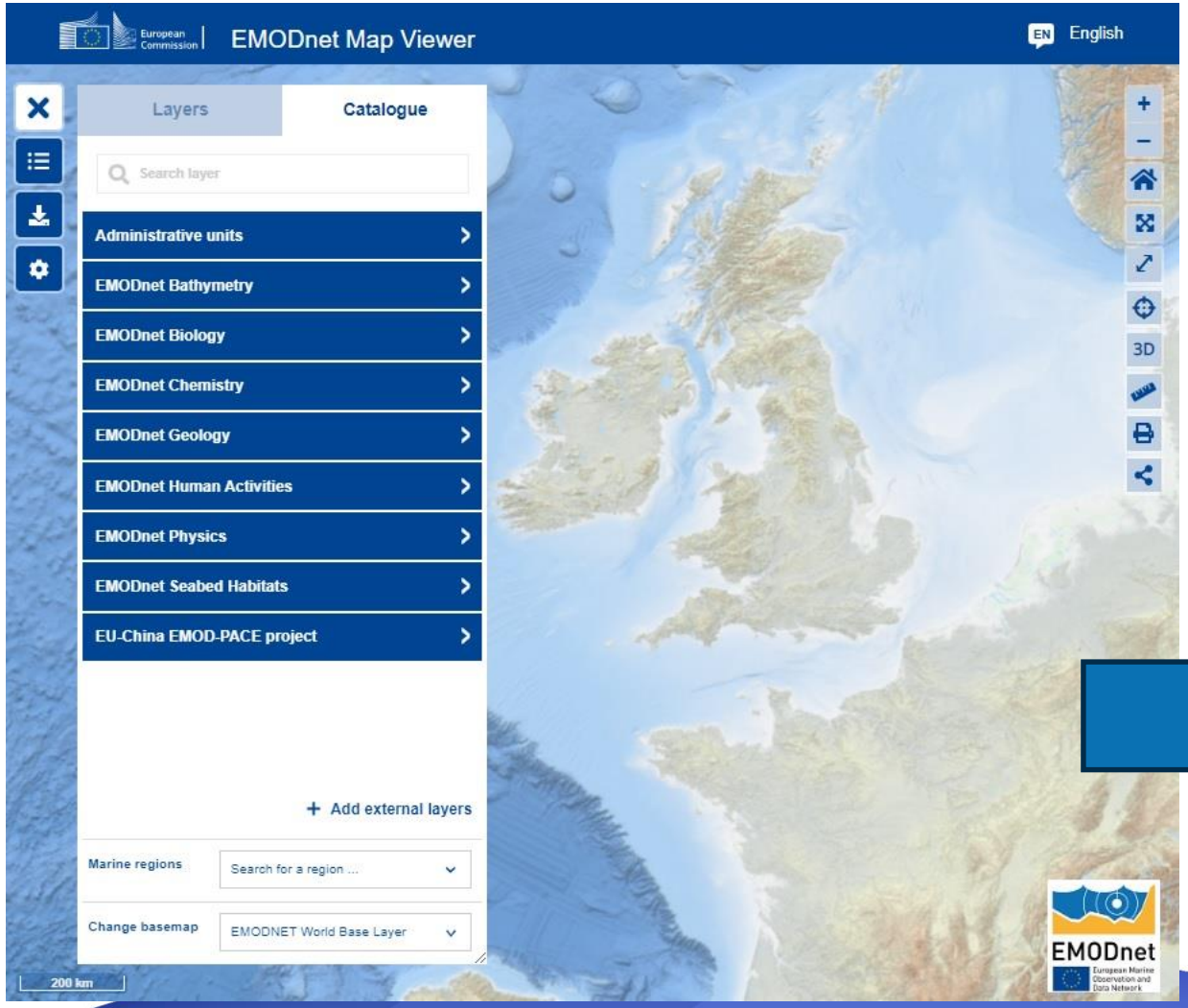
YOUR GATEWAY TO *IN SITU* MARINE DATA IN EUROPE AND BEYOND

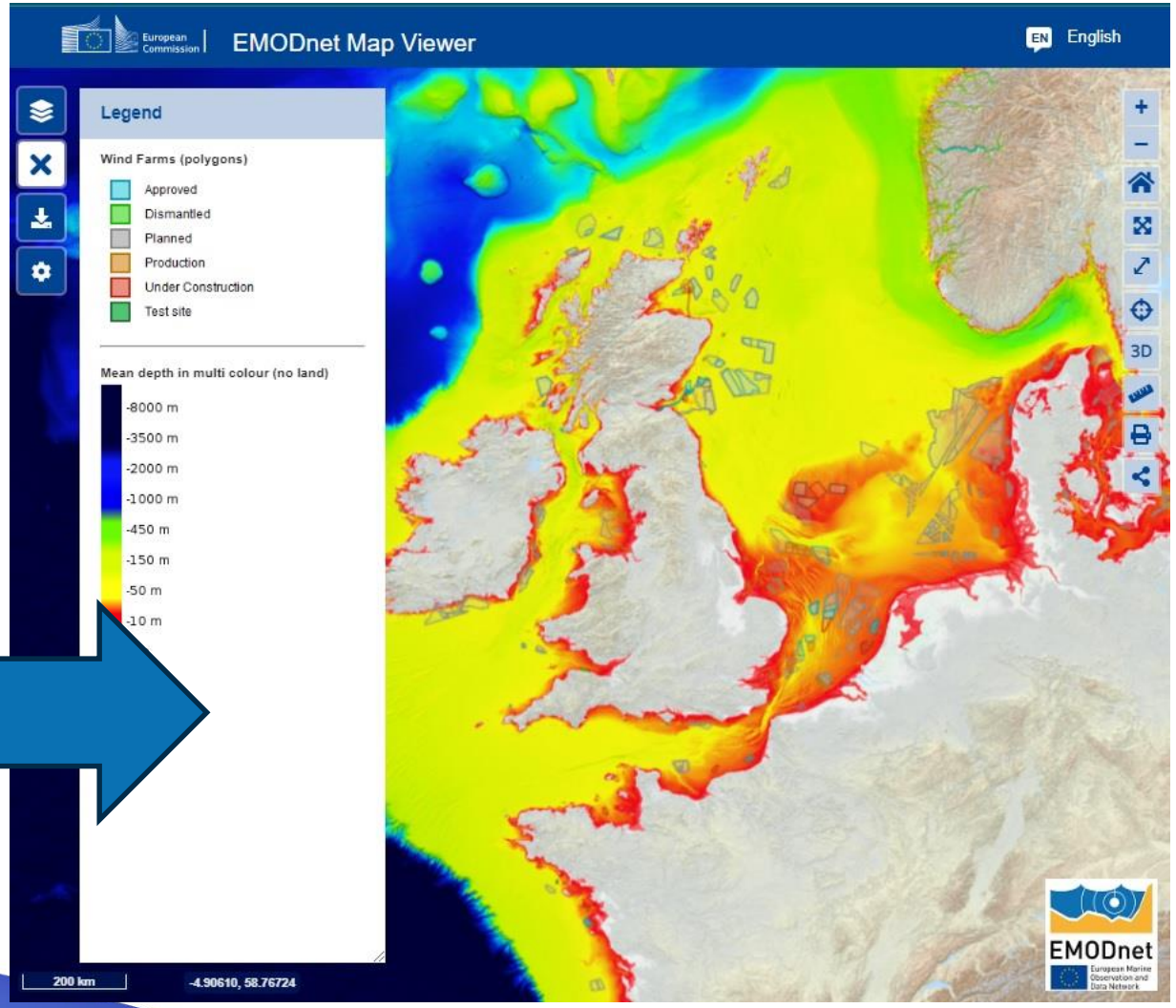
EMODnet
European Marine Observation and Data Network

EMODnet | One website – thematic pages – common information



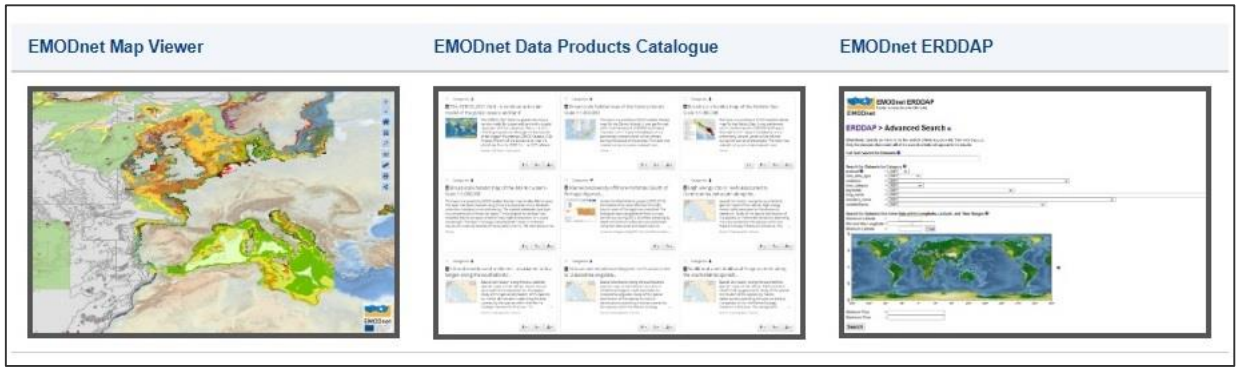
EMODnet | One map viewer for data discovery and download

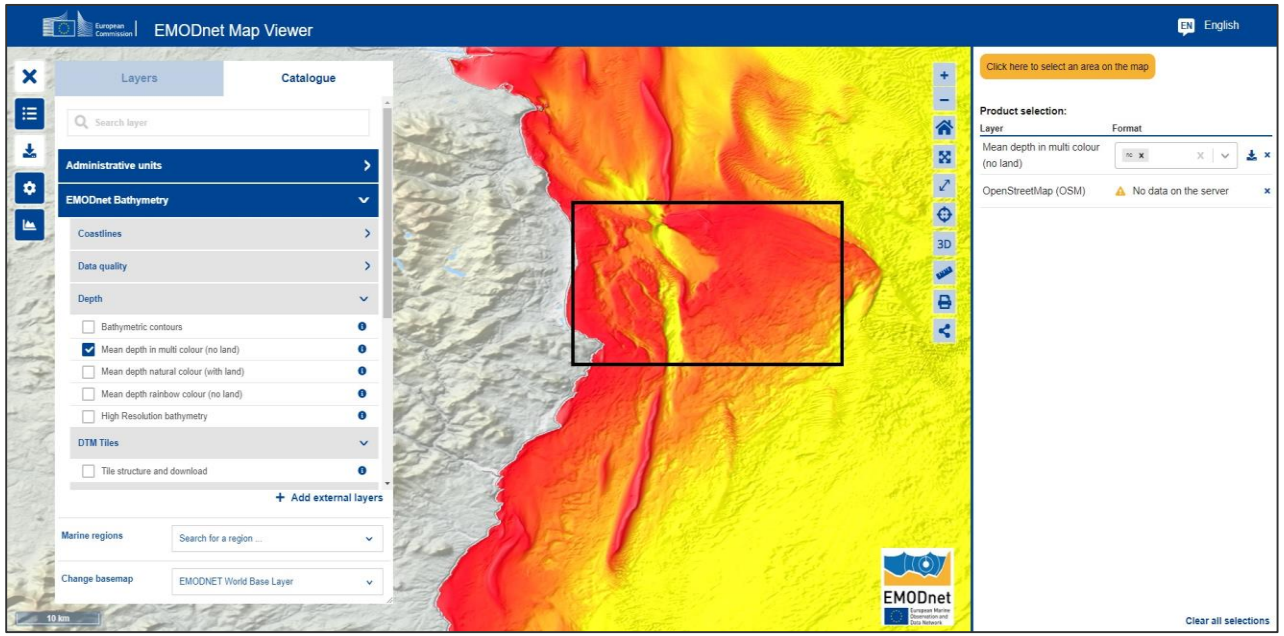


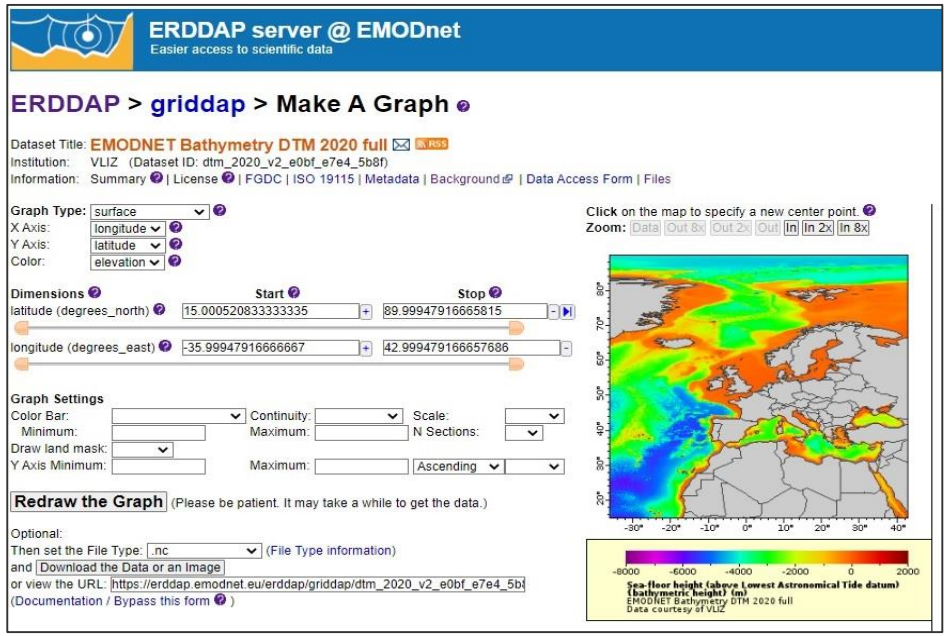


EMODnet | One map viewer – subset and download – webservice

Data Services directly accessible from EMODnet landing page

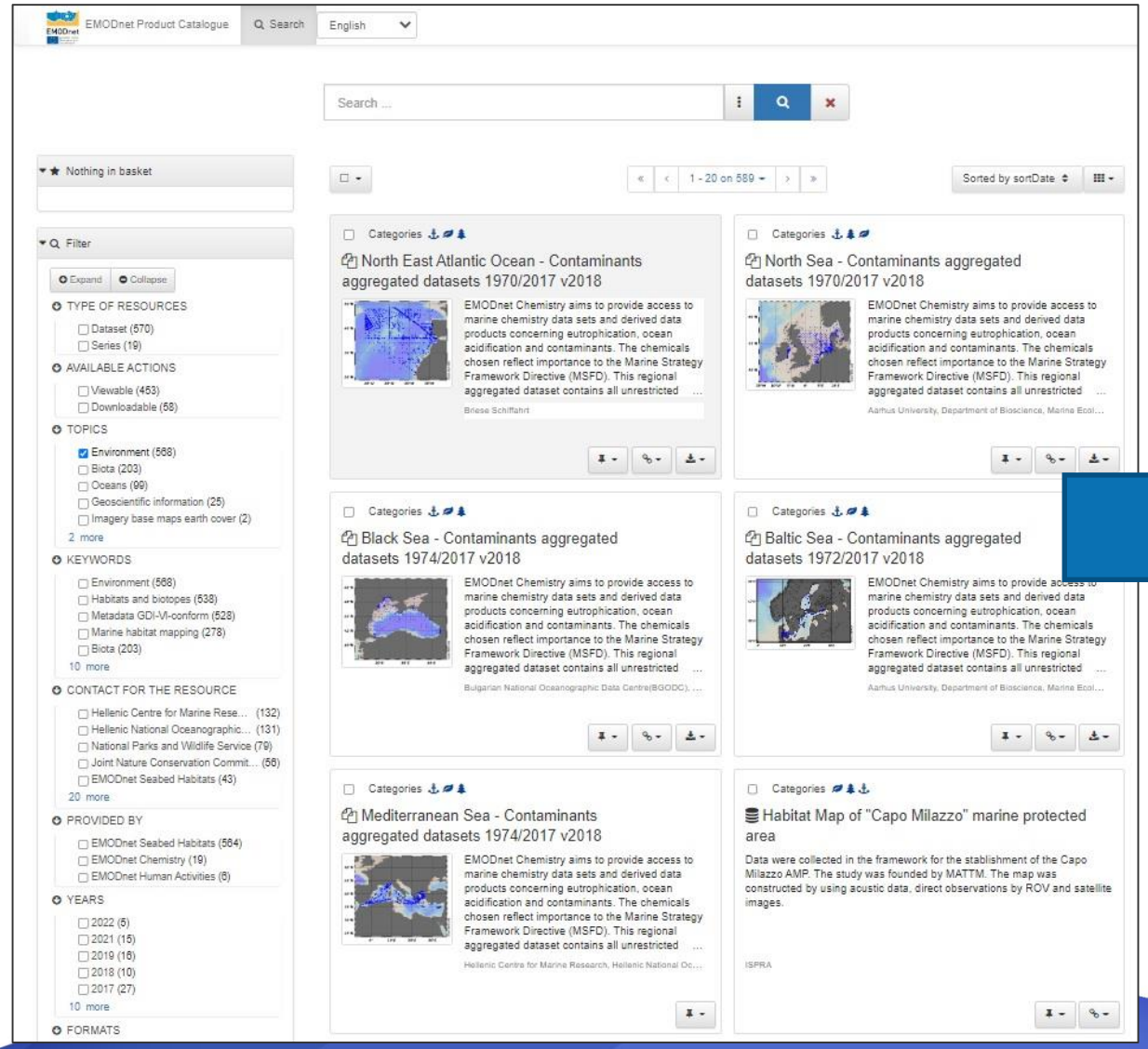


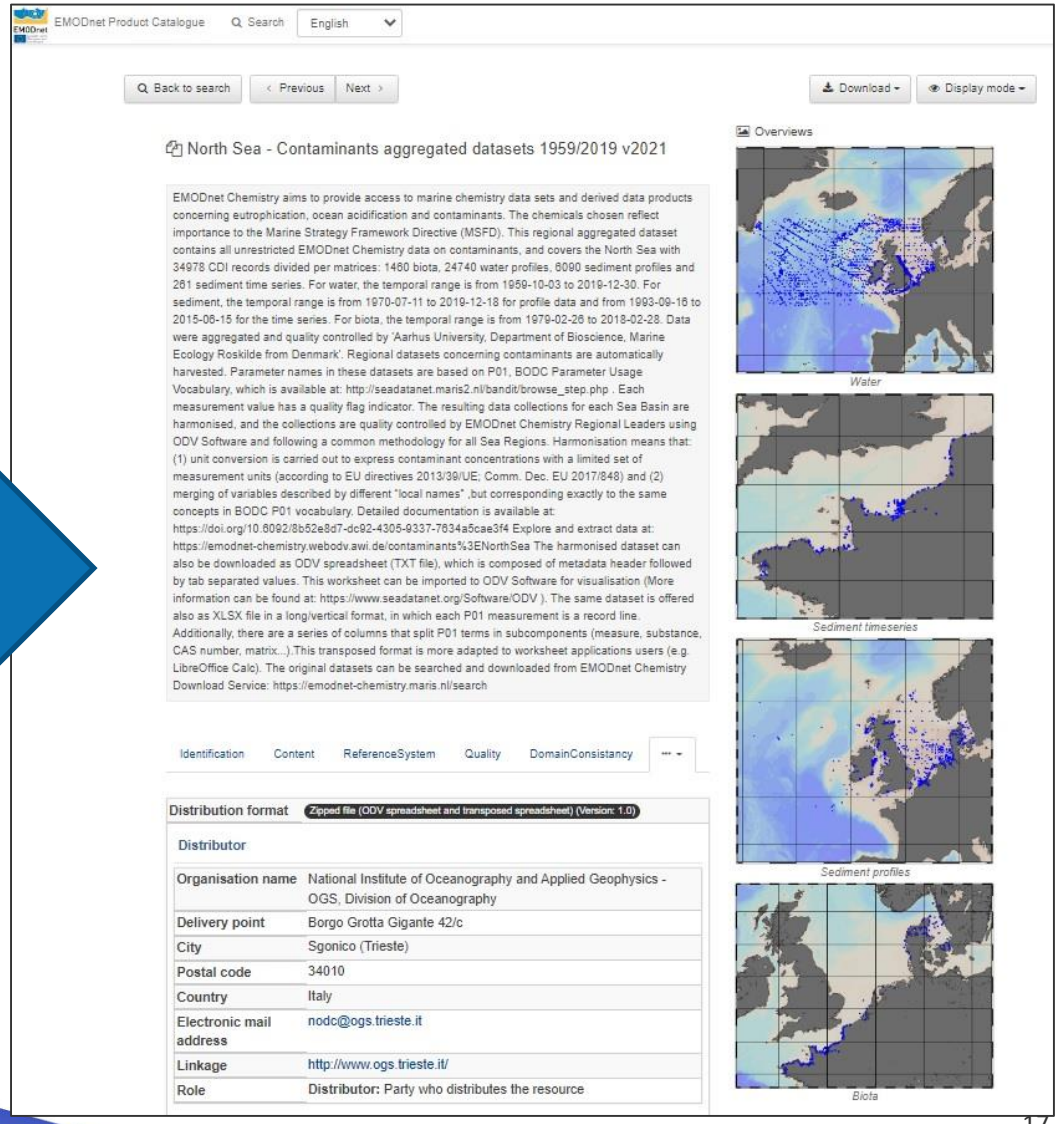




EMODnet | One central metadata catalogue

A single GeoNetwork catalogue that harvest OGC CSW published by thematic groups





EMODnet |Global Reach and Contribution to OceanData 2030

GEOSS Portal

International portal, implemented by ESA

Ocean Data and Information System (ODIS)

Implemented by IODE of IOC/UNESCO

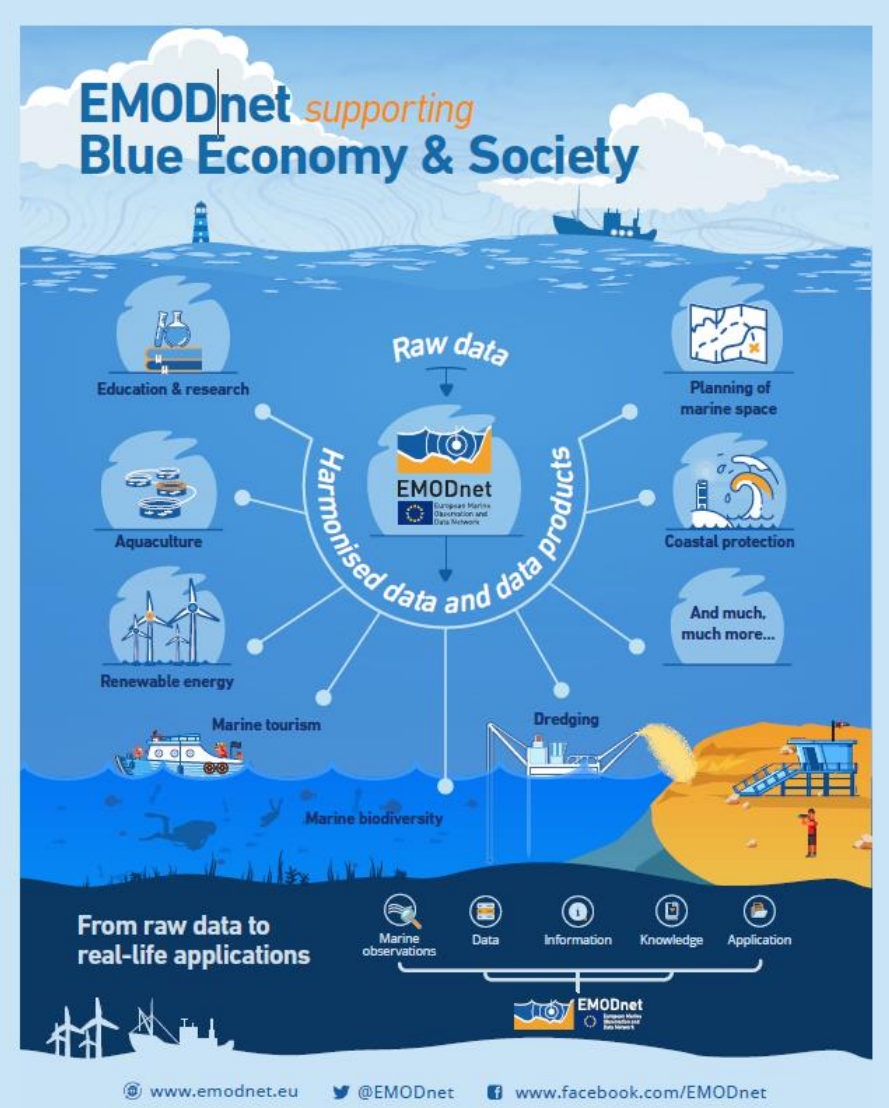
EMODnet's FAIR common metadata catalogue is the backbone for EMODnet's contribution to the the **global ocean data digital ecosystem**, the UN Decade of Ocean Science for Sustainable Development, Sustainable Development Goals (SDG) agenda and **machine-machine data harvesting.**

EMODnet | centralization explainer video

[EMODnet centralization Explainer Video 2023 | European Marine Observation and Data Network (EMODnet) (europa.eu)]

EMODnet | A trusted source of pan-European marine data services, for all

Focus of this presentation is on EMODnet for European Research and Innovation

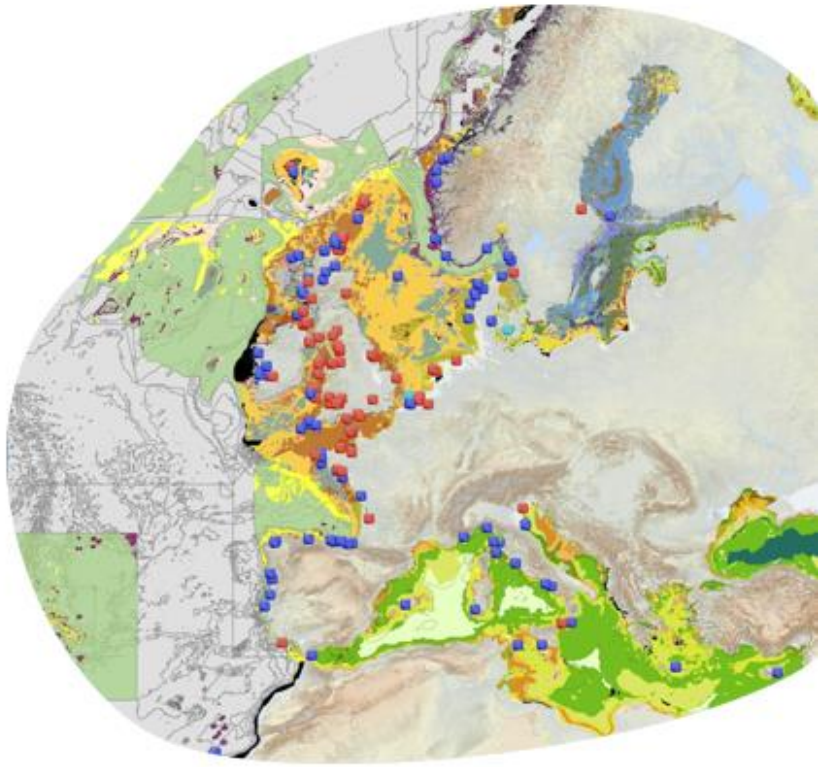


EMODnet has many ongoing collaborations with European Marine Research and Innovation community as data collectors and providers, as partners in EMODnet delivering the service, and as users of EMODnet.

EMODnet: DELIVERING *IN SITU* MARINE KNOWLEDGE FOR EUROPE AND BEYOND

The **European Marine Observation and Data Network (EMODnet)** is an EC marine data service of DG MARE providing pan-European data and data products on the marine environment and human activities at sea.

EMODnet's free and open access service **delivers FAIR data and marine knowledge** for 1000's of users, also supporting delivery of the EU Mission "Restore our Ocean and Waters by 2030." Specifically, the EMODnet offer supports the EU Mission's 3 objectives and the 2 enablers. This includes EMODnet's core role in the European Digital Twin Ocean, a key component of the European Ocean and Water Knowledge System.

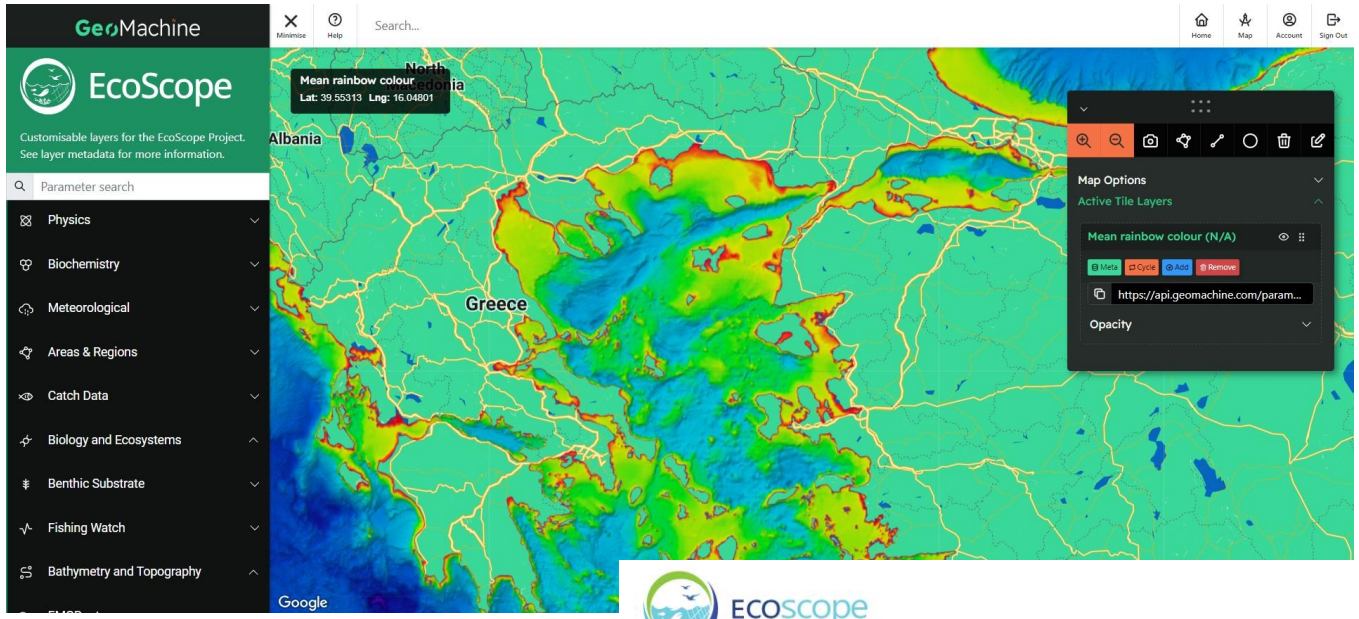


EMODnet
European Marine Observation and Data Network

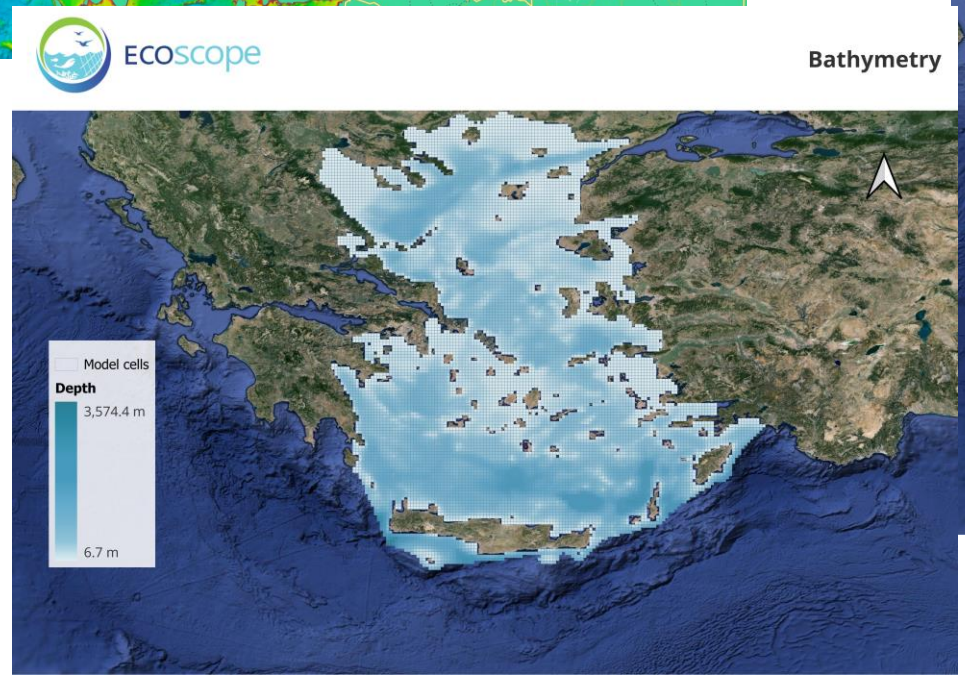
emodnet.ec.europa.eu

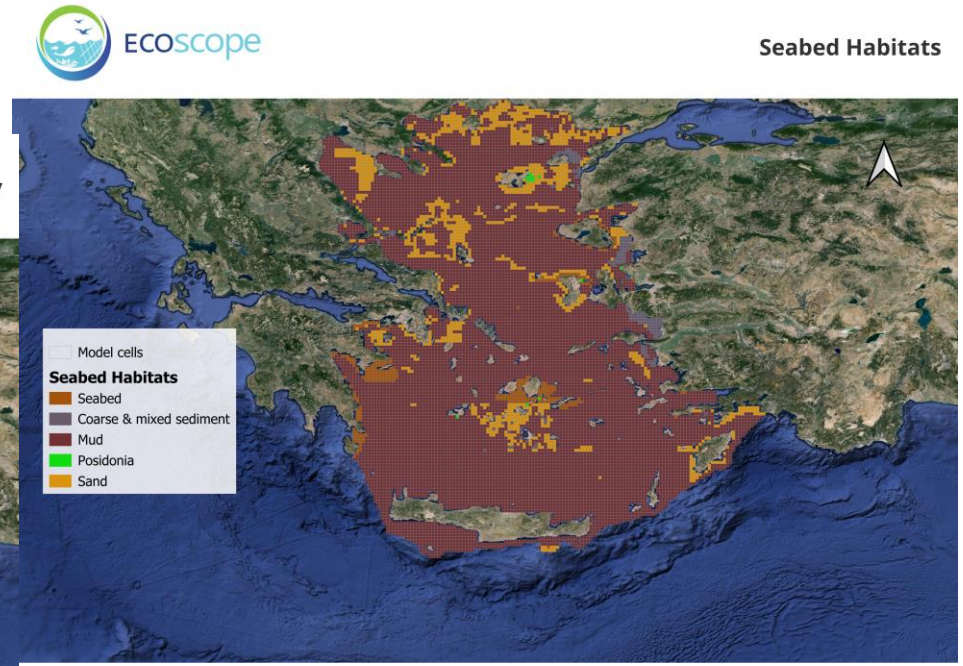
EUROPEAN OCEAN DAYS

EMODnet data in Ecoscope



Ecoscope platform integrates meteorologic, climate, oceanographic, biogeochemical, socio-economic, biological and fishery data for all EU Seas from various repositories. The platform prepares the data in the appropriate format to be imported in ecosystemic and fishery models, like the Ecopath with Ecosim model.





EMODnet Bathymetry and Seabed Habitat data are important for modeling the spatial variability of fishing impacts and running scenarios for the designation of Marine Protected Areas using the Ecospace component of the EwE model.

EU H2020

https://ecoscopium.eu

Remedies Project: EMODnet Data in Action

REMEDIES
MEDITERRANEAN SEA BASIN LIGHTHOUSE

#PlasticLitterFree
#RemediesForOcean
#20tonneschallenge
#MissionOcean
#HorizonEU

EMODnet Chemistry
Beach Litter

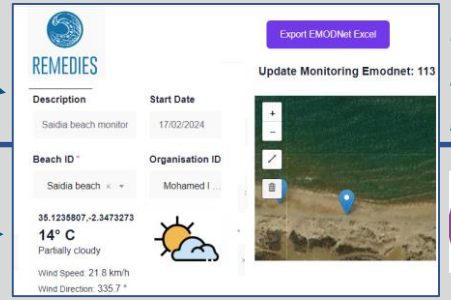
Search of historical data regarding beach monitoring in the Mediterranean Sea

KEMIJSKI INŠTITUT
vito

EMODnet
European Marine Observation and Data Network

Send to EMODnet Ingestion Portal

Import to Remedies Portal



Remedies data repository management portal

Remedies App — *Send data to portal*

infordata SISTEMI

VENICE LAGOON PLASTIC FREE

Align methodologies with EMODnet guidelines and forms for gathering marine beach litter data.

7 REMEDIES partners

(registered EMODnet data provider) reporting data from seasonal beach monitoring campaigns in 6 Mediterranean countries (**Albania, Italy, France, Greece, Morocco, Slovenia**)

MCG MARINECONSERVATIONGREECE
ETMI
Univerza v Mariboru
VENICE LAGOON PLASTIC FREE
Consiglio Nazionale delle Ricerche
SMILO SUSTAINABLE ISLANDS

EU MISSIONS RESTORE OUR OCEAN & WATERS

Co-funded by the European Union

https://remedies-for-ocean.eu/

EMODnet |Research and Innovation Use cases

European Marine Observation and Data Network (EMODnet)

About | Data Services | Solutions | Themes | Community Pages | Atlas of the Seas | EU-China | News & Events | FAQ Downloads

Home > Solutions > Use Cases

Search options

EMODnet component

- Any -

Case Type

× Research/Academia

Search text:

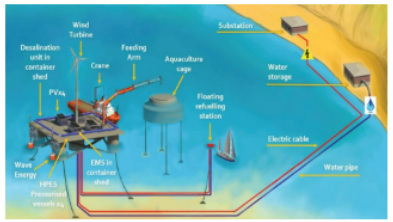
Refine results

Use Cases

Bathymetry | Geology | Human Activities

06 Oct 2023

Utilizing marine data for the design of a floating multiuse renewable energy platform



The University of Aegean is a partner in the MUSICA (Multiple Use of Space for Island Clean Autonomy) project, that developed a smart multi-usage of space (MUS) platform for the concurrent use of three types of renewable energy – wind, photovoltaic and wave – at small islands. The MUS also contributed to the advancement of a successfully tested multi-

https://emodnet.ec.europa.eu/en/use-cases

EMODnet

European Marine Observation and Data Network

emodnet.ec.europa.eu

Stay up-to-date with the latest news

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Q&A

Put your questions in Slido!

slido

Audience Q&A Session

ⓘ Start presenting to display the audience questions on this slide.

Data Ingestion

EMODnet Data Ingestion

Sissy Iona, EMODnet Data Ingestion Scientific Coordinator, HCMR, Greece

The Challenge in marine data sharing and exchange

Streamlining the ingestion process from data sources towards data infrastructures and EMODnet

- **Reliable** and **accessible marine data** are key to supporting good research, and EU ocean policies, initiatives, and sustainable Blue Growth.
- The costs of marine data collection by European organizations is circa 1.4 billion Euro per year: ~ 1.0 billion for in-situ; ~ 0.4 billion for remote sensing.
- Existing marine data management infrastructures (SeaDataNet, EurOBIS, EGDI, ICES, CMEMS, and others) connected to EMODnet, already make a substantial amount of marine data **discoverable, accessible,** and **reusable.**
- However, still, a lot of valuable marine data **does not arrive in these infrastructures**, **preventing its distribution through EMODnet and limiting its use.**

Ocean Observation

In Europe, we spent circa 1.4 Billion Euro a year in marine data acquisition (1.0 BE in-situ; 0.4 BE remote sensing)

Published in Frontiers in Marine Science 2020 (source: Glynn Gorick and the NeXOS project)
Future Vision for Autonomous Ocean Observations

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

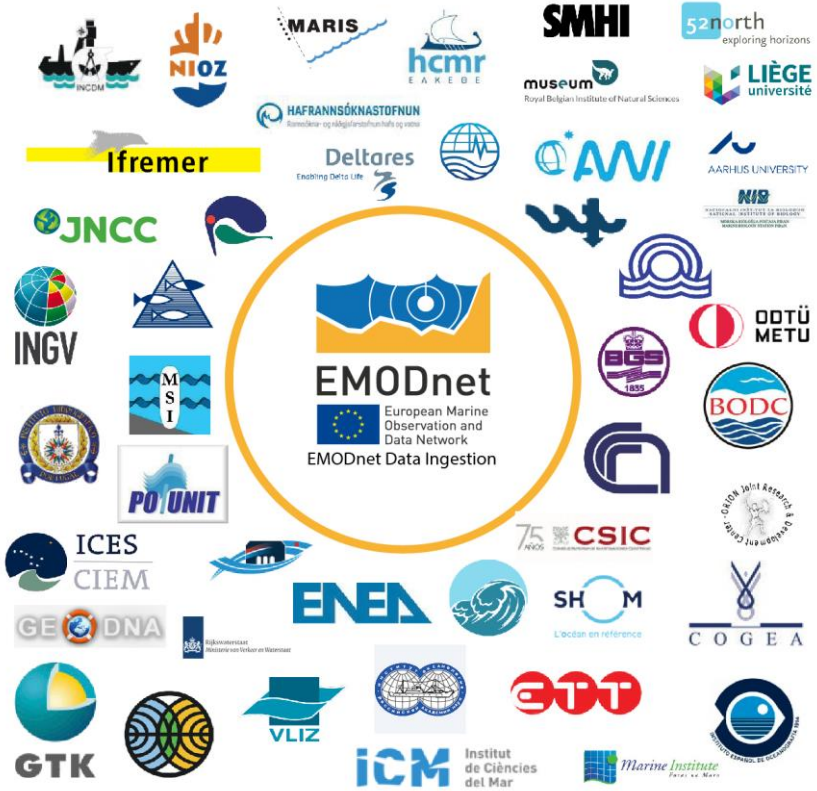
Promotion and interaction with new data providers from multiple sectors

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

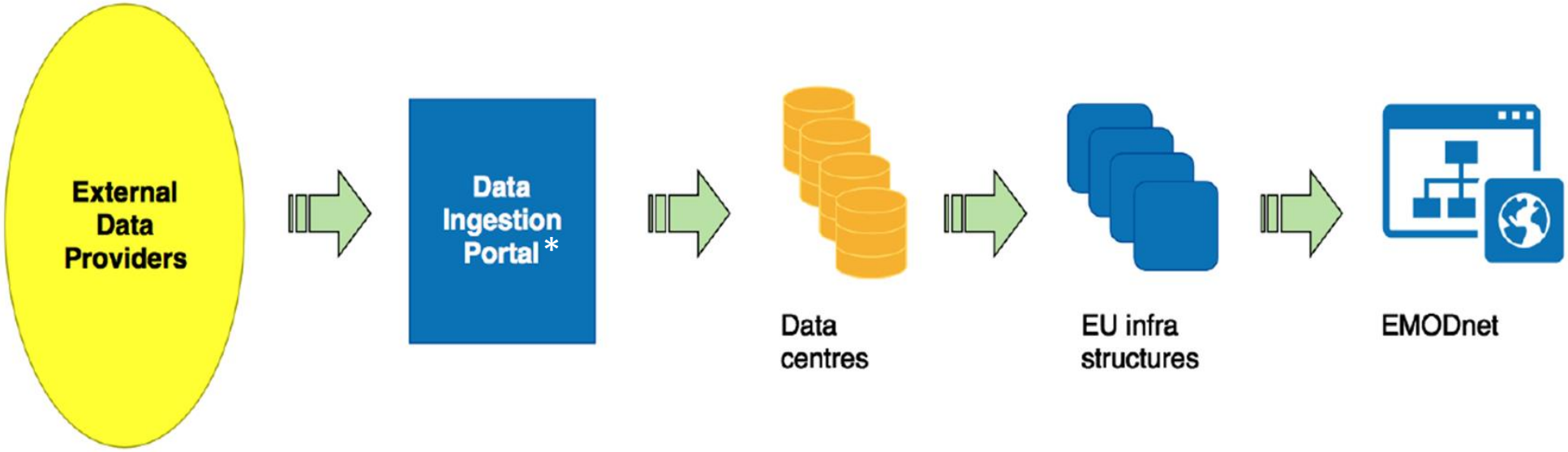
PHYSICS

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

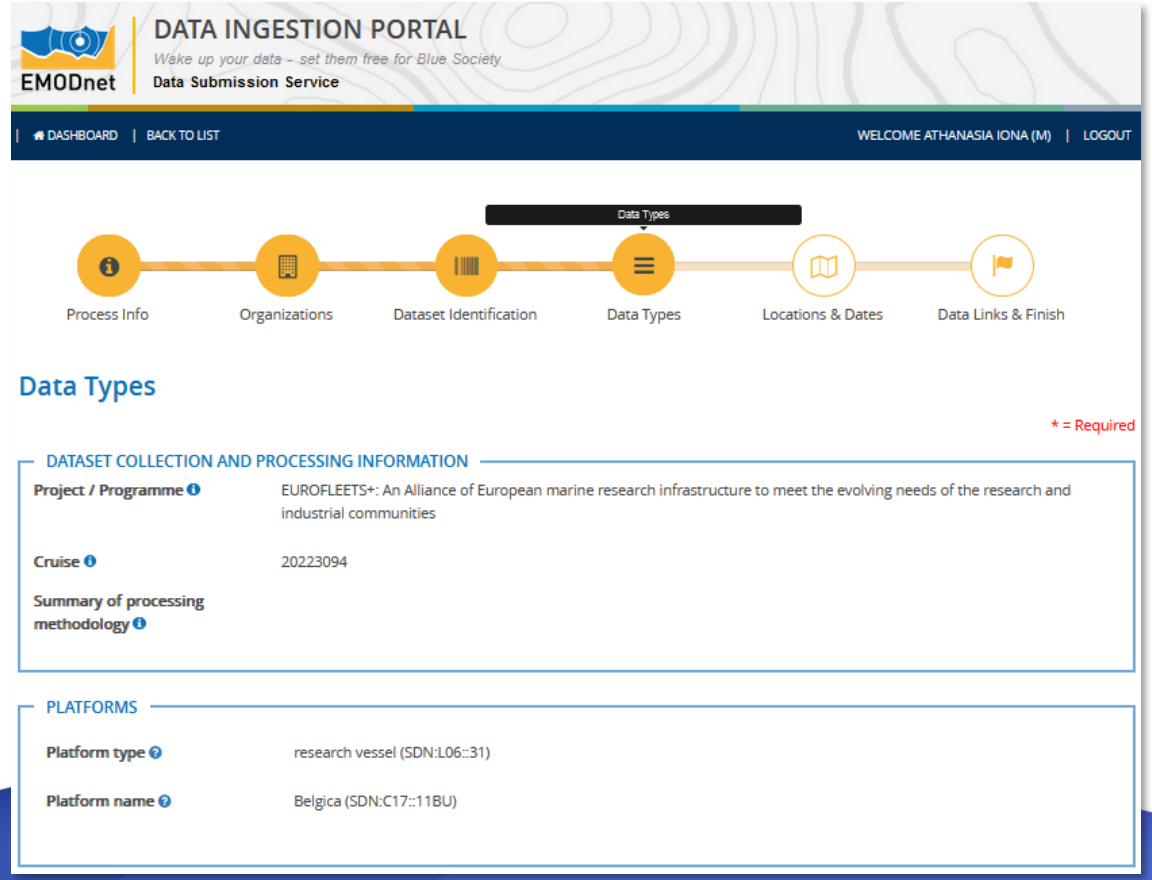
* Migration to Central Portal, 2024

On line submission form

A step by step approach

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

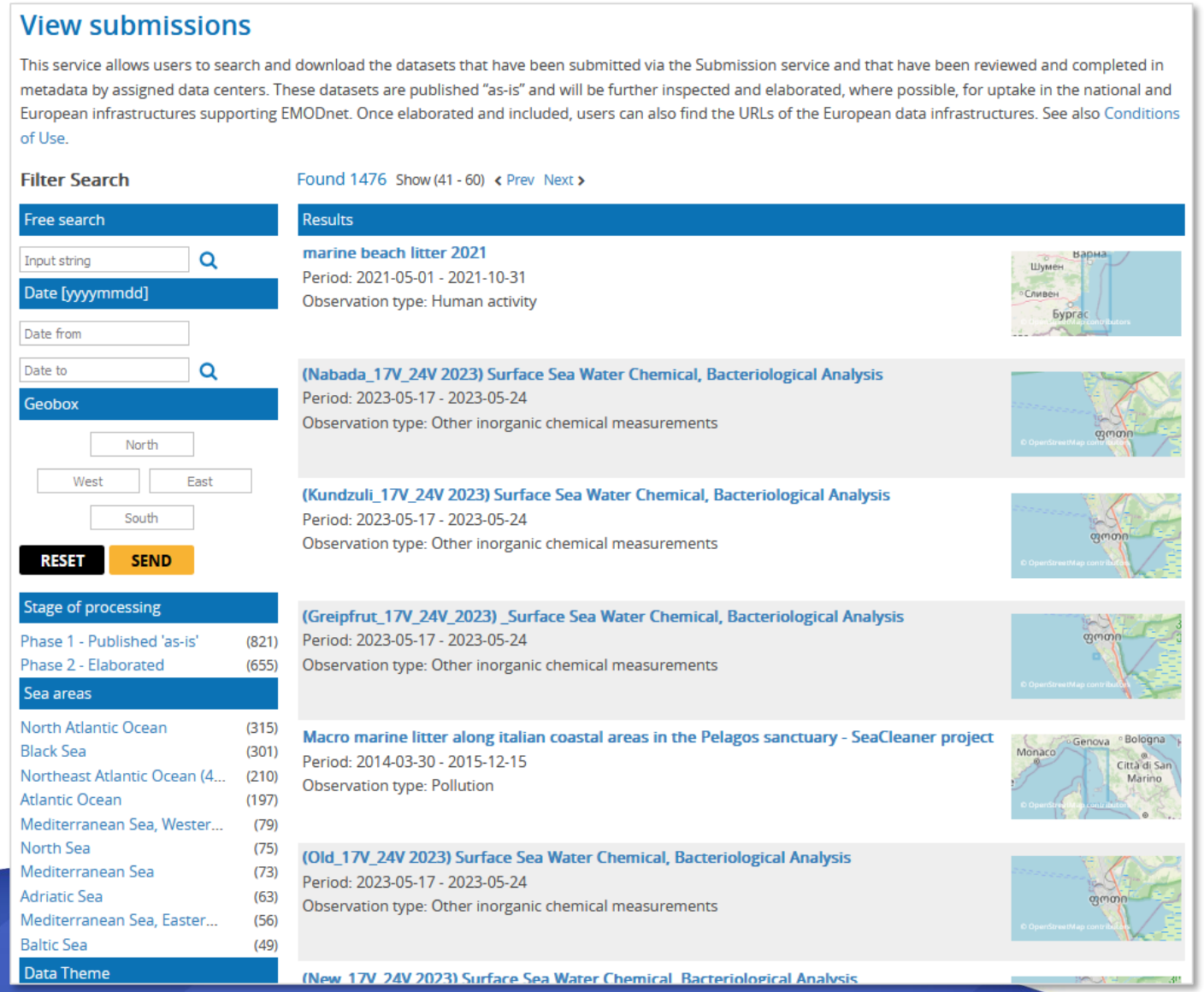
- **Phase I**: from data submission to publishing '*as is*'
- **Phase II**: data that fit for use by EMODnet and its stakeholders are further elaborated and integrated by the expert data centers in national, European infrastructures and EMODnet for publishing and sharing with the wider community



- 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 (41 - 60) ‹ Prev Next ›

Free search

Input string

Date [yyyymmdd]

Date from

Date to

Geobox

North

West East

South

RESET SEND

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

marine beach litter 2021
Period: 2021-05-01 - 2021-10-31
Observation type: Human activity

(Nabada_17V_24V 2023) Surface Sea Water Chemical, Bacteriological Analysis
Period: 2023-05-17 - 2023-05-24
Observation type: Other inorganic chemical measurements

(Kundzuli_17V_24V 2023) Surface Sea Water Chemical, Bacteriological Analysis
Period: 2023-05-17 - 2023-05-24
Observation type: Other inorganic chemical measurements

(Greipfrut_17V_24V_2023) _Surface Sea Water Chemical, Bacteriological Analysis
Period: 2023-05-17 - 2023-05-24
Observation type: Other inorganic chemical measurements

Macro marine litter along italian coastal areas in the Pelagos sanctuary - SeaCleaner project
Period: 2014-03-30 - 2015-12-15
Observation type: Pollution

(Old_17V_24V 2023) Surface Sea Water Chemical, Bacteriological Analysis
Period: 2023-05-17 - 2023-05-24
Observation type: Other inorganic chemical measurements

(New_17V_24V 2023) Surface Sea Water Chemical, Bacteriological Analysis

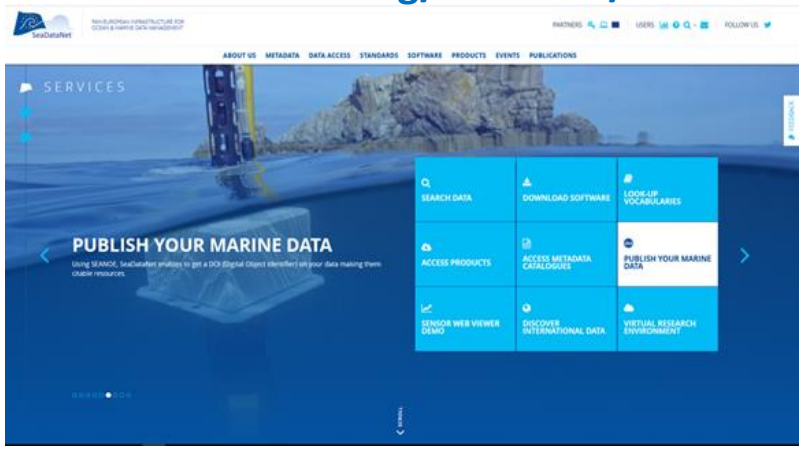
Making more scientific data available

Establishing automatic (M2M) exchanges with other data repositories

- **Coupling with the SeaDataNet / SEANOE data citing service**
  - Dynamic exchange has been deployed (with > 320 entries, 250 already published)

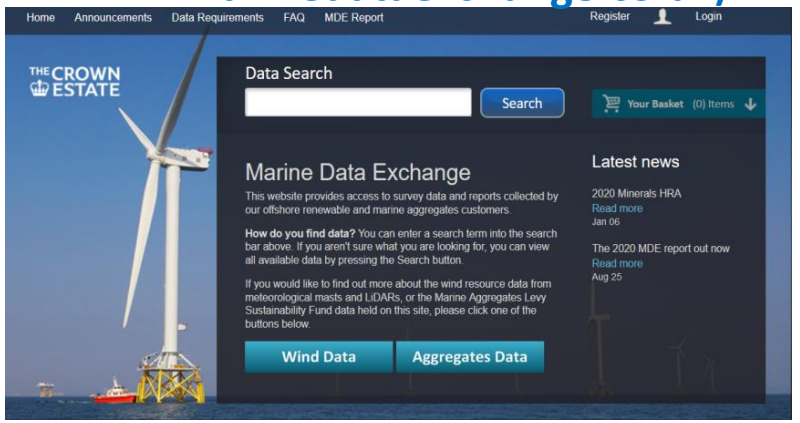
publish and get a DOI for your data !

www.seadatanet.org/Software/SEANOE



- **Coupling with The Crown Estate (TCE) Marine Data Exchange (MDE)** is under development
  - MDE stores, manages, share data of offshore renewable energy projects in the UK North Sea sector

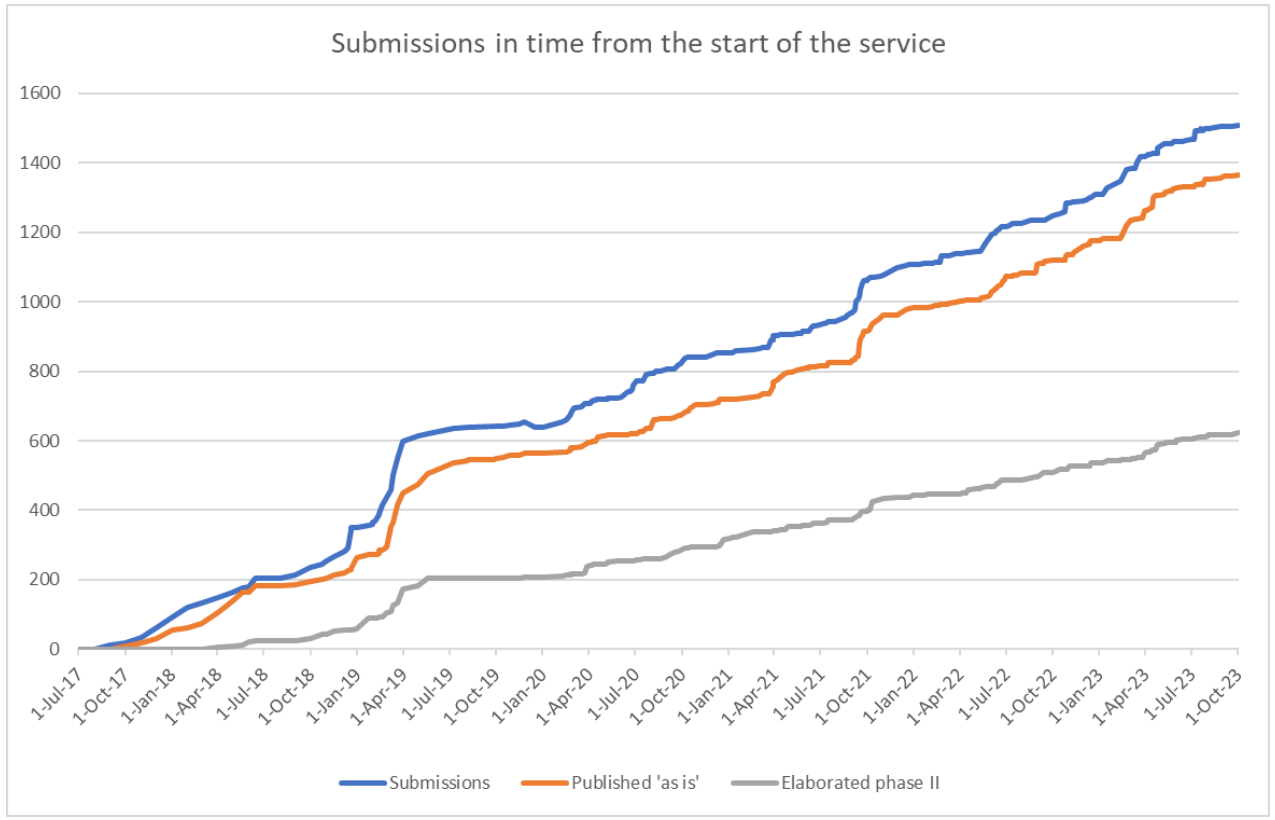
www.marinedataexchange.co.uk/

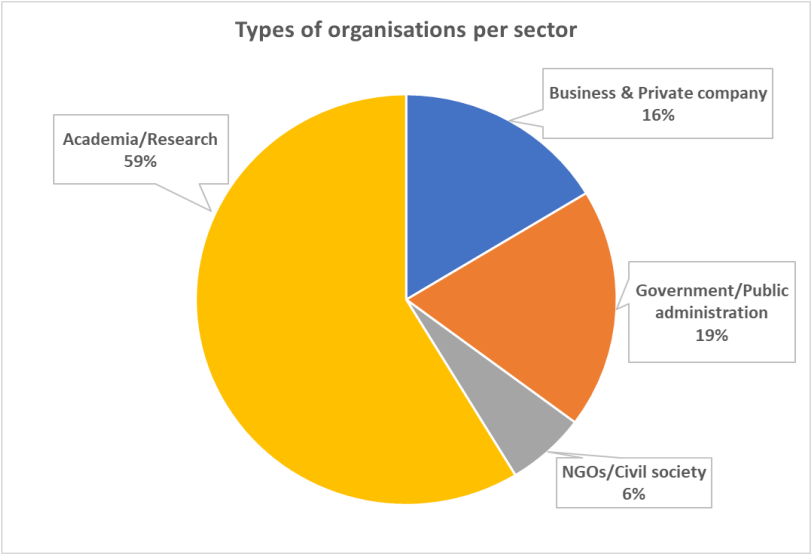


Synthesis of our data providers and data content

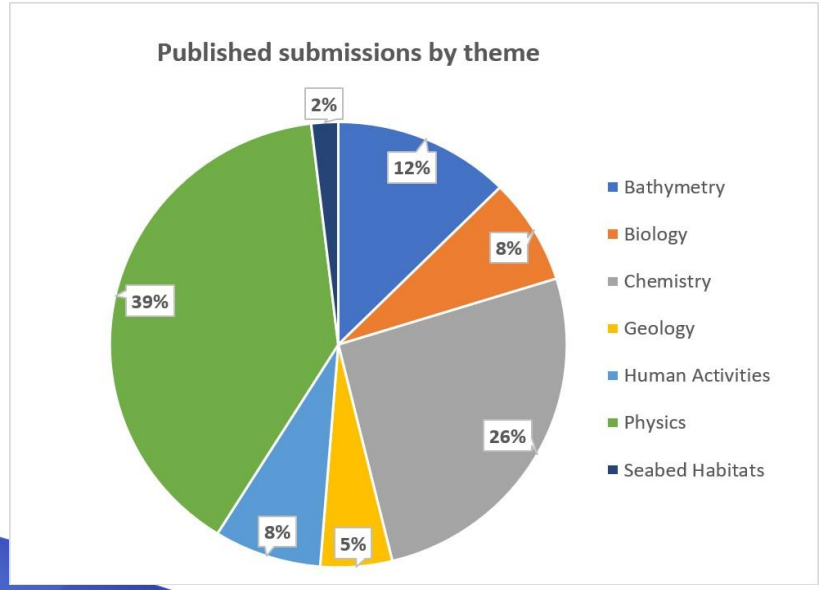
>1550 submissions from 200 Organizations from Academic, Governmental, Business, NGOs sectors

Increasing submissions in time





Wide range of marine environmental parameters



EMODnet

European Marine Observation and Data Network

emodnet.ec.europa.eu

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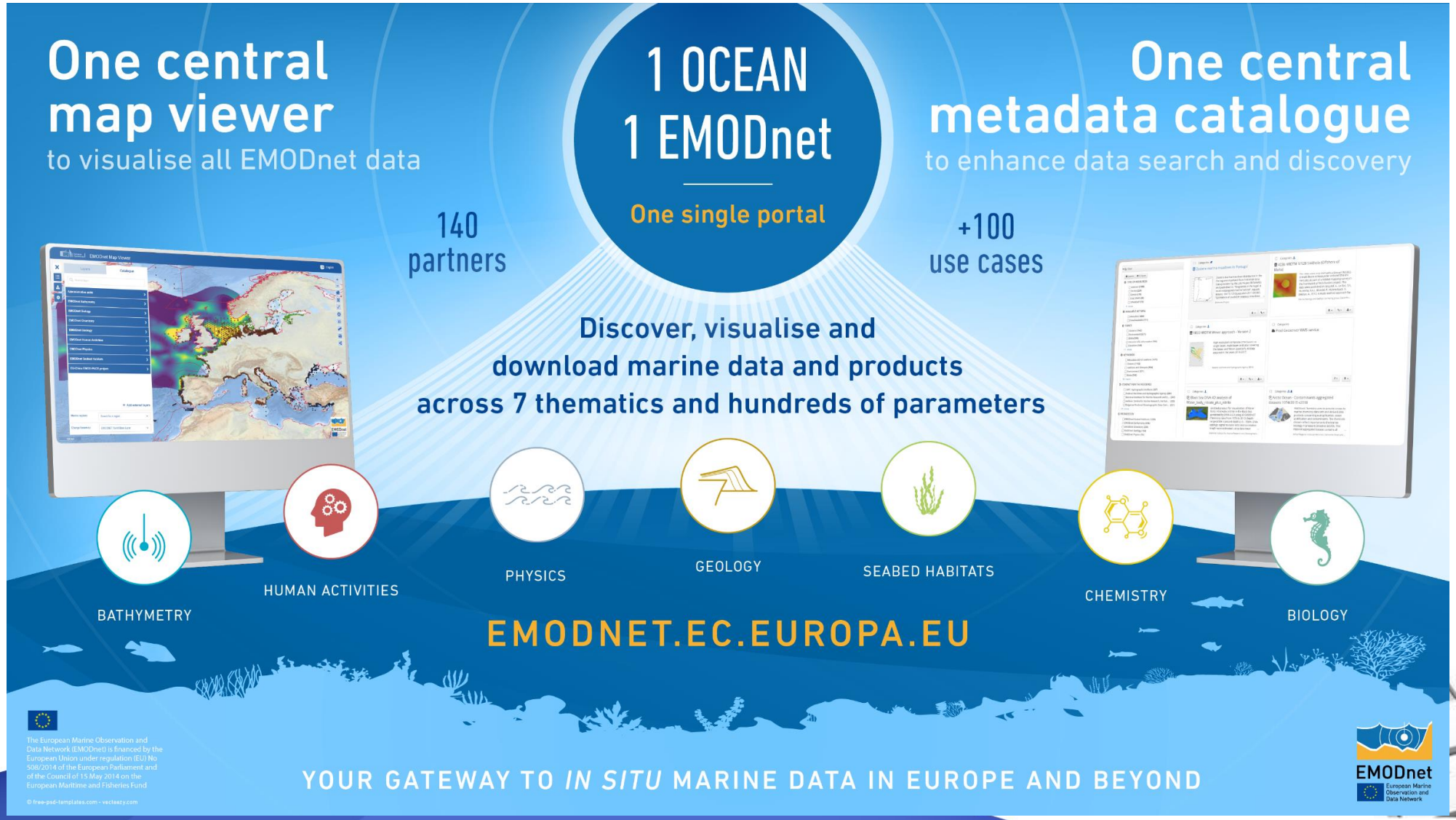
Data Ingestion

EMODnet, Guidelines for Data Submission and European Marine Data Management community practices

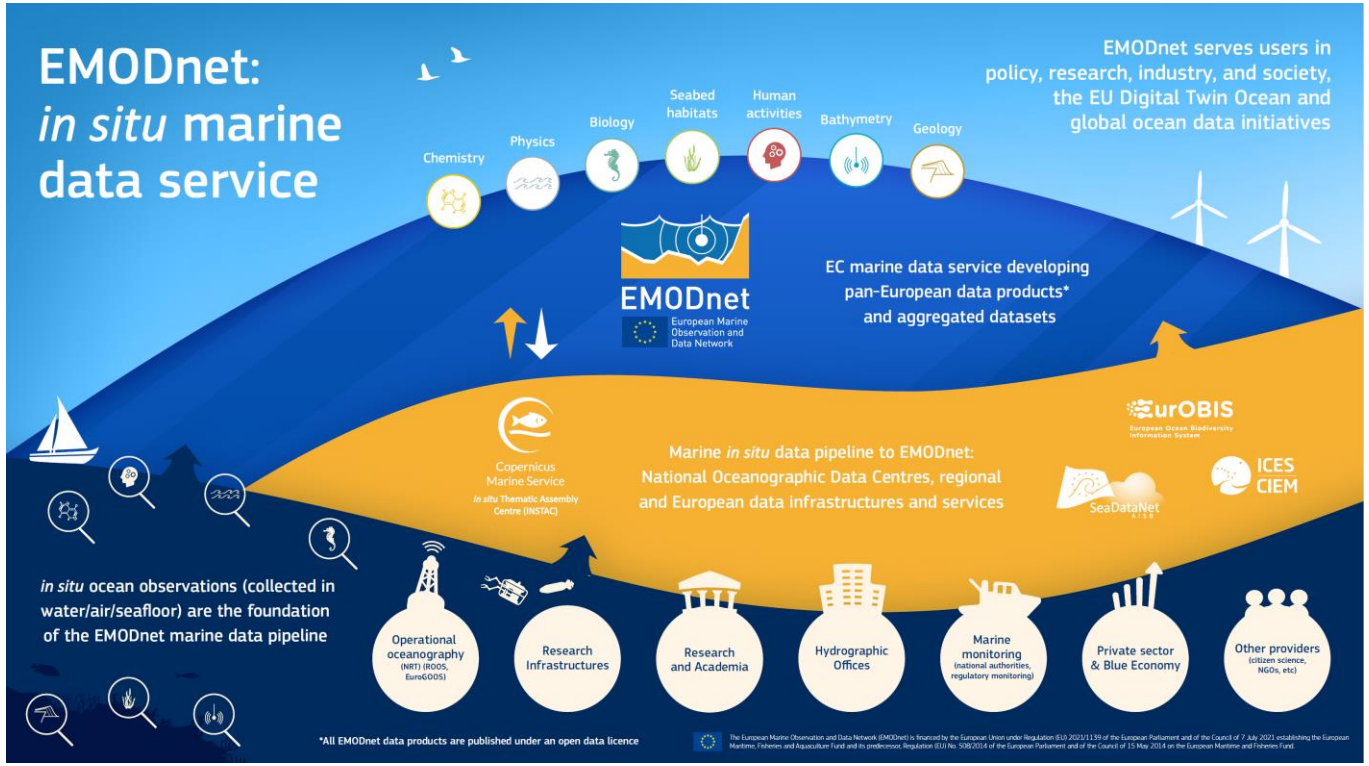
Dick Schaap, EMODnet Data Ingestion Coordinator, MARIS, Netherlands

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



EMODnet Thematic groups develop high-quality European data products and services which are made freely available through its portal and web services

- 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.



Value of EMODnet for EU Research and Innovation Projects

- EMODnet **provides open and free** baseline pan-European marine data and data products that can be used in **R&I activities** towards a better understanding of the ocean environment, ocean applications, conservation and management.

- See the EMODnet portal for use cases

- Projects, collecting *in situ* marine environmental and/or human activities data, have a **contractual obligation** to make their data openly available.

- The EC aims to streamline this through **EMODnet, as its in-situ data service**.

- Contributing to EMODnet will facilitate R&I projects to make their data compliant to **FAIRness principles**

- Moreover, to get **wider recognition** by acknowledgement in EMODnet products and by wider use of their data.

- Finally, to **extend the reach** of their work, as EMODnet is feeding into larger initiatives such as the EU Digital Twin of the Oceans (DTO) and global UN Ocean Decade.

FAIR principles

To enable and enhance the reuse of data by both humans and machines

***F* – "Your data can be discovered by others"**

- Assigned **persistent identifier** for unique identification and versions management
- Rich descriptive **metadata** for searching and finding

***A* – "Your data can be made available to others"**

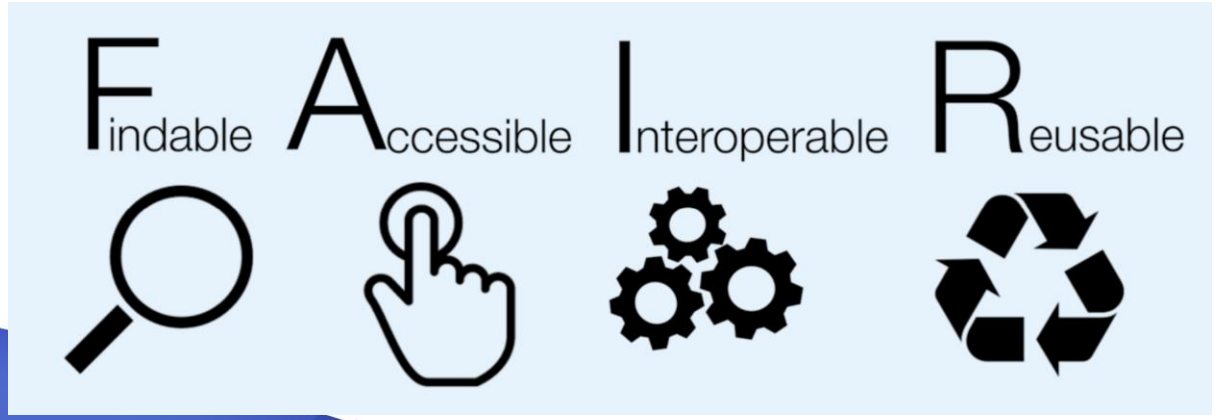
- Accessible on the **internet** or by other applications
- **Access restrictions and conditions** should be clearly specified

***I* – "Your data can be integrated with other data"**

- Open **standards (formats, vocabularies)** should be applied to (meta)data
- **Identifiers** for linking with other data, metadata, information

***R* – "Your data can be reused by others"**

- Clear **license** to specify the reuse conditions and permissions (CC-read, understood by machines)
- **Provenance** information on how the data was created



Marine Data Management guidelines

- Marine and ocean data include a very wide range of measurements and variables derived from a broad spectrum of multidisciplinary research projects and monitoring programmes.

- **General principles for metadata**:
  - data should include enough meta-data to be processed, and include additional textual or standardized “history” or “comment” fields to prevent any loss of information,
  - provide similar structure and meta-data for different data type such as vertical profiles and time series.
  - For all types of data, information is required about:
    - Where the data were collected: location (preferably as latitude and longitude) and depth/height
    - When the data were collected (date and time in UTC or clearly specified local time zone)
    - How the data were collected (e.g. sampling methods, instrument types, analytical techniques)
    - How you refer to the data (e.g. station numbers, cast numbers)
    - Who collected the data, including name and institution of the data originator(s) and the principal investigator
    - What has been done to the data (e.g. details of processing and calibrations applied, algorithms used to compute derived parameters)

Marine Data Management guidelines - continued

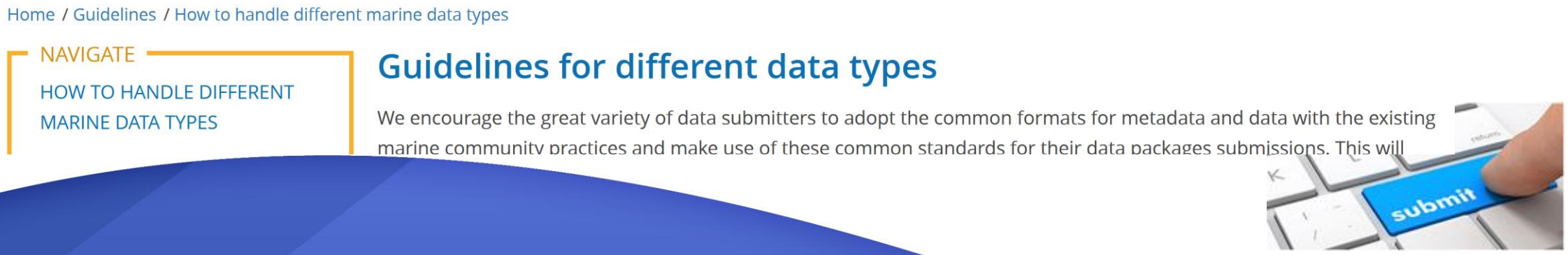
- Depending on the data type, the acquisition systems, the delivery time frame or operations of the archiving centre, there is not a unique used data model and structure and the original measurement format may not be the same as the format that the archiving centre can accept.

- Projects are encouraged to adopt the common formats for metadata and data with the existing marine community practices and make use of these common standards for their data packages submissions.

- This will enable the easiest integration of their data sets into the current data systems and make them re-usable.

- A summary of these basic data management guidelines used by the marine community can be at:

https://www.emodnet-ingestion.eu/guidelines/how-to-handle-different-marine-data-types



Recommendations to EU R&I projects

- Adopt **community standards** as in use in EMODnet for formulating **Data Management Plans (DMP)** for handling and documenting data collection and data processing steps in their project to contribute to long-term data preservation and accessibility. This will ultimately allow their data to be FAIR and machine-readable;

- DMPs should be defined by the goals of a research project or observation program and data should be documented through metadata following the EMODnet community standards;

- Design and implement the DMPs **in collaboration with marine data management infrastructures and their national nodes** that are feeding EMODnet and who provide standards and operate tools for submitting data and metadata, and facilitate long-term data archiving;

- Establish contact with EMODnet from the start of the project to explore data flow and long-term uptake of data into EMODnet. This can be done via project partners involved in EMODnet and/or with Data Ingestion, to get advice on possible data flow and ways to ensure long-term storage and uptake of the project data into EMODnet as an EC marine data service.

Support by EMODnet Ingestion for EU projects

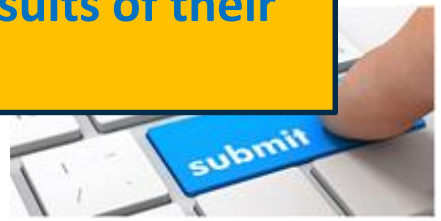
- EU R&I projects should initiate, formulate, and deploy DMPs **themselves**, taking into account their research and data collection plans, and considering the community standards and practices as promoted and used by EMODnet.
- They can seek **support** from EMODnet Ingestion for reviewing their DMPs, before these are published and deployed, and for possible matchmaking with relevant data centres.

- EMODnet Ingestion manages a network of data management experts, consisting of coordinators of each EMODnet thematic group and representatives of the European marine data management infrastructures such as SeaDataNet, EurOBIS, EGDI, and others, which have nodes in many European countries.

- Moreover, the **data submission service** of EMODnet Ingestion might be used for transfer, **albeit** for well documented and formatted metadata and data sets.

- EMODnet Ingestion could also assist for sharing **operational data streams** with the EMODnet operational oceanography data exchange.

Disclaimer: EU R&I projects are and stay themselves responsible for the quality and results of their data management activities.



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EMODnet Data Submission Tools and Good Practices

Antonio Novellino, EMODnet Physics Coordinator, ETT, Italy

Operational Oceanography and near real time data management

operational oceanography ©EuroGOOS

Operational Oceanography is the systematic and long-term routine measurements, interpretation and dissemination of the ocean (and atmosphere) data.

Operational Oceanography gives the accurate description of the present state of the sea (including living resources) and it is used for many crucial applications:

- fast response to emerging events, e.g. extreme weather conditions, harmful algal blooms, high tides (“Acqua Alta - Venice”),
- boundary conditions for implementing search and rescue, oil spills, pollutions detections, etc
- vessel routing, plan fishing activities, ensure the safety of maritime operations in dynamic oceans, etc

Most of the operational oceanographic data are ocean physics data (temperature, salinity, currents, waves, sea level, etc)
Operational data flow is key component in EMODnet Physics and other EU Programs and initiatives (Copernicus Marine Service)

EMODnet Ingestion has designed a dedicated path to manage these near real time data flows.

EMODnet Ingestion and Operational Oceanography

Similar to the “standard” flow the near real time is organized in phases to manage the submission life cycle:

- Phase 1: from data submission to publishing of the submitted datasets package ‘as is’
- Phase 2: further elaboration of the datasets package and integration (of subsets) in operational repositories

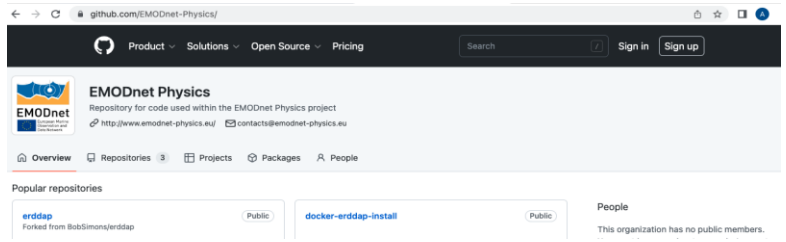
If eligible, the ingestion process continues under the “standard” path.

It applies to fixed stations, autonomous vehicles, drifting loads, smart sensors on vessels, …

The process consists in some steps/actions
- contacts (HD, mails, events,…), analysis (parameters, format, metadata, APIs), harmonization (metadata, …), ingestion

It is supported by tools (controlled vocabulary service, APIs mapping and broker tools, etc).
Some of these tools e.g. ERDDAP docker are available to newcomers to speed up and facilitated the process.

ERDDAP is open source, FAIR, endorsed by Global Ocean Observing System,
helps implementing full federation: streaming of data, without making copies, …



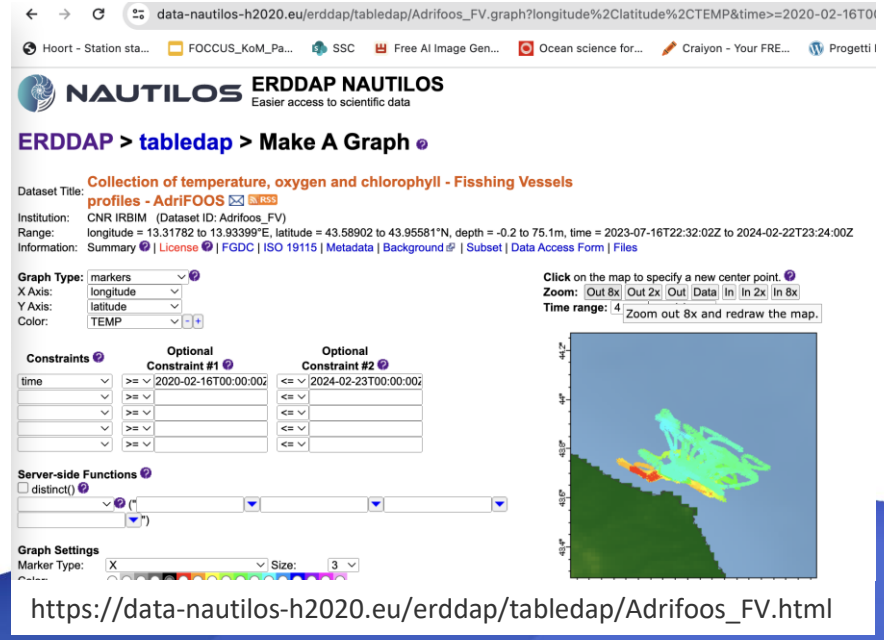
https://github.com/EMODnet-Physics
you can get your docker (ready to use installation package) and we’re at your service for HD

Use cases

NAUTILOS - New Approach to Underwater Technologies for Innovative, Low-cost Ocean observationS

To fill in marine observation and modelling gaps for biogeochemical, biological and deep ocean physics essential ocean variables and micro-/nano-plastics, by developing a new generation of cost-effective sensors and samplers, their integration within observing platforms and deployment in large-scale demonstrations in European seas. [H2020 – CT.101000825] - https://nautilos-h2020.eu

Operational cost-effective sensors for fishing vessels



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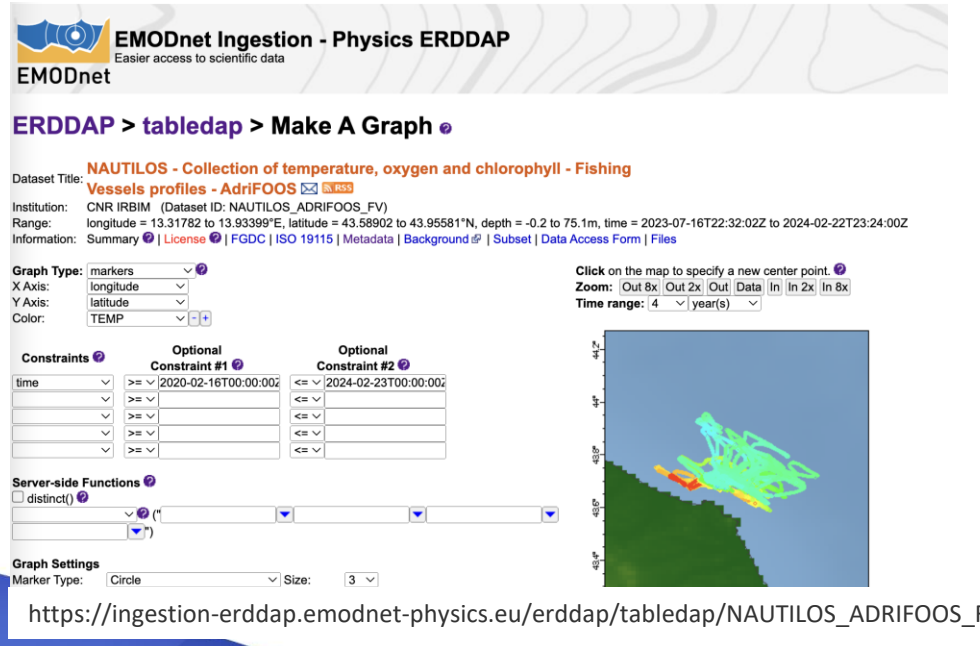


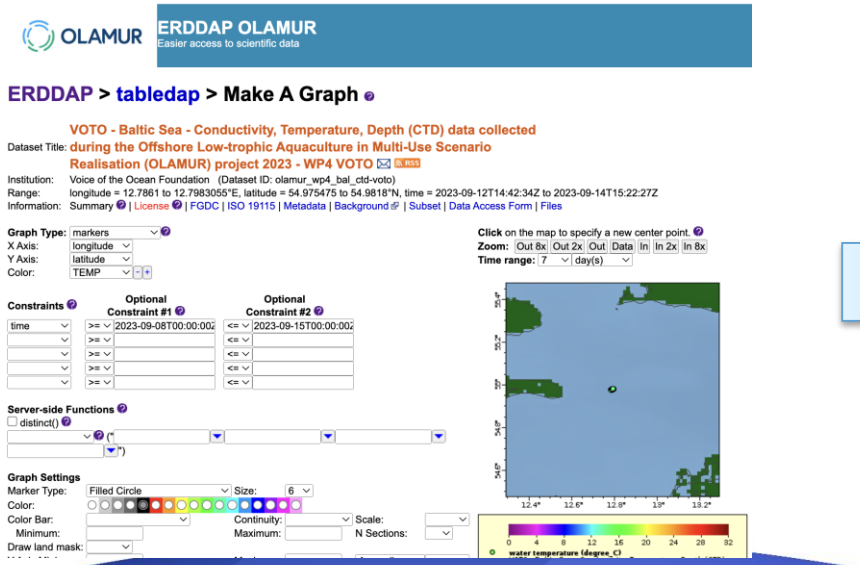
https://ingestion-erddap.emodnet-physics.eu/erddap/tabledap/NAUTILOS_ADRIFOOS_FV.html

Use Case

OLAMUR - Offshore Low-Trophic Aquaculture in Multi-use Scenario Realisation in North and Baltic Seas

To demonstrate sustainable multi-use low-trophic aquaculture (MU-LTA) related key sectors for both the North and the Baltic Sea. It includes 3 pilot demonstration sites where seaweed and blue mussels will be grown within windfarms or in the vicinity of a trout farm.
[EU Mission Ocean Lighthouse Project North Sea and Baltic Sea – CT.1011094065] - https://olamur.eu/

Study/monitoring of the site (glider/AUV missions)



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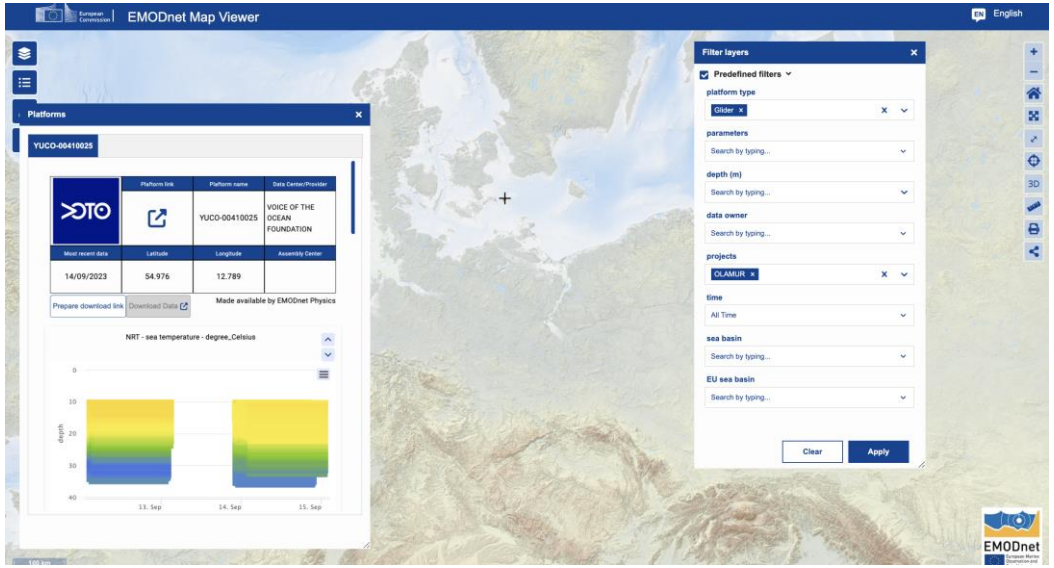

https://ingestion-erddap.emodnet-physics.eu/erddap/tabledap/PR_OLAMUR_YUCO.html

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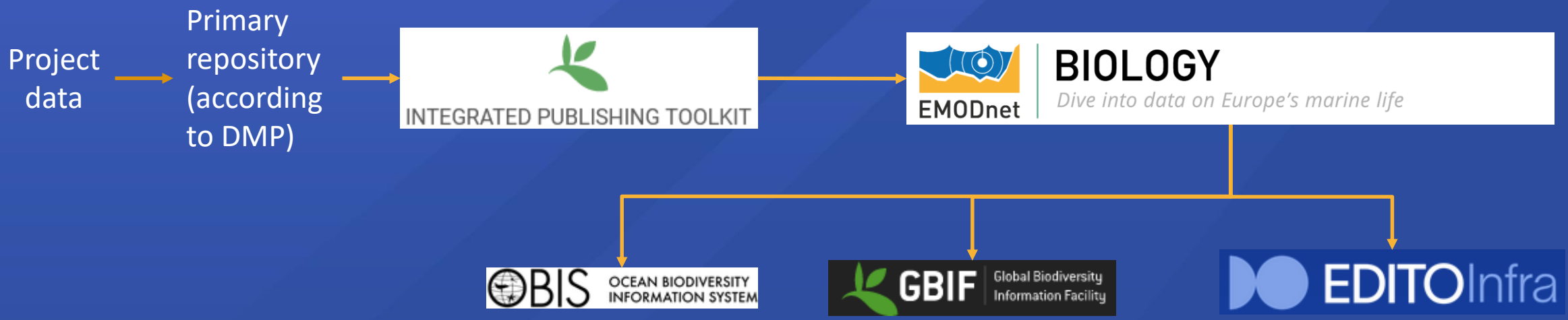
EMODnet Data Submission Tools and Good Practices

Joana Beja, EMODnet Biology Coordinator, VLIZ, Belgium

Data submitted directly to EMODnet Biology

Biology

- The EMODnet Biology data management team (bio@emodnet.eu) can support you for biodiversity data submissions



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Biology

- We can host your IPT instance or you can upload your data to our IPT
- Free self-paced training course ‘Contributing datasets to EMODnet Biology’ https://classroom.oceanteacher.org/enrol/index.php?id=958
- Guidance for the publication of genomics data (WIP) and for the creation of biodiversity data products in NetCDF
- Data file template
- Quality check tool as R package or Rshiny application
- More info in: https://emodnet.ec.europa.eu/en/biology

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Q&A and open floor

Put your questions in Slido

slido

Audience Q&A Session

ⓘ Start presenting to display the audience questions on this slide.

Webinar closing words

EMODnet Secretariat and DG MARE

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