Data exchange and integration:
Use cases for EMODnet Chemistry

Alessandra Giorgetti, OGS - agiorgetti@ogs.it

EMODnet service
The European Marine Observation and Data Network
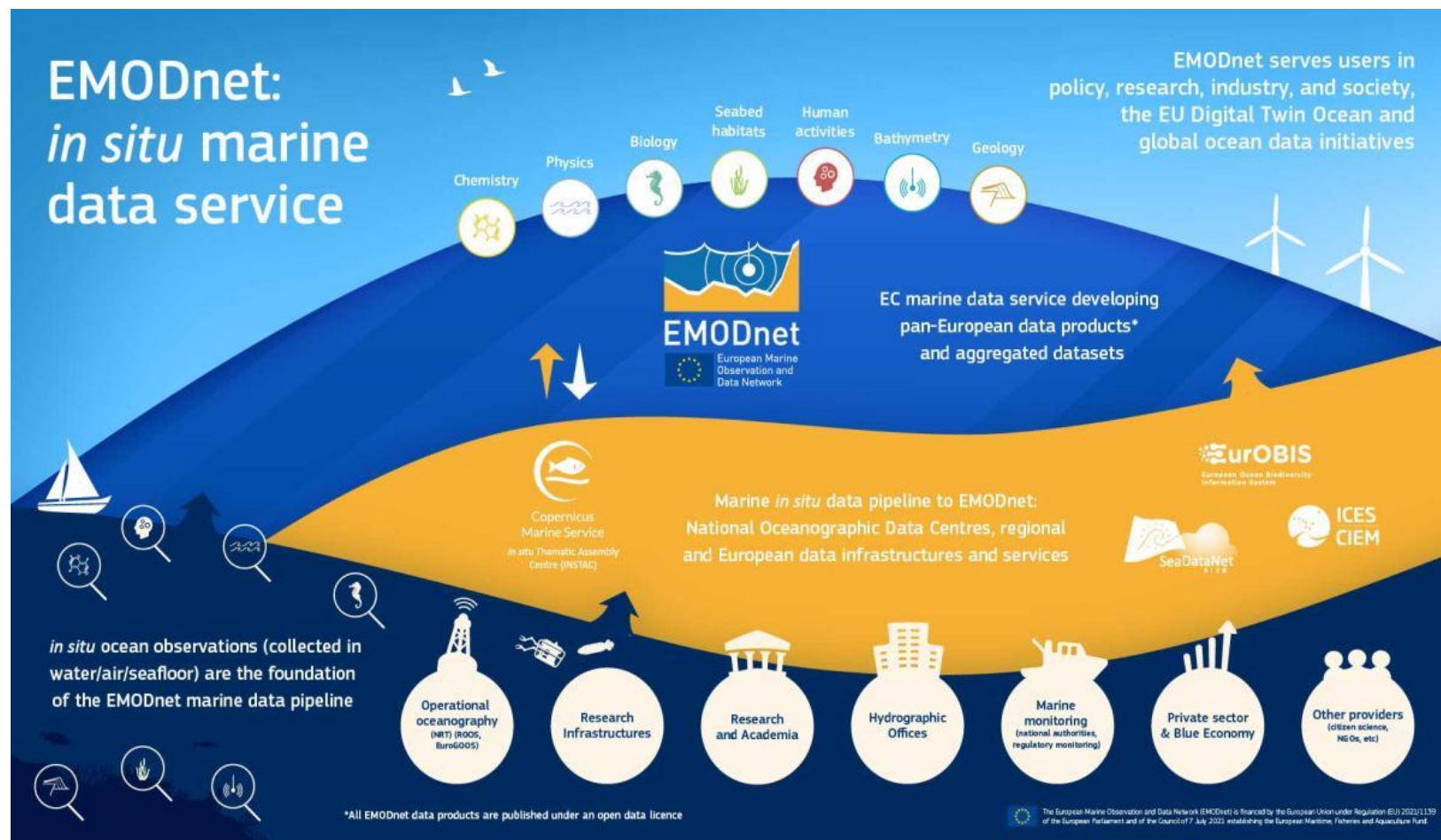
EU-funded since 2009
with a vision to 2035

+ 120 organisations working with national, regional and European marine data infrastructures

Easy and free access to marine data, metadata and data products from **7 domains**

EMODnet Chemistry
In a nutshell

Data and **data products** on **marine pollution** to support the EU and global marine and climate change policies

A network of 42 organisations:
national oceanographic data centres, research institutes, monitoring agencies, international organisations

The MSFD Board of Experts for feedback and refining data products and metadata.

EMODnet Chemistry
Contribution to the Marine Knowledge Value Chain

EMODnet
European Marine
Observation and
Data Network

Data - Metadata - Data Products

	Group of Parameters	Parameters
Marine Litter	Beach macrolitter, Seafloor macrolitter, Floating microlitter	Composition, Abundance, etc.
Ocean acidification	Acidity	pH, PCO_2, etc.
Contaminants	Antifoulants, Hydrocarbons, Heavy metals, Pesticides, Polychlorobiphenyls (PCBs), Radionuclides	Anthracene, Fluoranthene, Me, Cd, Pb, TBT, DDTs, etc.
Eutrophication	Nutrients, dissolved gases, etc.	N, P, Si, Chl-a, O_2, C, etc.

Task & Responsibility

Providing measurement Data

Gathering & validating data at national level

Standardising & validating data at regional level

Producing & Publishing data collections and maps

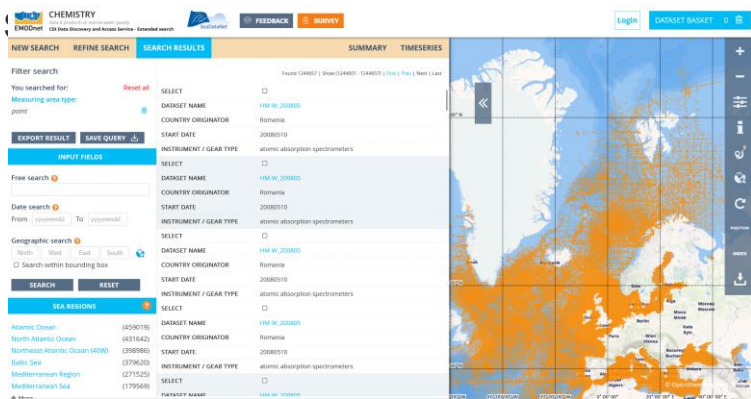Data Originators

Full Partnership

Regional Coordinators

Key partners

4

EMODnet Chemistry
Access to data and data products

Data Discovery and access service
To search and download measurement data

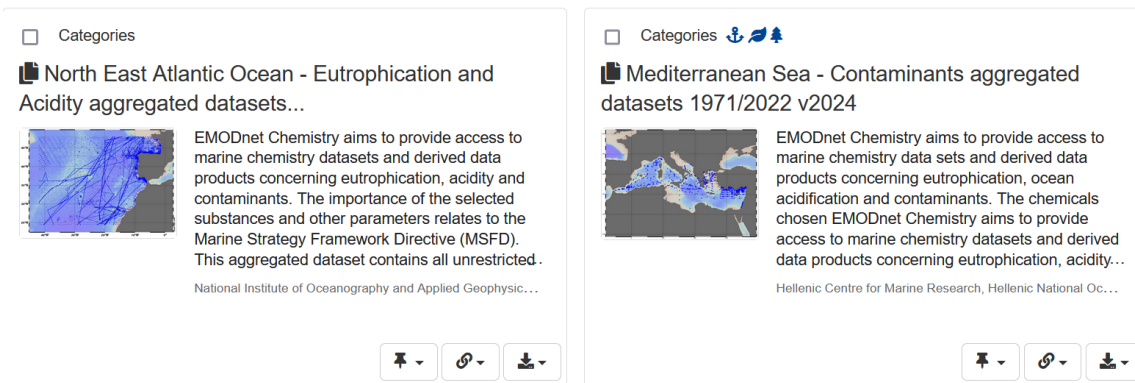## Products Catalogue
To search and download all data products

Map Viewer service
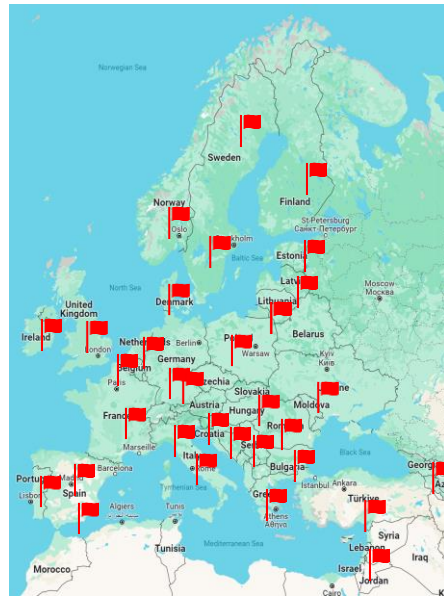To search and download the latest thematic maps

webODV Data Explorer and Extractor service
To subset, analyse and download the data collections
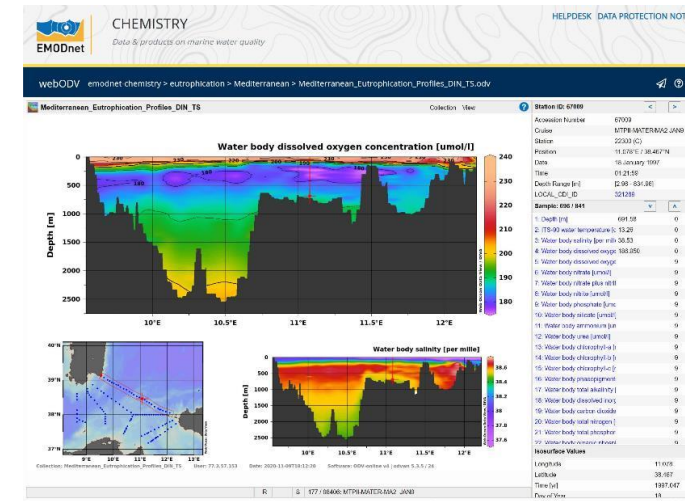
EMODnet Chemistry
Win-win interaction with SeaDataNet

The pan-European infrastructure for ocean & marine data management

SEARCH DATA

DOWNLOAD SOFTWARE

LOOK-UP VOCABULARIES

ACCESS PRODUCTS

ACCESS METADATA CATALOGUES

PUBLISH YOUR MARINE DATA

SENSOR WEB VIEWER DEMO

DISCOVER INTERNATIONAL DATA

VIRTUAL RESEARCH ENVIRONMENT

+100 national oceanographic data centres

≈900 data originators

Services and standards to format, harmonize and make accessible raw data and metadata.

EMODnet Chemistry & SeaDataNet
Interlaced histories

SeaDataNet I
Built up a standardized system for managing the large and diverse oceanographic data sets

SeaDataNet II
Enhance the network of data centres to build research excellence in Europe.

SeaDataCloud
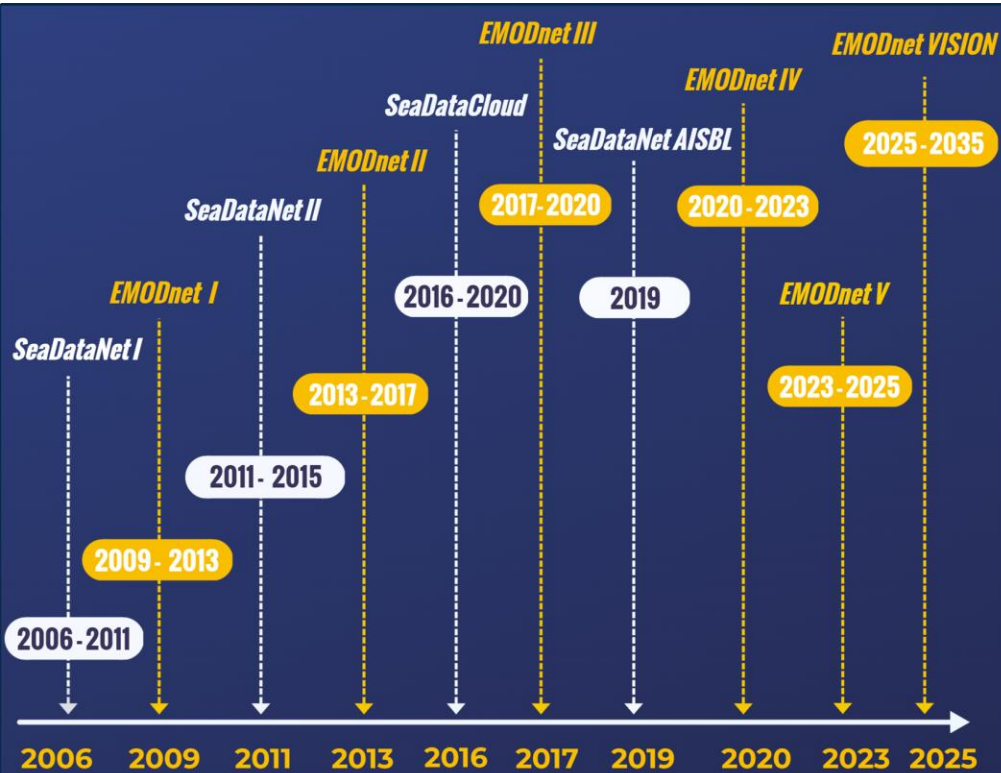Adopted cloud and High Performance Computing technology for better performance.

SeaDataNet AISBL
Established an International non-profit organization to improve marine data management.

EMODnet I
Limited sea basins; 59 Institutes.

EMODnet II
Low resolution all basins; 120 institutes.

EMODnet III
Multi-resolution; over 150 institutes.

EMODnet IV
Data products further enlarged; The network expanded.

EMODnet V
Integration and centralization.

EMODnet Vision
The call to action in 2023 set the stage for the development of the Vision up to 2035.
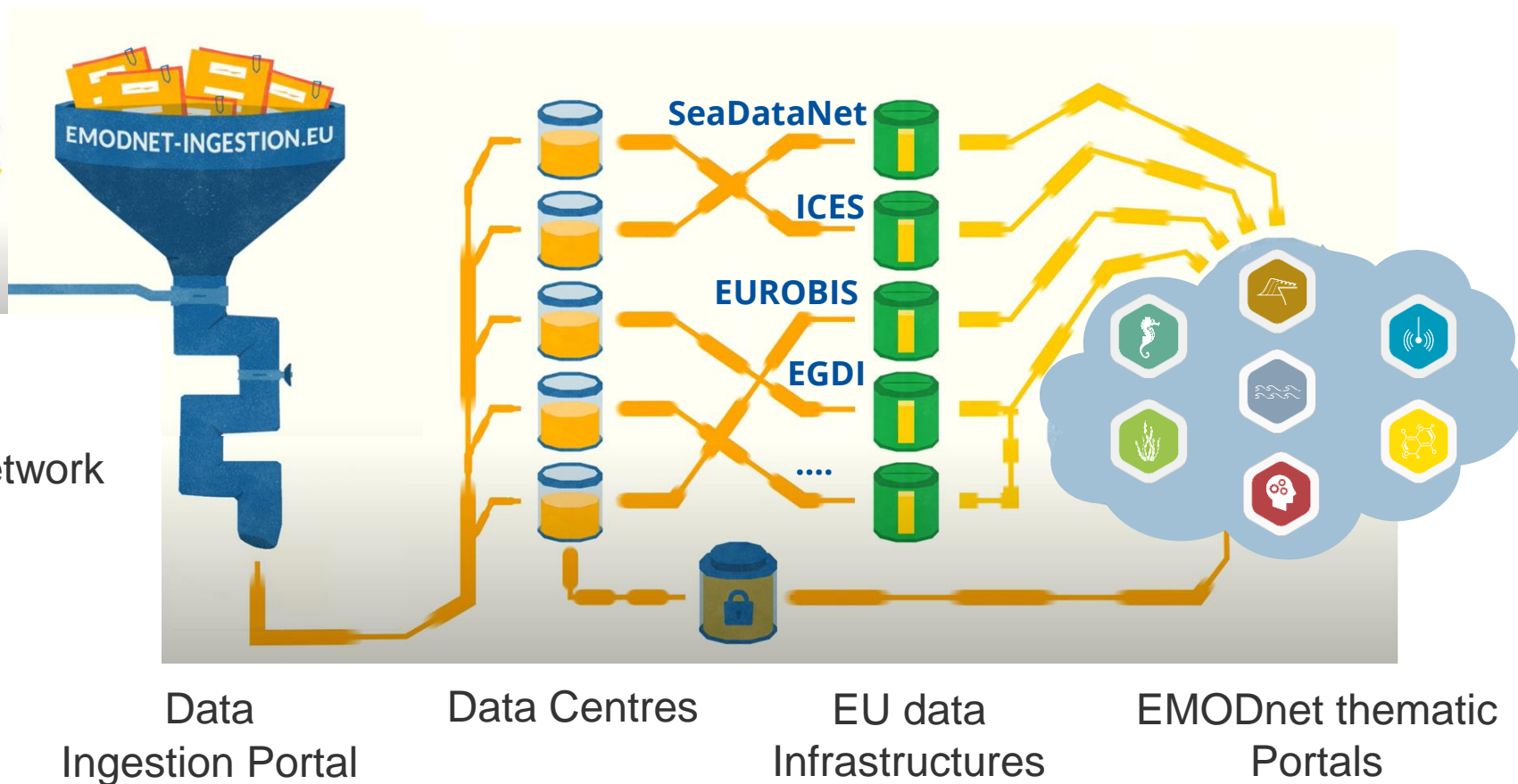
EMODnet Chemistry
Win-win interaction with EMODnet Ingestion

External Data Providers
Not connected to EMODnet Network
of data centres

SeaDataNet

ICES

EUROBIS

EGDI

....

Data
Ingestion Portal

Data Centres

EU data
Infrastructures

EMODnet thematic
Portals

Data sharing success stories at
https://emodnet.ec.europa.eu/en/data-sharing-success-stories

EMODnet Chemistry

A number of success stories show how EMODnet Chemistry is being used to share data, improve data standardization and visibility

EMODnet
European Marine
Observation and
Data Network

ICES

+

Regional Sea Conventions

+

Research institutes → Data providers

+

Monitoring agencies from EU Member States

+

Copernicus Marine Service

+

Citizen scientists

19 EMODnet Chemistry use cases at
https://emodnet.ec.europa.eu/en/use-cases
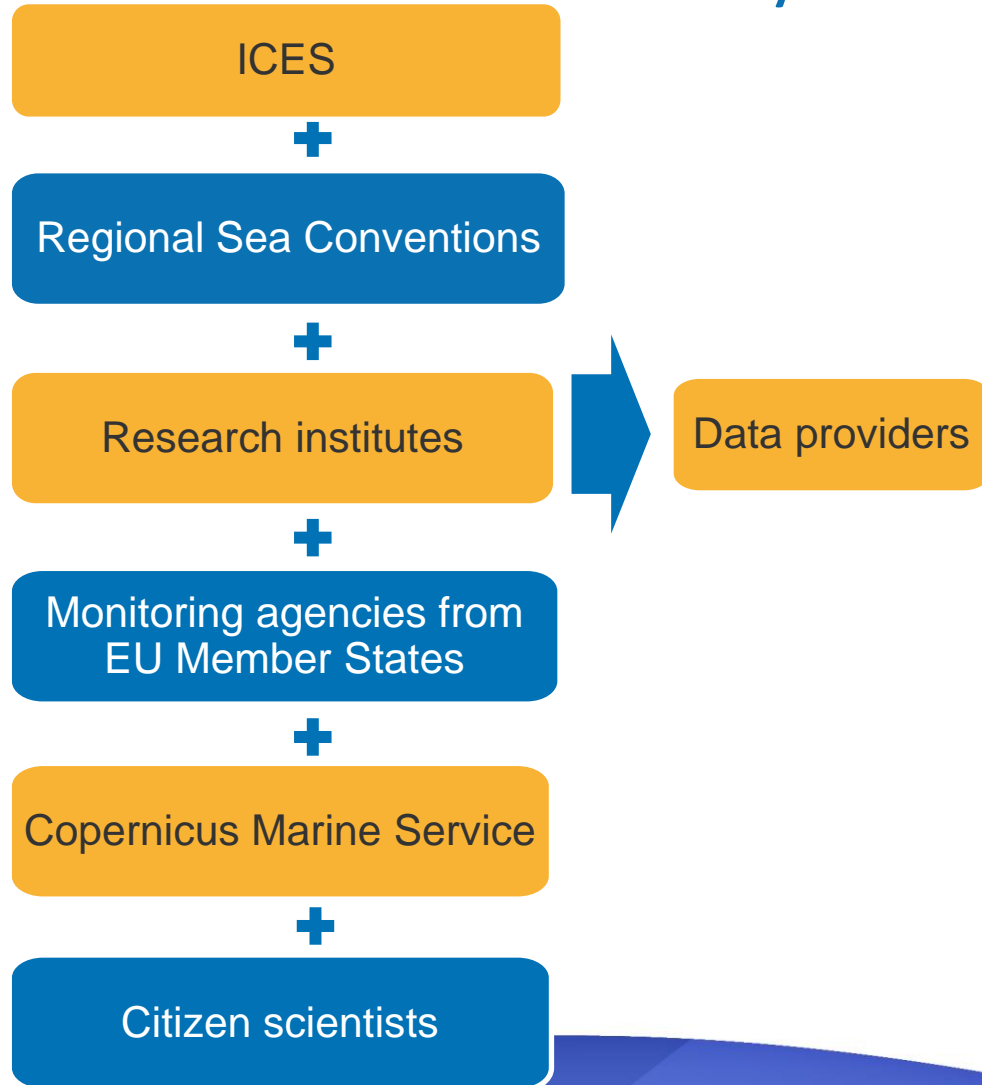
EMODnet Chemistry
Used by data providers

ICES
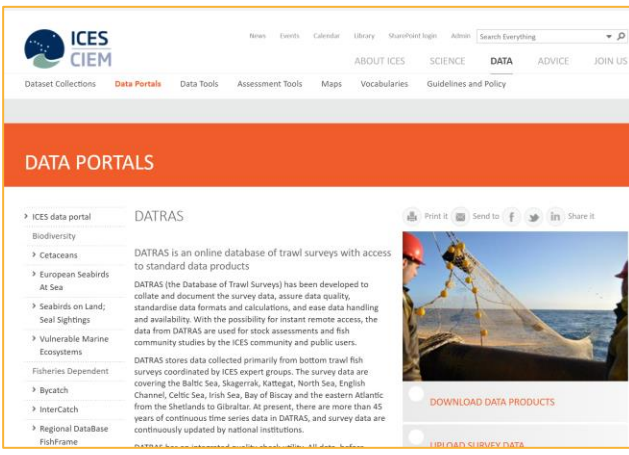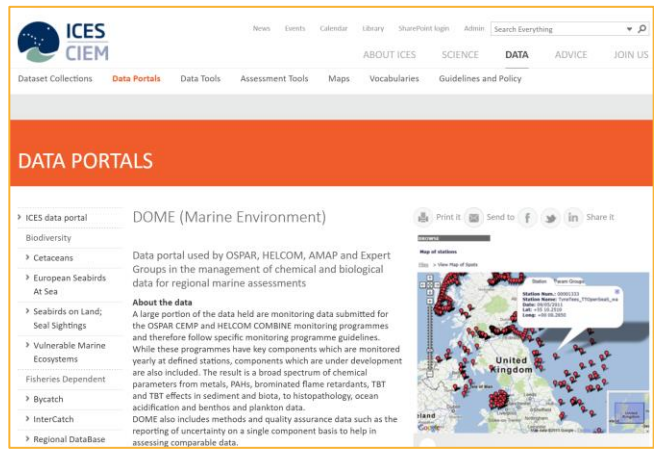+
Regional Sea Conventions
+
Research institutes
+
Monitoring agencies from EU Member States
+
Copernicus Marine Service
+
Citizen scientists

EMODnet Chemistry: the gateway to HELCOM beach litter data

Majority of samples taken during Volvo Ocean Race contain microplastics, new data reveals
by Volvo Ocean Race 28 Jun 2018 12:47 UTC

Volvo Ocean Race Leg 3, Cape Town to Melbourne, day 10, on board Turn the Tide on Plastic © Jeremie Lecaudey / Volvo Ocean Race

19 EMODnet Chemistry use cases at
https://emodnet.ec.europa.eu/en/use-cases
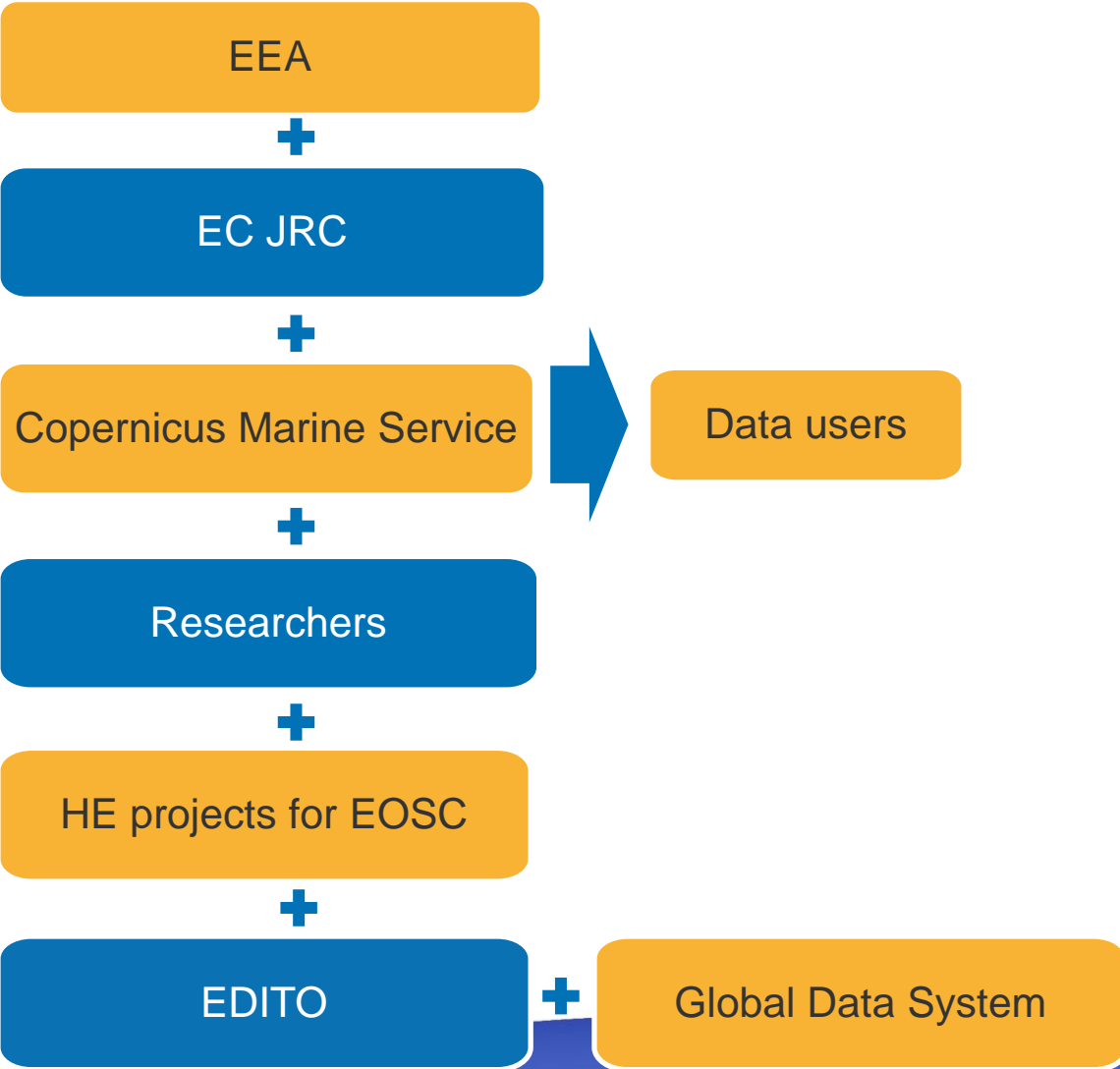
EMODnet Chemistry
Used by data users

EEA

+

EC JRC

+

Copernicus Marine Service → Data users

+

Researchers

+

HE projects for EOSC

+

EDITO **+** Global Data System

19 EMODnet Chemistry use cases at
https://emodnet.ec.europa.eu/en/use-cases

EMODnet Chemistry
Used by data users

EEA

ICES and EMODnet Chemistry providing a comprehensive European data source for the European Environment Agency

+

EC JRC

EMODnet Chemistry: a point of reference for management of marine litter data in the context of the EU Marine Strategy Framework Directive

Harmonised, standardised and validated data collections on eutrophication and chemical pollution for the EU Marine Strategy Framework Directive.

+

Copernicus Marine Service

EMODnet Chemistry Datasets provide high quality harmonised and integrated data to the Copernicus Marine Service Thematic Assembly Centre products

+

An integrative tool for the assessment of eutrophication status at the sub-basin level in the Mediterranean region

Researchers

Eutrophication climatology to decipher the consequences of climate change in the Adriatic Sea

EMODnet Marine litter data used to develop and test the first Marine Litter Assessment Tool

+

HE projects for EOSC

A simple dashboard for visualising trends in oxygen and nitrate concentrations

EMODnet Chemistry and Blue Cloud 2026 project: a win-win interaction

+

EDITO **+** **Global Data System**

EMODnet Chemistry enriches the Global Partnership on Marine Litter platform

19 EMODnet Chemistry use cases at
https://emodnet.ec.europa.eu/en/use-cases

emodnet.ec.europa.eu

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the latest news