



# EMODnet: Open Source Marine Data, Digital Products and Services for Europe and beyond

Managing ships effluents within the Green Deal  
Blue Ports Projects SEARICA event, 10 December 2020

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Head, EMODnet Secretariat

[www.emodnet.eu](http://www.emodnet.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.



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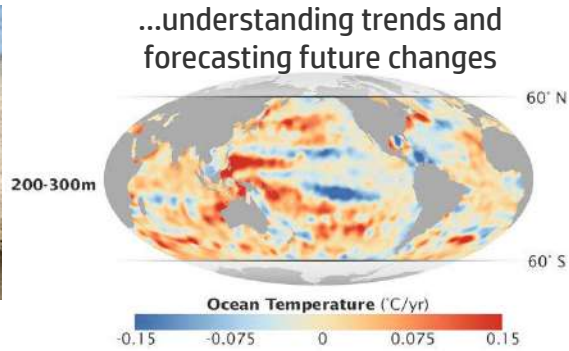
## Outline

- What is EMODnet, and its added value to yo(u)sers?
- How EMODnet can help you share your data?
- EMODnet examples of a decade of progress & achievements
- Future outlook in the digital era



# Why do marine data matter?

## Rapid access to marine data is vital in...



*Sound ocean data is indispensable if we want to tackle major global issues such as climate change, marine litter, illegal fishing or marine protection. It is also a bare necessity if we want to develop the blue economy and create sustainable economic growth in the EU.*

*Karmenu Vella, European Commissioner for Environment, Maritime Affairs and Fisheries*

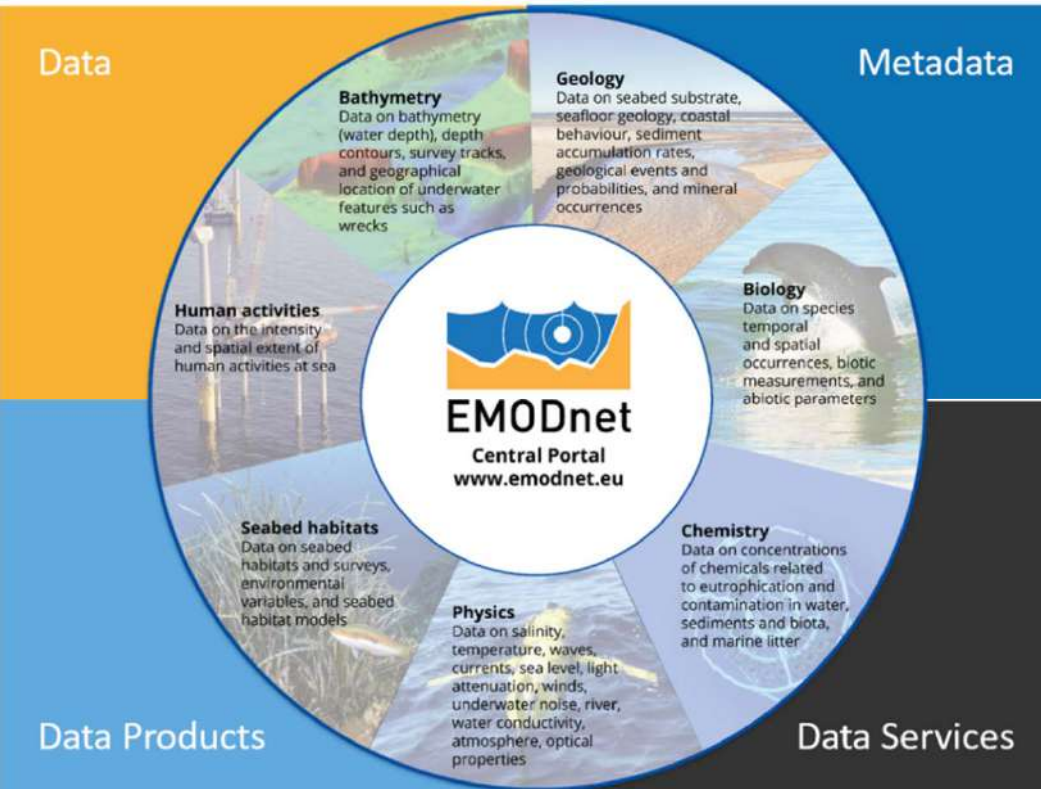
#E00SConference18



<https://www.emodnet.eu/conference/e00s2018/>

# What is EMODnet?

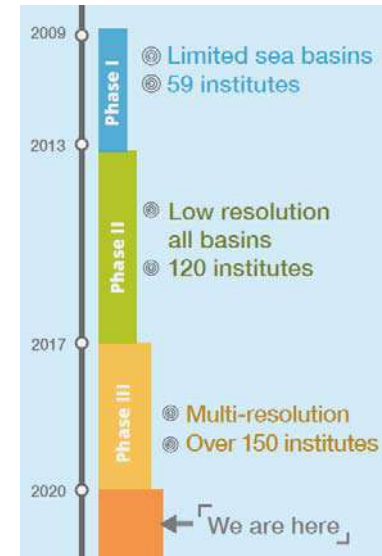
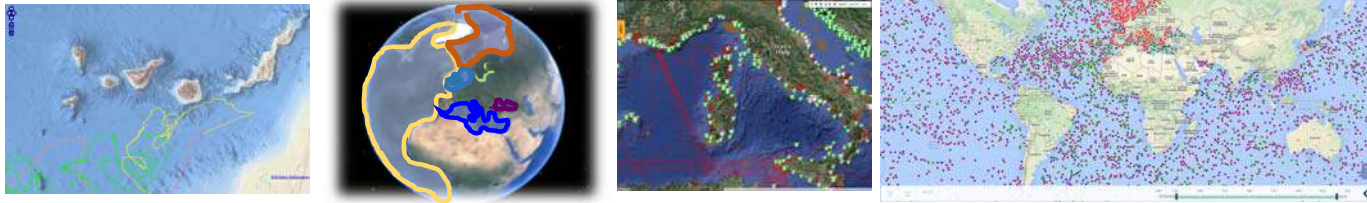
....aims to UNLOCK HIDDEN AND FRAGMENTED (*in situ*) marine data resources stored & scattered around Europe for use by ALL



- a long-term European marine knowledge initiative funded by the EC (DG MARE);
- marine knowledge broker, providing open and free access to marine data, products, services;
- Large network of >150 organizations, experts & wider community of data providers and users;
- Complimentary and aligned to other data services e.g. Copernicus Marine Service (satellite/remote sensing focus)
- data & products from the surface to seafloor (focus on data collected in water *in situ*);
- 7 thematics & central portal & data ingestion & Secretariat

# EMODnet: A decade of achievements – connecting marine data to knowledge

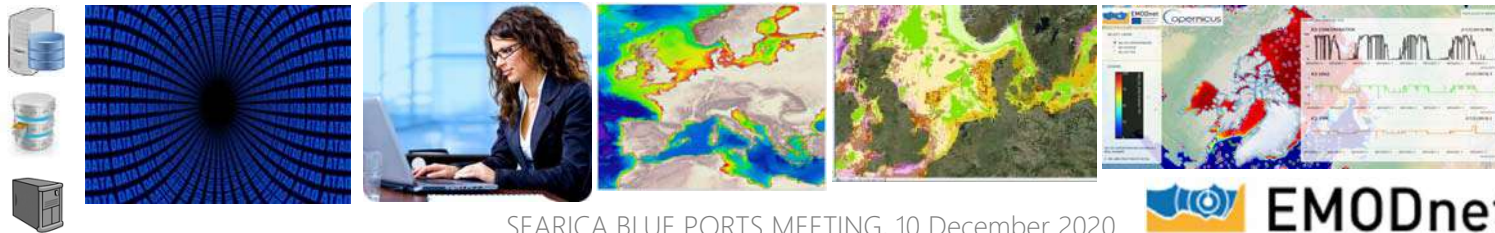
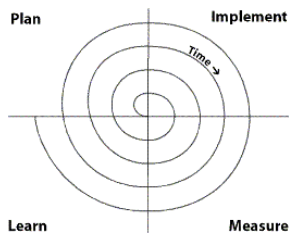
- From *regional* to *pan-European* coverage and onwards to *global* remit



- From *small network* to a *movement* - bringing people & ideas together



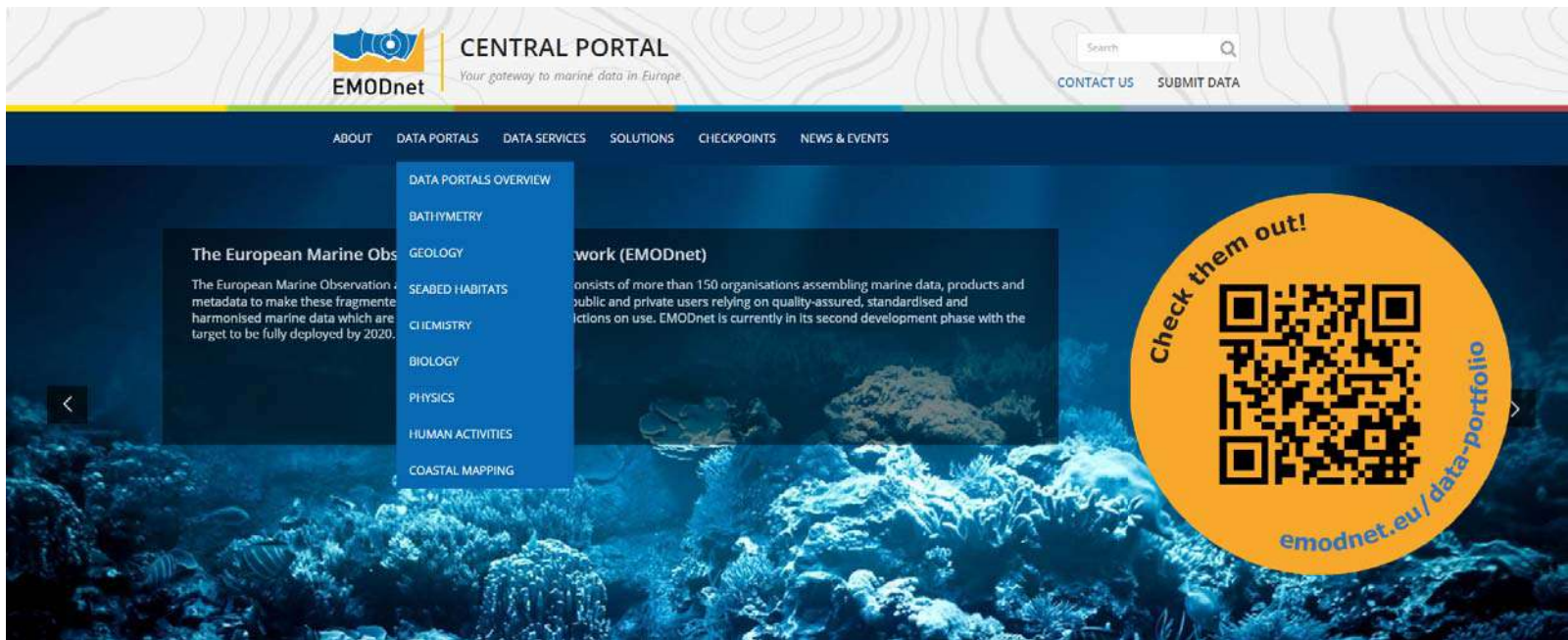
- From *prototypes* to an *operational, mature and user-driven distributed infrastructure*



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The EMODnet Central Portal provides a single point of access to the 7 thematic areas: **Centralisation towards a common map viewer**

[www.emodnet.eu](http://www.emodnet.eu)



Discover the EMODnet tutorials to help you find the data and data products you need!

<https://www.emodnet.eu/en/videogallery>

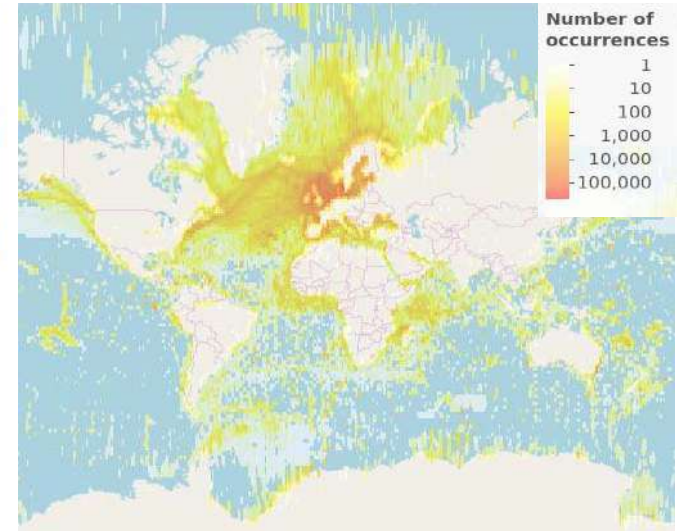
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# EMODnet Biology

*Information on the abundances and occurrences of all kinds of species of plankton, angiosperm plants, birds, sea mammals, etc.*



- EMODnet Biology plays a pivotal role, in collaboration with EuroBIS in supplying standardized marine data for international OBIS.
- Over 3 million records are available outside European waters
- Data are used for international marine assessments e.g. UN World Ocean Assessment.

# EMODnet Biology - Worms & WRIMS

*The World Register of Introduced Marine Species (WRIMS) records which marine species in the World Register of Marine species (**WoRMS**) have been introduced deliberately or accidentally by human activities to geographic areas outside their native range.*

Links to species profiles of marine invasive species in the Global Invasive Species Database ([GISD](#)) of the IUCN Invasive Species Specialist Group ([ISSG](#)).

EMODnet also works closely with European Research Infrastructures (Ris) such as the **European Marine Biological Resource Centre** (EMBRC) and **Lifewatch** – *These infrastructures have huge expertise in collecting and sharing marine biological and biodiversity data*

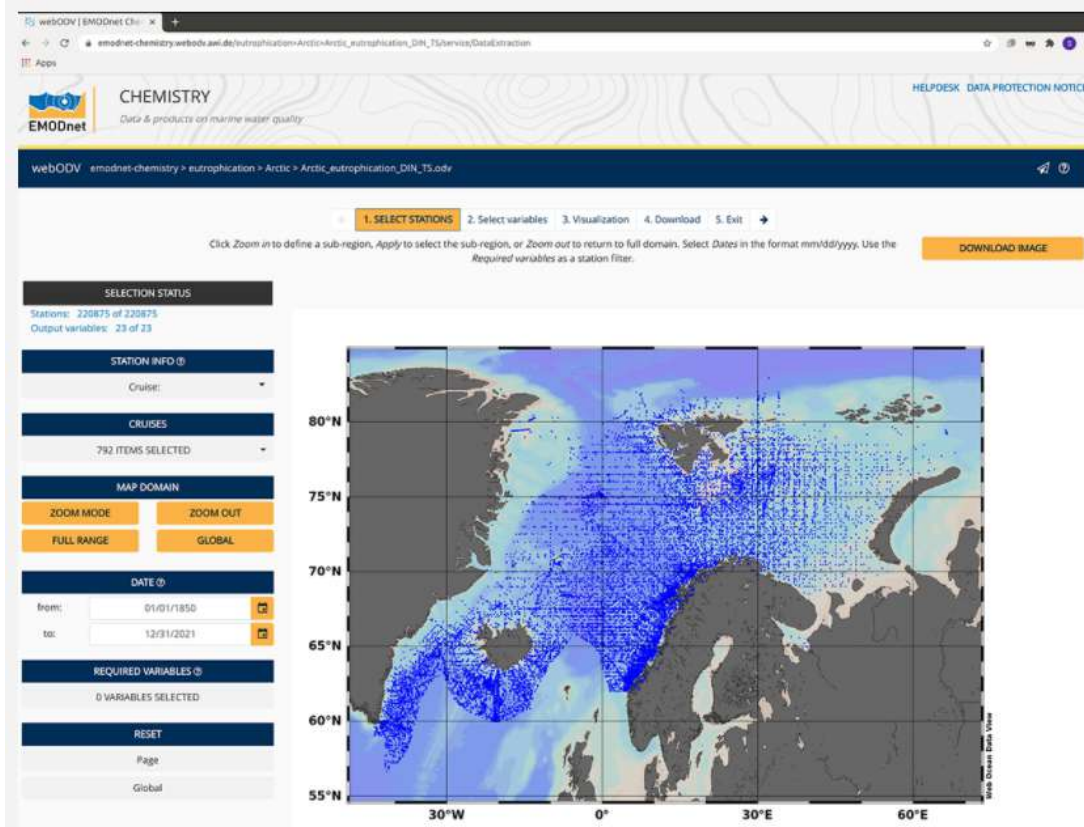


## Slide 8

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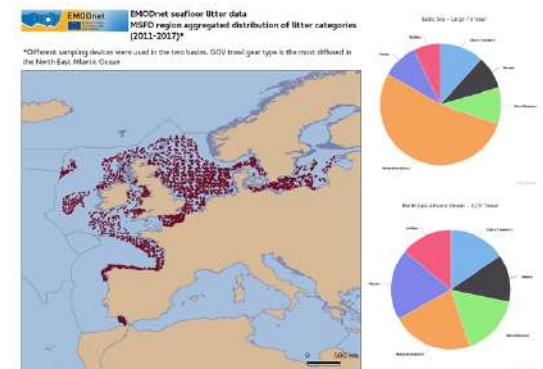
**JC1** Jan-Bart Calewaert; 9/12/2020

# EMODnet Chemistry



New Release, November 2020

- webODV provides fast and easy access to EMODnet Chemistry **datasets for eutrophication and contaminants** for all European sea basins, and seamlessly lets users explore, visualize and extract subsets of the data simply by using their web browser. <https://emodnet-chemistry.webodv.awi.de/>
- Aggregated and **harmonized marine litter data** from across Europe

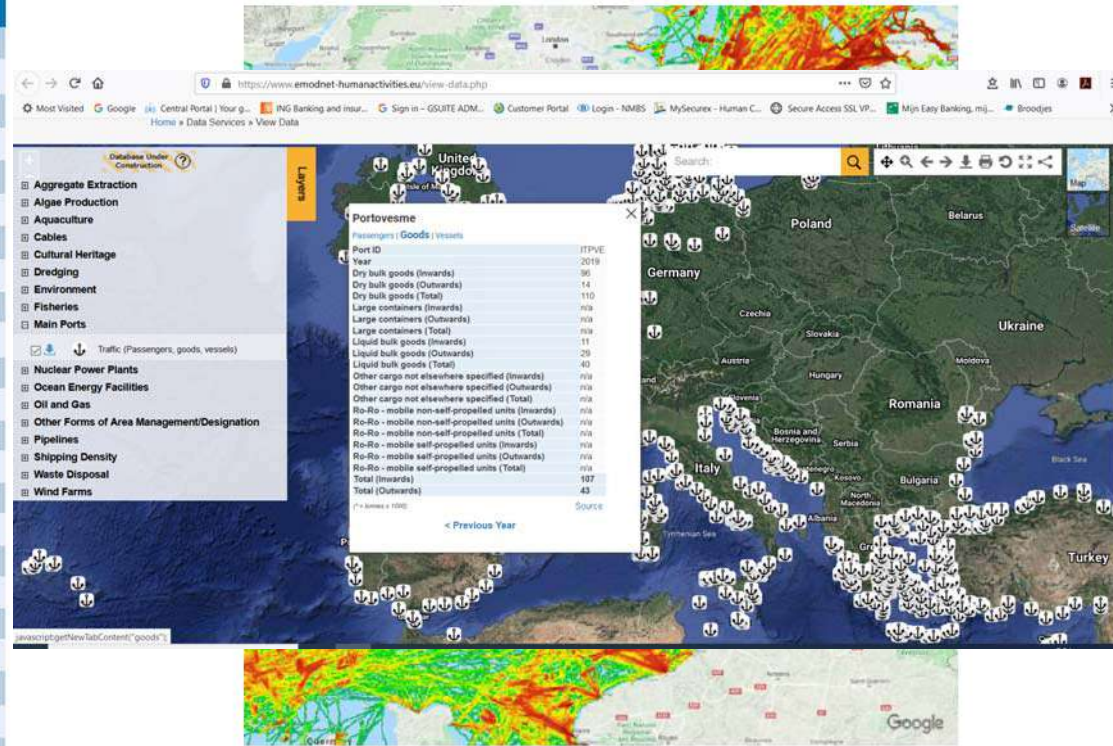


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# EMODnet Human Activities

Theme	Activity	Geographical Type	Attributes
Aggregate Extraction	Aggregate Extraction	Points	Gravel extracted per year, area of activity
Aquaculture	Finfish Production	Points	Species of fish and shellfish, production tonnage per year
	Shellfish Production	Points	Species of fish and shellfish, production tonnage per year
	Freshwater Production	Points	Species of fish, production tonnage per year
Cables	Telecommunication Cables (schematic routes)	Lines	Types of cable or pipeline, width
	Landing Stations	Points	
	Telecommunication Cables (actual route locations)	Lines	
Cultural Heritage	Ship Wrecks	Points	
	Lighthouses	Points	
	Submerged Prehistoric Archaeology and Landscapes	Points	
Dredging	Dredging	Points	Status (years operational), purpose
Environment	Protected Areas	Points and polygons	Legal basis for protection
	State of Bathing Waters	Points	
Fisheries	Fisheries zones	Polygons	ICES and FAO nomenclature
	Fish Catches	Polygons	
	Fish Sales	Points	
Hydrocarbon Extraction	Active Licenses	Polygons	Status (exploration, exploitation)
	Boreholes	Points	Status (exploration, exploitation)
	Offshore Installations	Points	
Main Ports	Traffic	Points	Traffic
Ocean Energy Facility	Project Locations	Points	Type, status (planned, under construction, operational)
	Test Sites	Polygons	
Other Forms of Area Management/ Designation	Other Forms of Area Management/ Designation	Polygons	National or international basis
Pipelines	Pipelines	Lines	
Waste Disposal	Dredge Spoil Dumping	Points and polygons	Status (years operational), distance from coast
	Dumped Munitions	Points and polygons	Distance from coast, munition type
Wind Farms	Wind Farms	Points and polygons	Number of turbines, generation capacity, status (planned, under construction, operational)

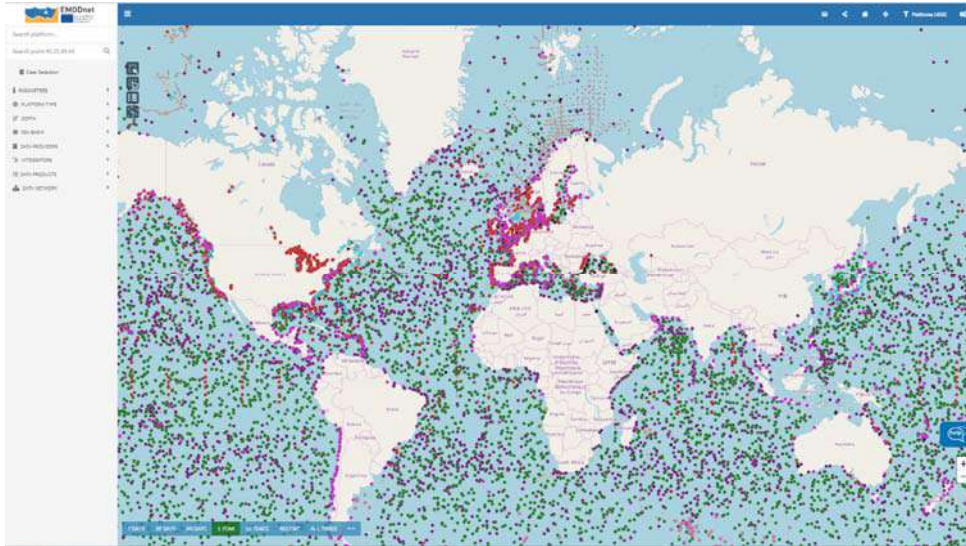
April 2019



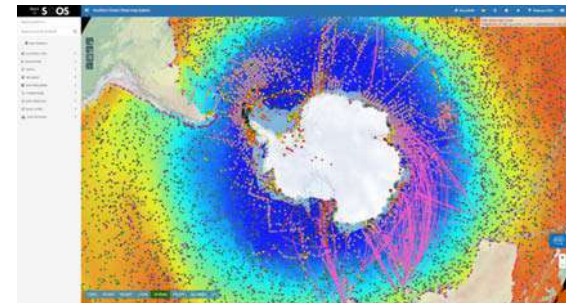
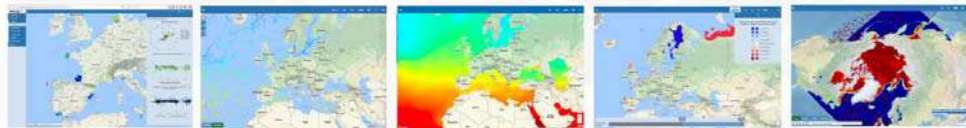
EMODnet Vessel density composite maps  
The English Channel / La Manche / Het Kanaal

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## EMODnet Physics



- >600,000 global datasets e.g. physics, temperature
- Near real-time data/operational, historical validated data sets, reprocessed data/ products
- Close collaboration with Copernicus Marine Service (CMEMS) *in situ* Thematic Assembly Centre (INSTAC) and EuroGOOS
- New datasets on river runoff, total suspended matter
- Southern Ocean Observing System (SOOS) interface with centrally-curated circumpolar datasets



# EMODnet: A decade of achievements – connecting marine data to knowledge

## EMODnet for Business



Get value from ocean data

**EMODnet for business:**  
A wealth of marine data, products and services to support your company

### THE BENEFITS

- 1 Save costs**  
 Collecting marine data can be very costly. By providing access to already existing marine data, EMODnet improves offshore business' and operator's efficiency and saves costs in gathering and processing marine data for operational and planning purposes.
- 2 Develop new products and services**  
 By providing harmonised open data and products, EMODnet offers the material from which innovative start-ups and companies can leverage new products and services, or improve existing ones.
- 3 Add value to your own data**  
 Enrich your company's data with datasets available via EMODnet and generate better information to plan and implement your business activities.
- 4 Improve knowledge and reduce risks**  
 EMODnet data resources are essential for your maritime investment decisions as they help to reduce uncertainty and improve our ability to forecast the behaviour of the sea. They also help you to understand and respond to the impacts that climate change may have on your business.



EMODnet Associated Partnership Scheme

# EMODnet: A decade of achievements – connecting marine data to knowledge

## EMODnet Data Ingestion



The screenshot shows the top navigation bar of the EMODnet Data Ingestion Portal. On the left is the EMODnet logo, followed by the text 'DATA INGESTION PORTAL' and the tagline 'Wake up your data - set them free for Blue Society'. On the right is a search bar and a 'CONTACT' link. Below this is a dark blue navigation menu with the following items: ABOUT, DATA SUBMISSION, GUIDELINES, SUBMISSIONS, DATA WANTED, HELP, OPERATIONAL DATA, PROMOTION, and CENTRAL PORTAL.

Home

## Welcome to the EMODnet Data Ingestion portal

The European Marine Observation and Data Network (EMODnet) consists of more than 160 organisations that together work on assembling, harmonising and making marine data, products and metadata more available to public and private users. This Data Ingestion portal facilitates additional data managers to ingest their marine datasets for further processing, publishing as open data and contributing to applications for society.

[READ MORE](#)



A promotional banner for the EMODnet Data Ingestion portal. It features the text 'EMODNET INGESTION' in large white letters on a red background. To the right, it says 'CHECK OUT THE MOVIE 3:30 MINUTES' in white text. Below the text is an illustration of five people in blue uniforms standing together, holding folders or documents.

<https://www.emodnet-ingestion.eu/>

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# European partnerships

## Copernicus Marine Service



- EC DG DEFIS
- Copernicus Space Programme
- Copernicus Marine Service (satellite focus, some operational *in situ*)

EMODnet and CMEMS are both long-term European data initiatives that offer a strong and complimentary capability with data and web services and are working towards greater interoperability

- EMODnet - CMEMS collaborates across many activities, e.g.,
  - coordination level e.g. coastal, marine data for aquaculture in the North Atlantic
  - thematic collaborations & use cases (physics, chemistry, seabed habitats)



EMODnet Seabed Habitats uses CMEMS model ocean currents reanalysis (past 20 years) in the Mediterranean and Black Seas as boundary conditions to higher resolution coastal models to predict values at the sea floor (using EMODnet bathymetry and substrate data).



<https://marine.copernicus.eu/usecases/cmems-support-emodnet-seabed-habitats/>

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## Future Outlook *What's next for EMODnet and the wider community?*

### EMODnet 2<sup>nd</sup> Open Conference and Jamboree, 14-16 June 2021



#### Key themes:

- **EMODnet Partnerships & collaborations:** Data producers, data management services, data and data product users, long-term data initiatives e.g. Copernicus Marine Service (CMEMS);
- **EMODnet for user tracks:** Policy, Industry, Research, Society;
- **EMODnet for Global:** Supporting the UN Decade of Ocean Science, UN 2030 Agenda;
- **Ocean Observing and Data Collection:** including a workshop on European Ocean Observing, 16 June PM

<https://www.emodnet.eu/en/conference2021>

A full week of EMODnet Jamboree for the EMOD-network



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## Take home message

### What we want from you?

- Use EMODnet, it's data, products, tools/services and expertise
- Provide feedback → **help us improve the service**
- Help **guide further developments** → data coverage, products & services
- **Provide your data** via EMODnet Data Ingestion Facility → get visibility for your efforts & **help us make better products for you!**
- Become an **EMODnet Associated Partner** & join our network of >150 organisations/institutes
- **Spread the word!**



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# Thank you!

- **Discover EMODnet data and data products**
- **Connect** with the online EMODnet **community** @EMODnet (Twitter, LinkedIn and Facebook)
- **Help shape the future of EMODnet! Join us for the EMODnet Open Conference & Jamboree 14-18 June 2021, Ostend, Belgium**

[www.emodnet.eu](http://www.emodnet.eu)

[info@emodnet.eu](mailto:info@emodnet.eu)

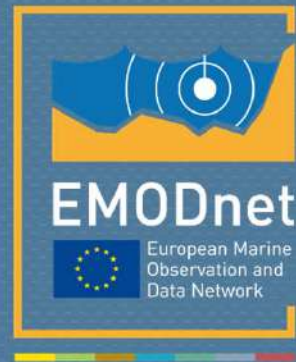


<https://bit.ly/2IMZAgv>



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*Your gateway to marine data in Europe*

