



OCEAN-DRIVEN SOLUTIONS FOR A **SUSTAINABLE ECONOMY** AND **RESILIENT COMMUNITIES**

EMODnet *in situ* data and data products for addressing food security, sustainable economy, ecosystems, resilient communities



PROGRAMME OF THE
EUROPEAN UNION



In collaboration with
the UN OD Data
Coordination Office



What is EMODnet

DATA FOR THE
UN OCEAN DECADE
A EUROPEAN FOCUS



- EMODnet is a European Commission (EC) operational **marine *in situ* data service**, funded by EC DG MARE;
- EMODnet is delivered by a **network of > 120 organisations** and experts, working in collaboration with *in situ* (field/survey) ocean observation efforts;
- Provides open and free access to FAIR *in situ* **marine data, metadata and data products** from 7 different domains: Bathymetry, **Biology**, Chemistry, Geology, **Physics**, Seabed Habitats and Human Activities at Sea.

emodnet.ec.europa.eu



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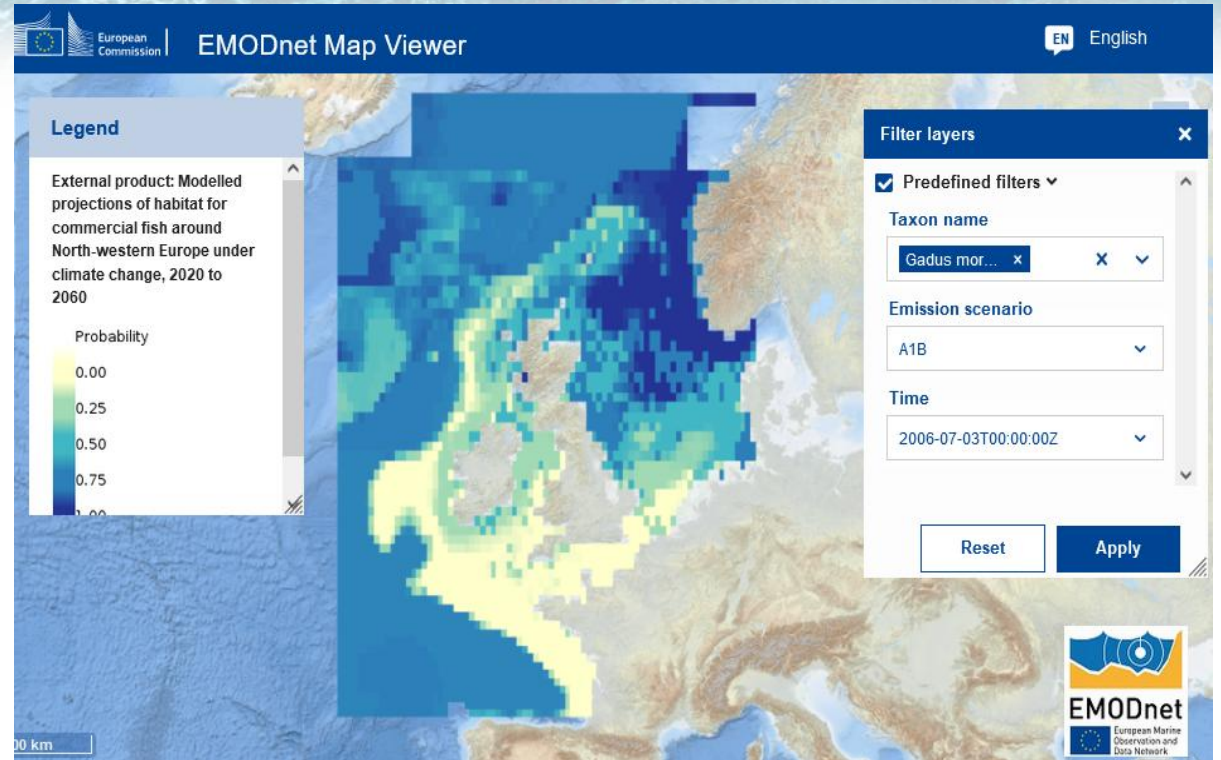
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EMODnet Biology data and data products

- Publishes biology data (and data products) from species across the food chain, from **plankton** to **Birds** and **Mammals**.
- EMODnet Biology database is constantly evolving, and new data are published continuously
- EMODnet Biology contributes to address Challenge 3 ***Sustainably feed the global population***, alongside other sources of data

<https://emodnet.ec.europa.eu/en/biology>



Modelled projection of probability of occurrence of **habitat for commercial fish** between 2020 and 2060: product (created by CEFAS, UK) combining environmental and ecosystems models and *in situ* data retrieved from OBIS and GBIF

#EUdata4OceanDecade

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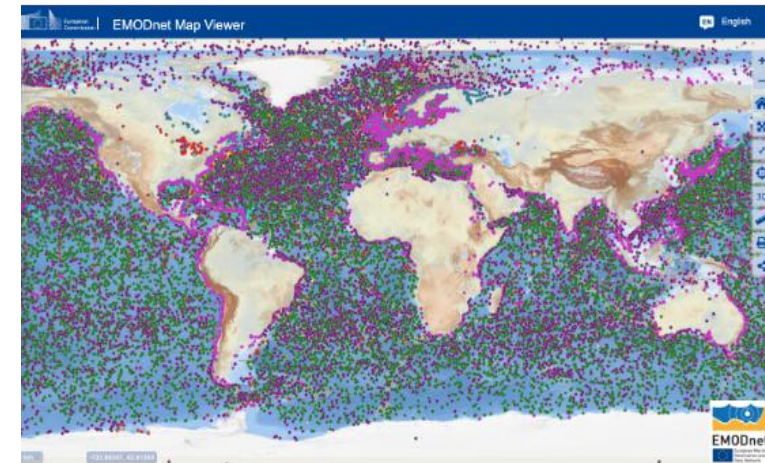
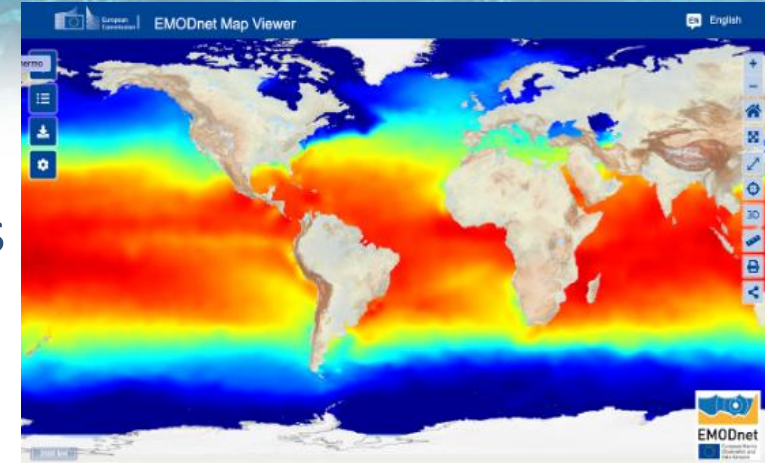
EMODnet Physics data and data products

- Integrates and makes available **near real time and delayed mode data** on ocean physics
- Builds on **marine data infrastructures** and international programs
- A **single point** of shop (central portal) for the *in situ* data
- **Capacity building** (tools, training, ... to advance in open data, FAIRness, Standards, Best Practices)

Parameters:

- Temperature, Salinity, Sea Level, Currents, Waves and Winds, Optical properties of the water, Underwater noise, Ice data, River runoff, Meteorological data at sea level

**2300 Mooring, 950 Rivers, 700 Gliders/AUVs missions, ...
330 Vessels data, 25900 drifting buoys, 14900 ARGO, ...**



EMODnet Physics data and data products

In situ physics products help to support UN Ocean Decade initiative

- Challenge 3: Sustainably feed the global population
- Challenge 4 Develop a sustainable, resilient and equitable ocean economy
- **Challenge 6 Increase community resilience to ocean hazards**

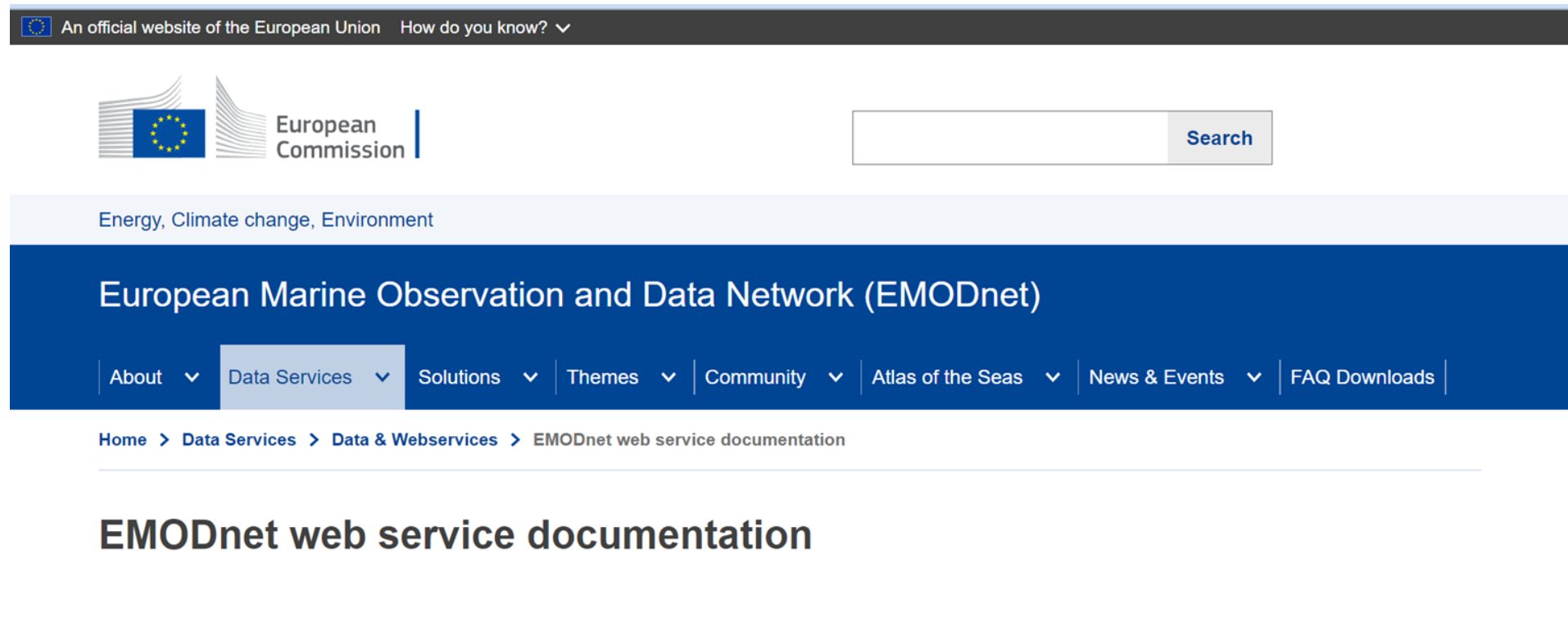
--> Example of use case on **river flow data and sea level** for **coastal resilience** in an **extreme flood event**



EMODnet OGC webservice, ERDAPP and jupyter notebooks data access in the follow-up EMODNET presentations

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<https://emodnet.ec.europa.eu/en/emodnet-web-service-documentation>



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THANK YOU