

Powering the European Marine Data Ecosystem

For a digital and green future

EMODnet OPEN CONFERENCE 2023



Session 1: EMODnet: a unified public marine data service

EMODnet Physics

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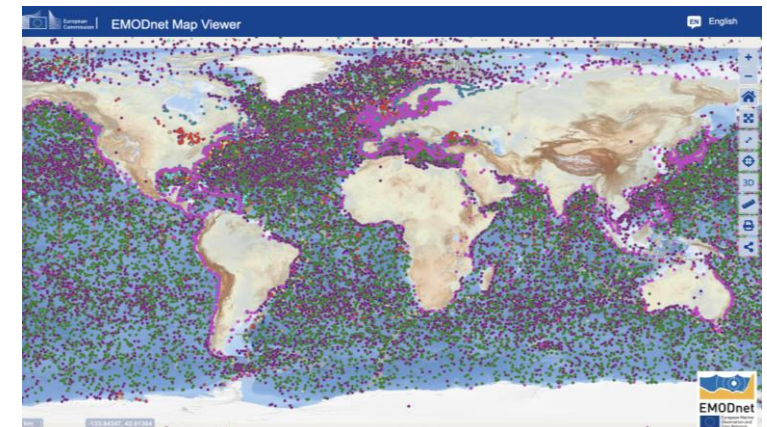
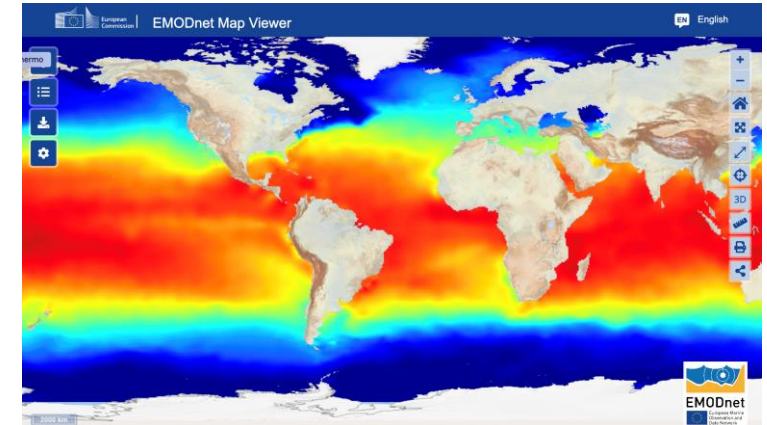
EMODnet Physics

Latest offer and key achievements

- **in situ FAIR** data and products
- integrates and makes available **near real time and delayed** mode data on ocean physics
- builds on **marine data infrastructures and programs**
- **common standards** and tools
- **Centralization of the service**
- **Capacity building**

Parameters

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



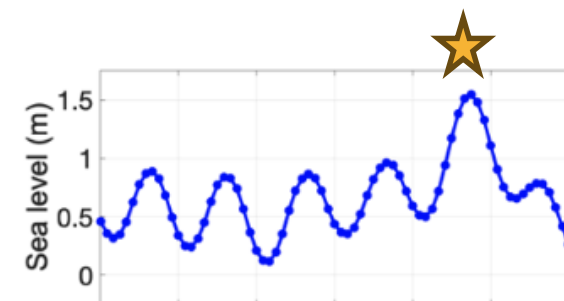
The **extreme sea level** event in Venice, known as **Acqua Alta**, involves several processes: high tides, storm surges, seiches

CMCC operates MFC service and for Venice area:

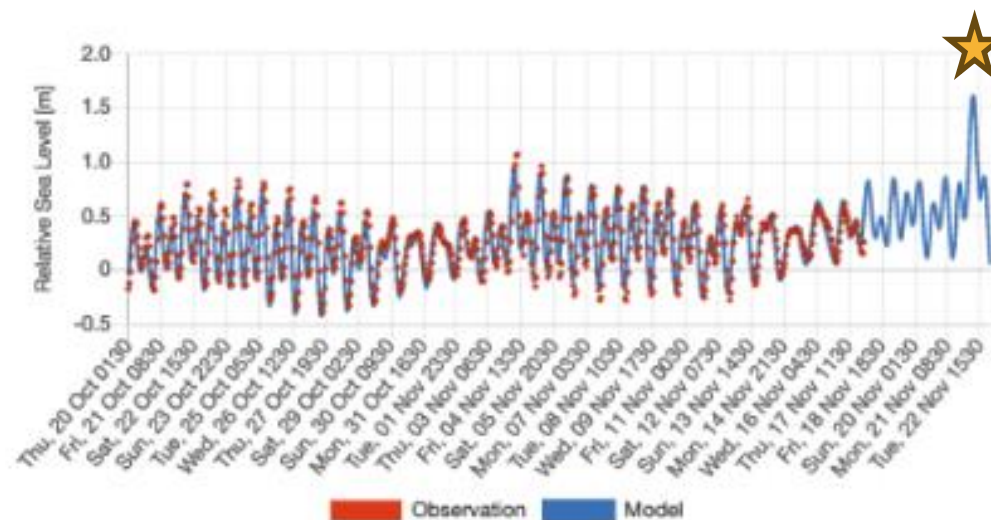
- CMEMS Med-MFC Analysis and Forecast Physical system (4km grid)
+
- Adriatic coastal Forecasting System (unstructured grid 2 – 0.3Km)
- Tides and Atmospheric fields from European Centre for Medium-Range Weather Forecasts – Integrated Forecasting System
- Runtime comparison with in situ observations:
 - ISPRA Stations from EMODnet Physics

The operational chain predicted Acqua Alta to reach 1.6m @9.40am

AdriFs Forecast produced on 20th Nov. 2022



MedFS Forecast produced on 19th Nov. 2022



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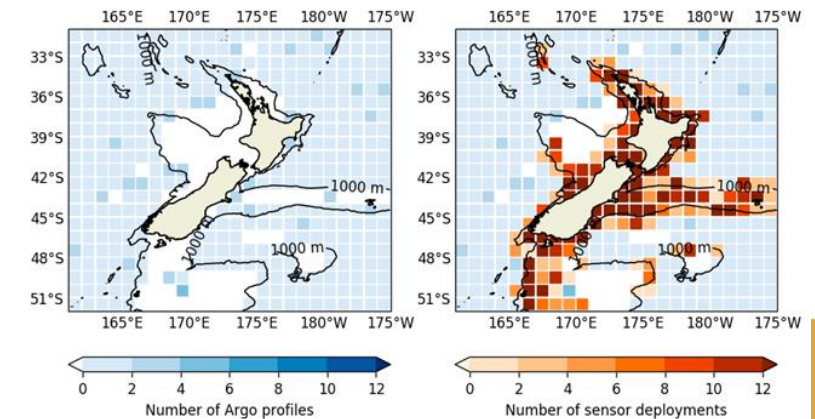
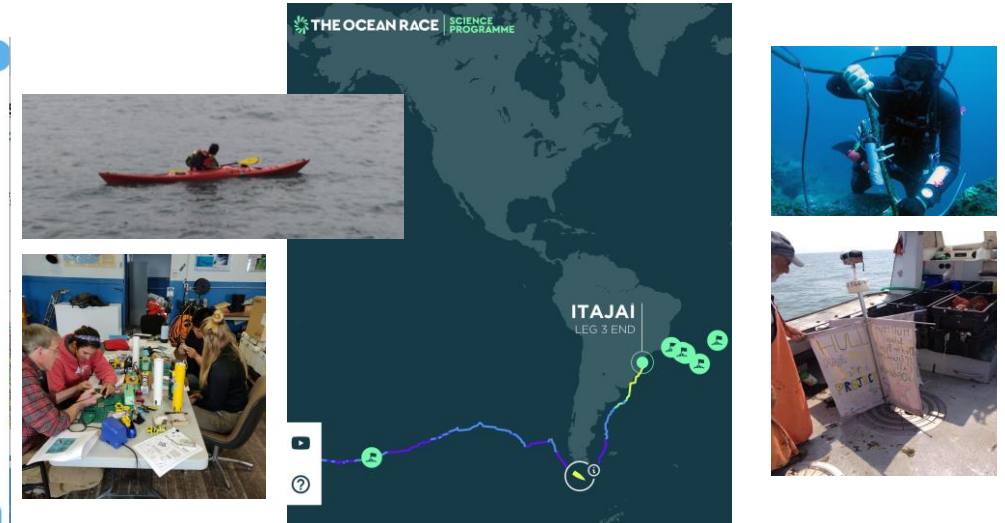
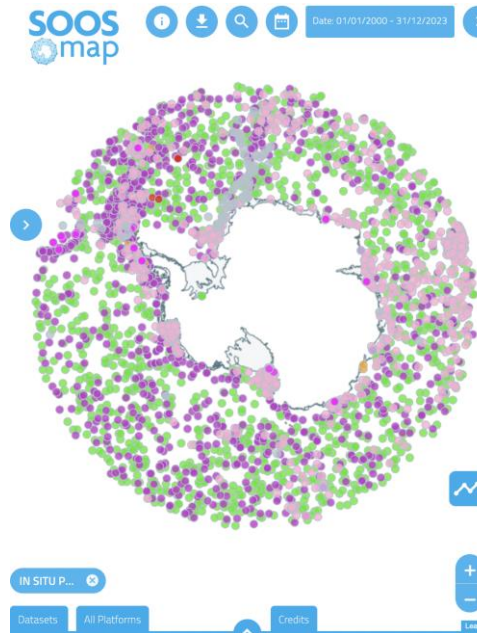
Future evolution: content, services, partnerships

Focus on:

- Sea-Air fluxes
- Sea-Land interface
- Ocean sounds
- Citizen Science initiatives

In partnership with

- Copernicus Marine Service INS TAC
- OceanOPS
- EuroGOOS
- Southern Ocean Observing System
- Deep Ocean Observing System
- WMO Hydrological Observing System
- GOOS OGC capacity development
- ...



ARGO profiles

vessels using Moana probe system

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Thank you for your attention

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