Copernicus Marine Service

EU Coastal Use Cases Workshop

September 16, 2024

COPERNICUS MARINE SERVICE NATIONAL COLLABORATION PROGRAMME 2022-2028

TRENDHYD

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Deltares

Rijkswaterstaat
Ministry of Infrastructure and Water Management

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- **Project in a nutshell**
  Downscaling CMEMS

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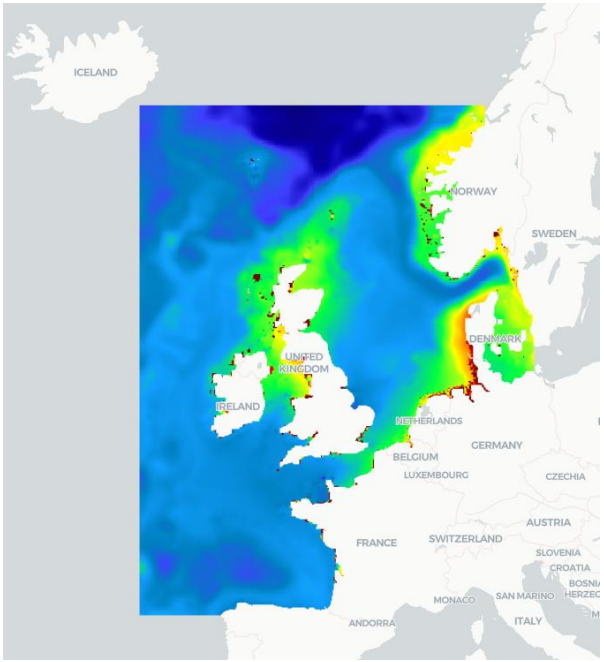
The TRENDHYD Service

- TRENDHYD – for TRENDs in HYDrodynamic parameters
  - Location: Shallow Southern North Sea
  - Motivation, to comply to EU policy and directives:
    1. Information on trends in Hydrographic Parameters is required (MSFD) (Use Case 1)
    2. Upscaling of offshore wind affects the ecosystem (MSPD) (Use Case 2)



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- **Consortium**

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Consortium

- Deltares is an independent Dutch not-for-profit knowledge institute for water and subsurface
  - Support Rijkswaterstaat
  - Experience with modelling and operational systems

Deltares

- Rijkswaterstaat is the responsible authority for the implementation of the EU policy and directives
  - Long and close collaboration with Deltares
  - User meetings

Rijkswaterstaat
Ministry of Infrastructure and Water Management

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- # Copernicus Marine Products and Coastal models

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Products and models

- The products

Full name	Product ID	DOI	Parameters
Global Ocean 1/12° Physics Analysis and Forecast updated Daily	GLOBAL_ANALYSIS FORECAST_PHY_001 _024	https://doi.org/10. 48670/moi-00016	Eastward sea water velocity; Northward sea water velocity; Sea surface height above geoid; Sea water potential temperature; Sea water salinity
Atlantic - European North West Shelf - Ocean Wave Analysis and Forecast	NORTHWESTSHELF_ ANALYSIS_FORECAS T_WAV_004_014	https://doi.org/10. 48670/moi-00055	various wind sea and swell related parameters like height, period, direction

Products and models

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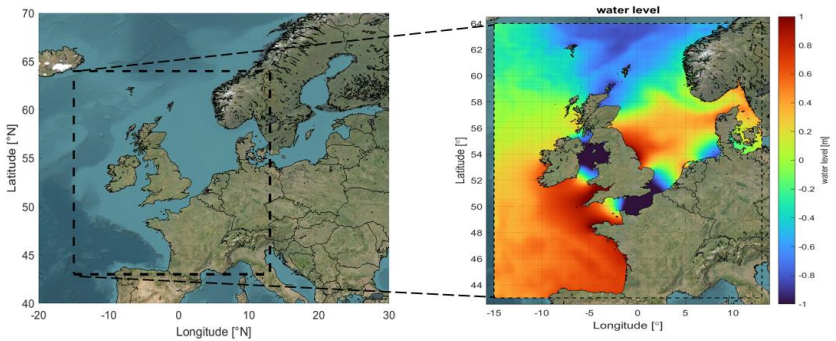
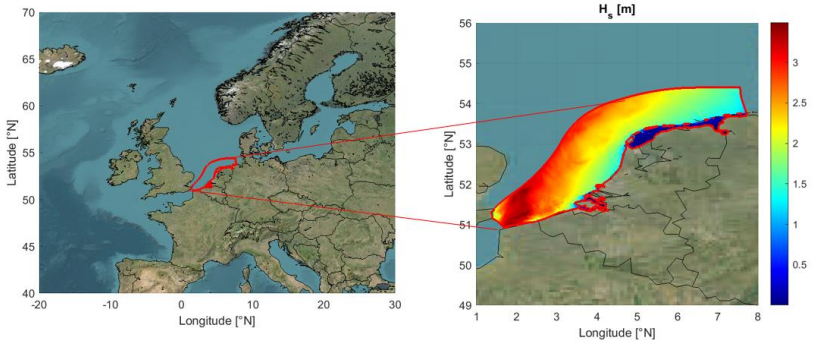
3D North Sea Hydrodynamic model



SWAN Kuststrook Wave model



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- **Seamless TRENDHYD Service**

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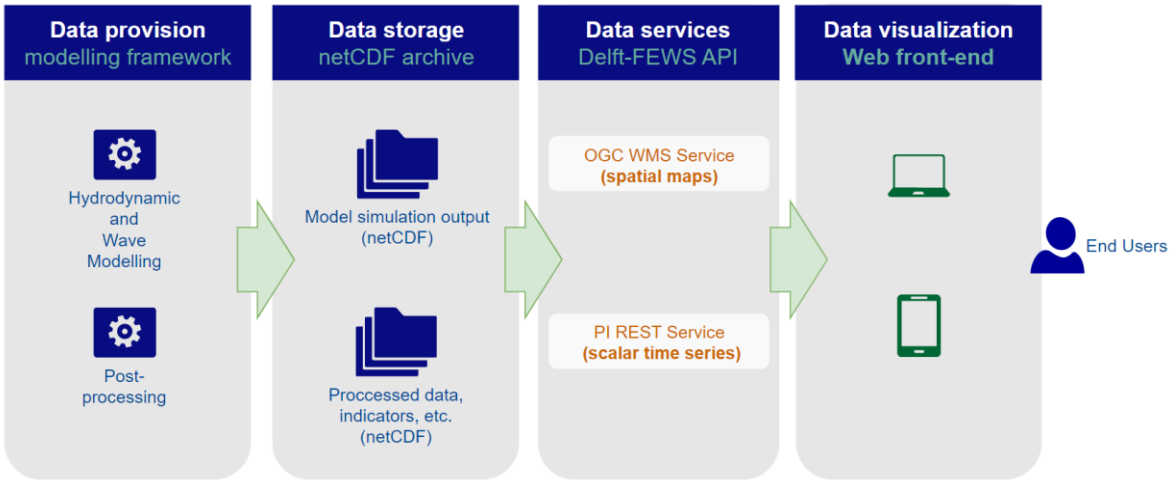
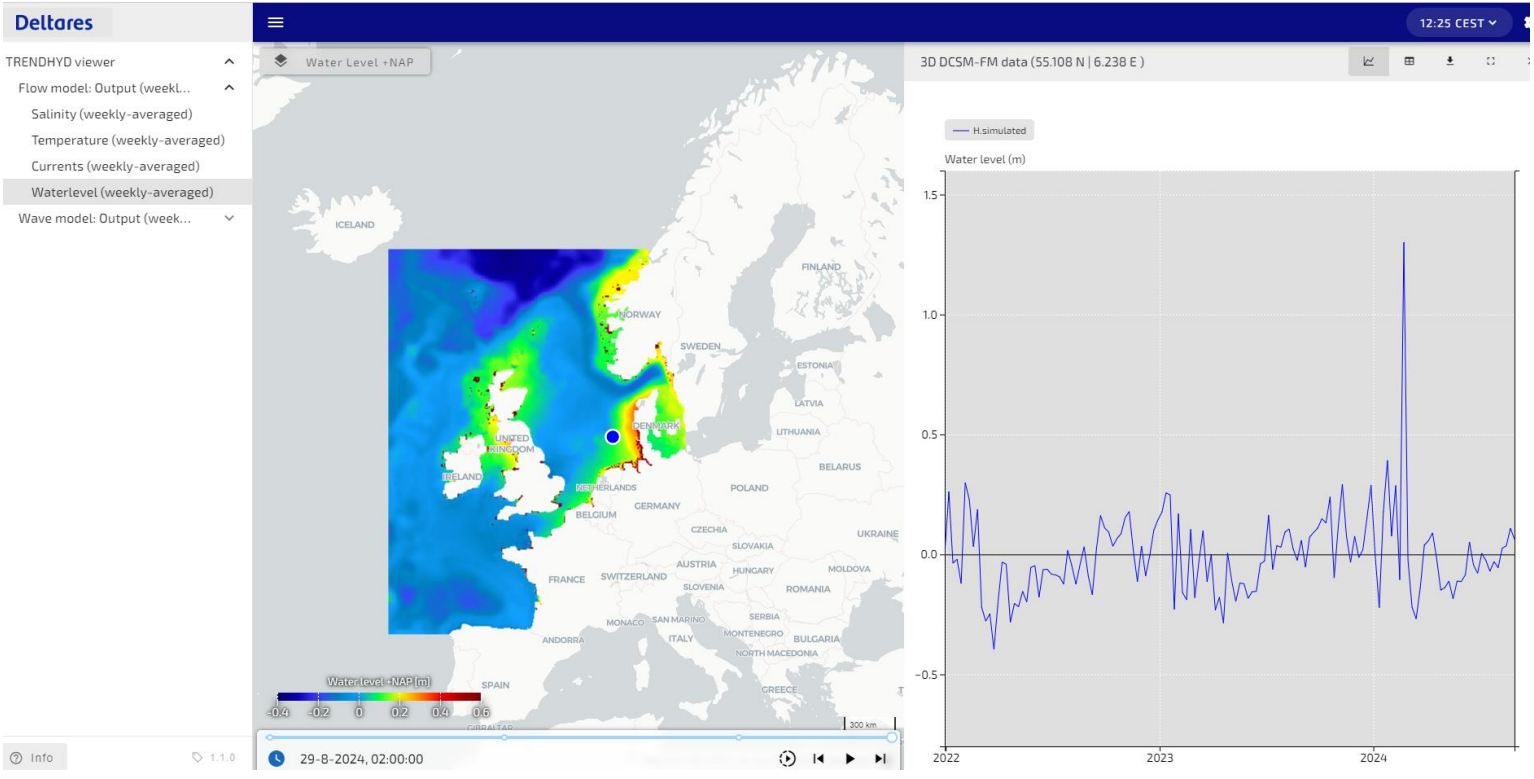
The prototype operational Marine service

- The architecture



The prototype operational Marine service

- The webviewer trendhyd.Deltares.nl



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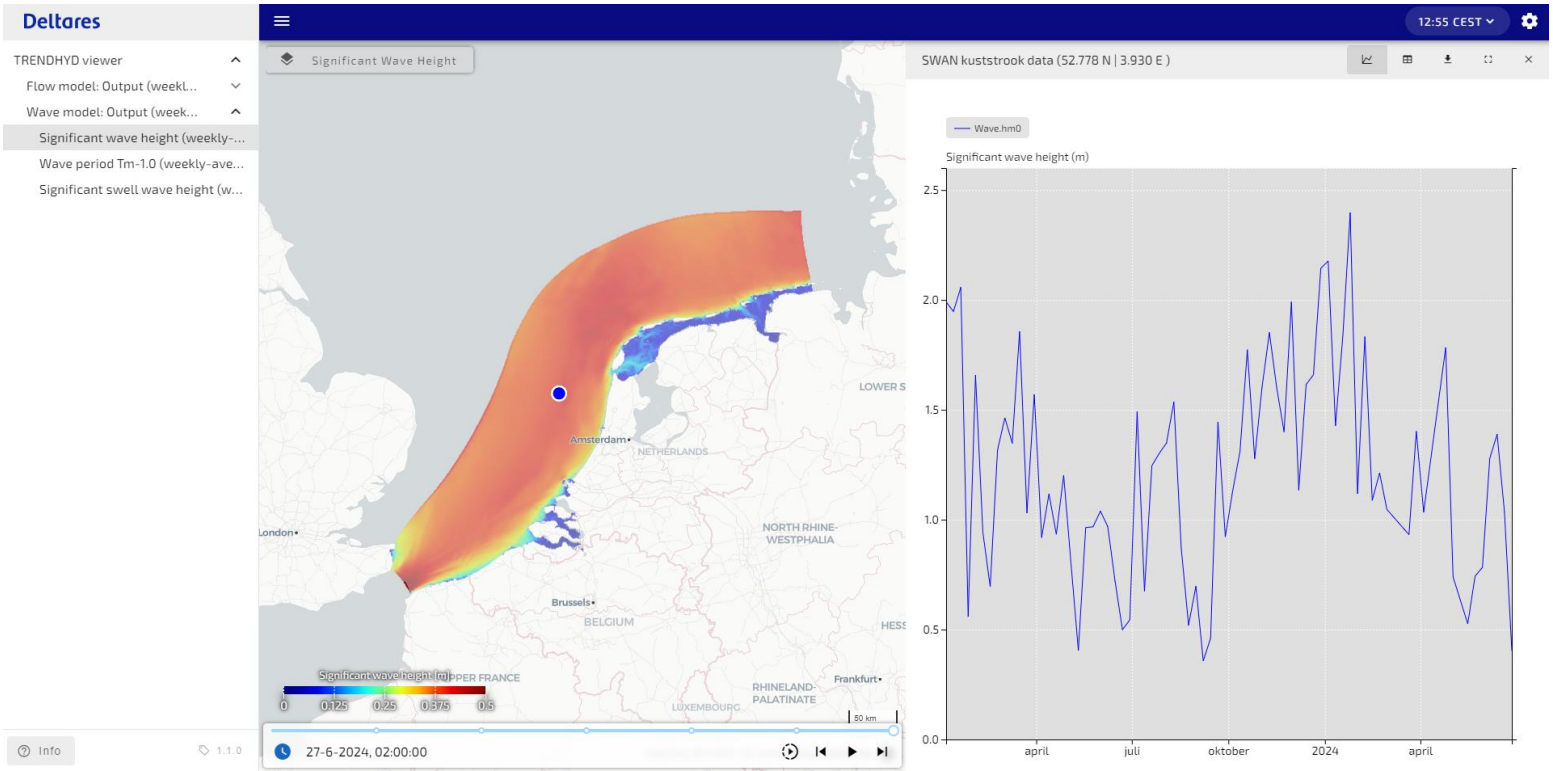

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Questions?

- Thank you for your attention