

NOOS co-chairs report 2018

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24th of May 2018



NW Shelf Operational Oceanographic System

<http://noos.eurogoos.eu/>

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2. Overview of NOOS long-term services
Achievements of NOOS WGs
and other national and EU projects
3. Challenges for the next few years

What's NOOS?



EuroGOOS
European Global Ocean
Observing System



NW Shelf Operational Oceanographic System

<http://noos.eurogoos.eu/>

What's NOOS?



NOOS is a network of 23 governmental agencies and research institutions

- From the 9 countries bordering the NWS
- Active in operational oceanography
- Willing to operate real-time operational data, products and services
- For the whole NWS and its Atlantic margin



NW Shelf Operational Oceanographic System

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NOOS motto:

Coordination, cooperation and co-production

- **[overall objective]** To develop and implement on-line operational marine data and information services.
- **[Obs]** To integrate national observing networks in order to give a reliable description of the actual marine condition of the European North West Shelf (NWS) area, including physical, sedimentological, and ecosystem variables.
- **[Data]** To establish a marine database from which time series and statistical analyses can be obtained, including trends and changes in the marine environment, and the economic, environmental, and social impacts.
- **[Models]** To provide analysis, forecasts, and model-based products describing the marine conditions.
- **[Added-value products]** To collaborate with national and multinational agencies in the NWS area to maximise the efficiency of the ocean observing system, and to optimize the value of the marine information products.



Overview of NOOS services

Outcomes of active collaborations for 17+ years
in NOOS working groups and other projects



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NOOS data portal

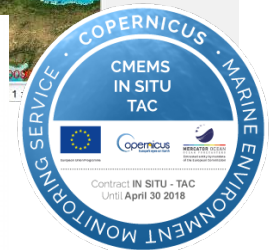
Integrating the national observing networks

NEW!

Steep increase of available data in the portal

- Both NRT and delayed mode data now included
- Nationally funded observational activities
- Not sustainable -> sustainability & cost analysis
- Update and check consistency of inventories

Back office work to



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NOOS modelling activities

both benefit and contribute to CMEMS NWS-MFC

- NOOS continuous efforts in operational models
 - physics, waves & BGC
 - forecast, hindcast & re-analysis
- NWS-MFC operated by a consortium built around Met Office, BSH, PML and NOC

The screenshot displays a web-based catalog of oceanographic models. The main list includes:

- NORTHWESTSHELF_REANALYSIS_BIO_004_011**
- NORTHWESTSHELF_REANALYSIS_PHYS_004_009**
- NORTHWESTSHELF_ANALYSIS_FORECAST_BIO_004_002_B**
- NORTHWESTSHELF_ANALYSIS_FORECAST_WAV_004_012**
- NORTHWESTSHELF_ANALYSIS_FORECAST_PHYS_004_001_B**

The detailed view for **NORTHWESTSHELF_ANALYSIS_FORECAST_PHYS_004_001_B** shows:

- MODEL:** ATLANTIC - EUROPEAN NORTH WEST SHELF - OCEAN PHYSICS ANALYSIS AND FORECAST
- Parameters:** T bottom, T S, SSH, UV, MLD
- Resolution:** 0.067 degree x 0.111 degree (24 depth levels)
- Time Period:** From 2014-04-01 to Present
- Data Type:** daily-mean, hourly-instantaneous
- Map:** A map of the Northwest Shelf region showing bathymetry and model coverage.
- Actions:** MORE INFO, ADD TO CART, WMS, Sub-setting



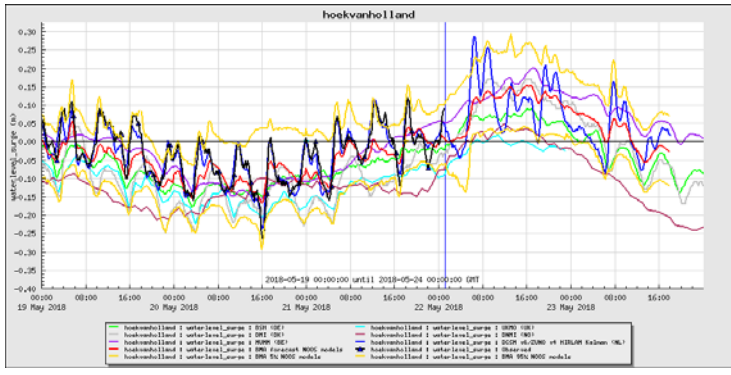
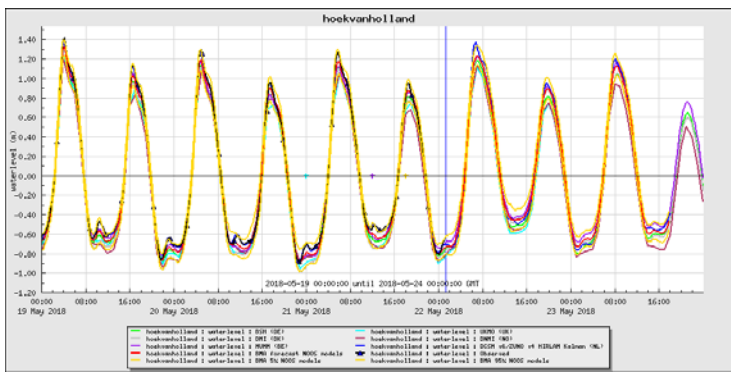
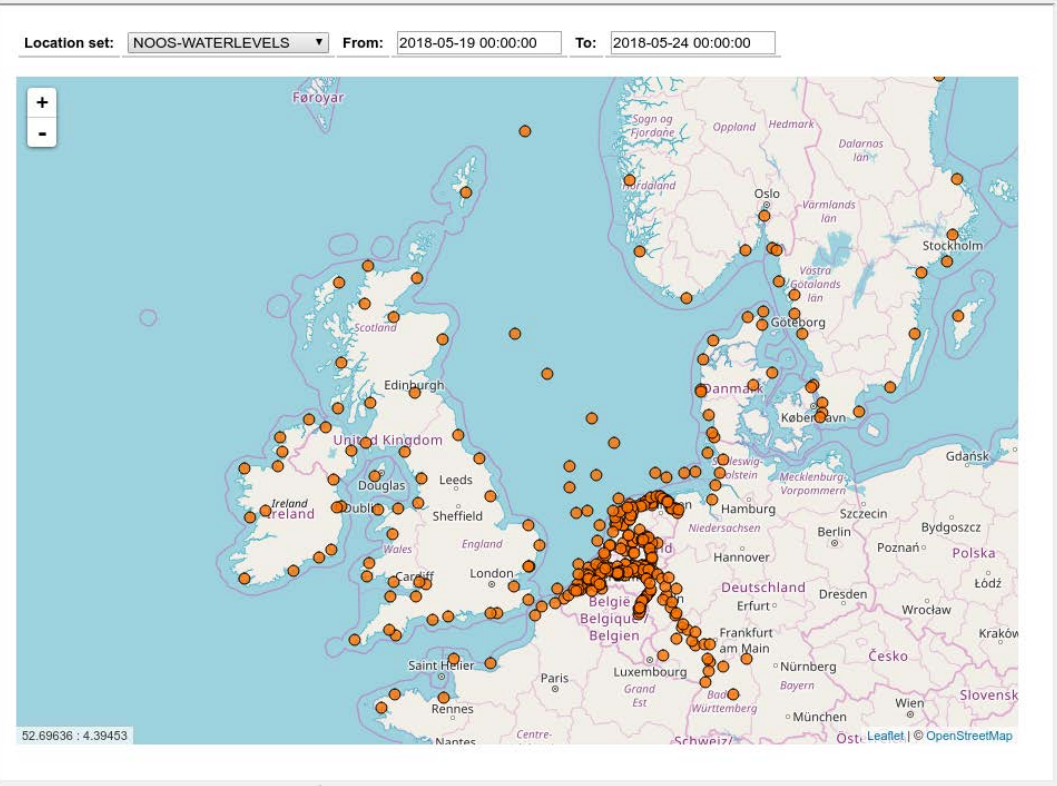
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Sea level and storm surge

Integration of observation and multi-models ensemble forecast

Water level (fc)



NEW

stations covering the whole NWS coastlines

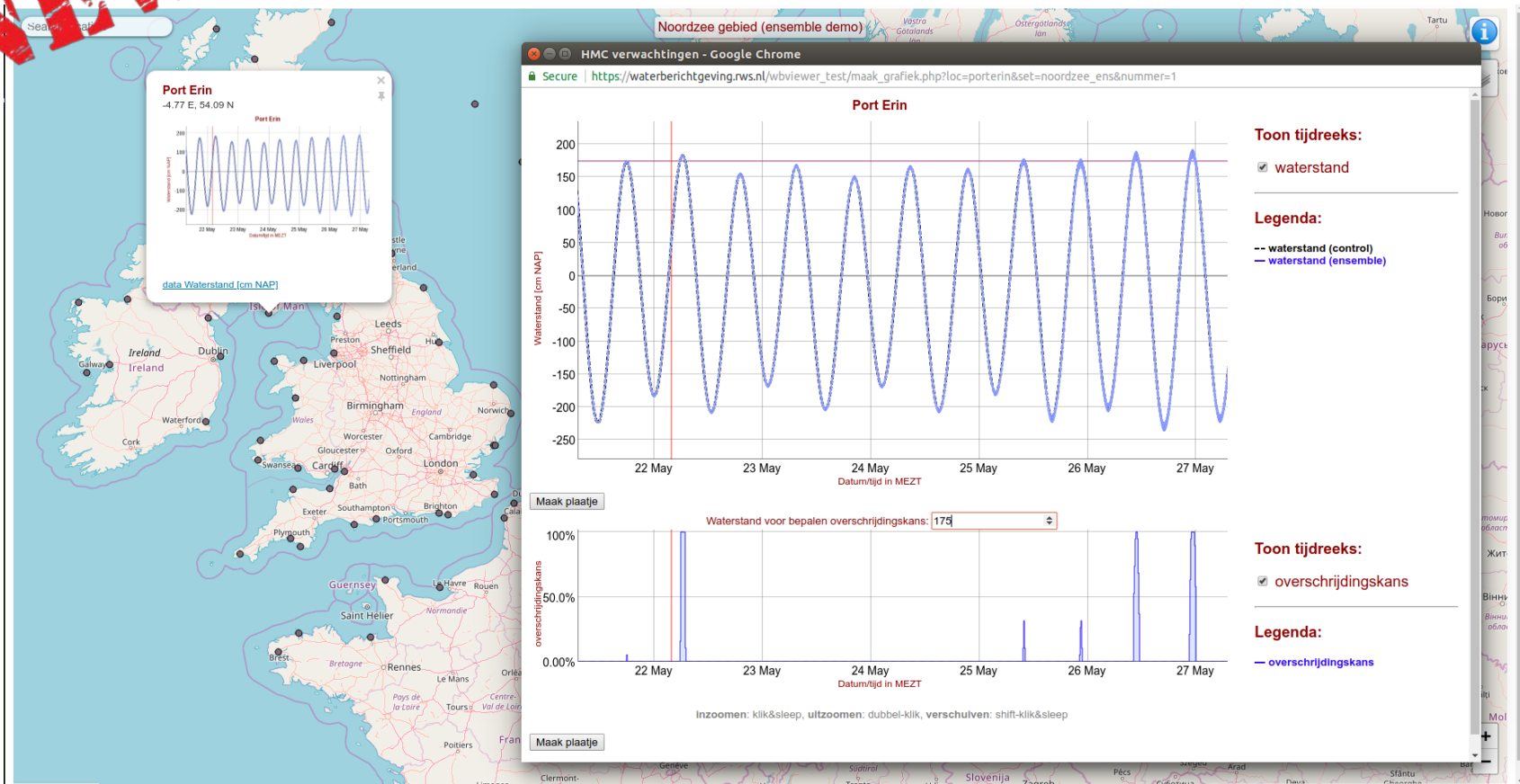


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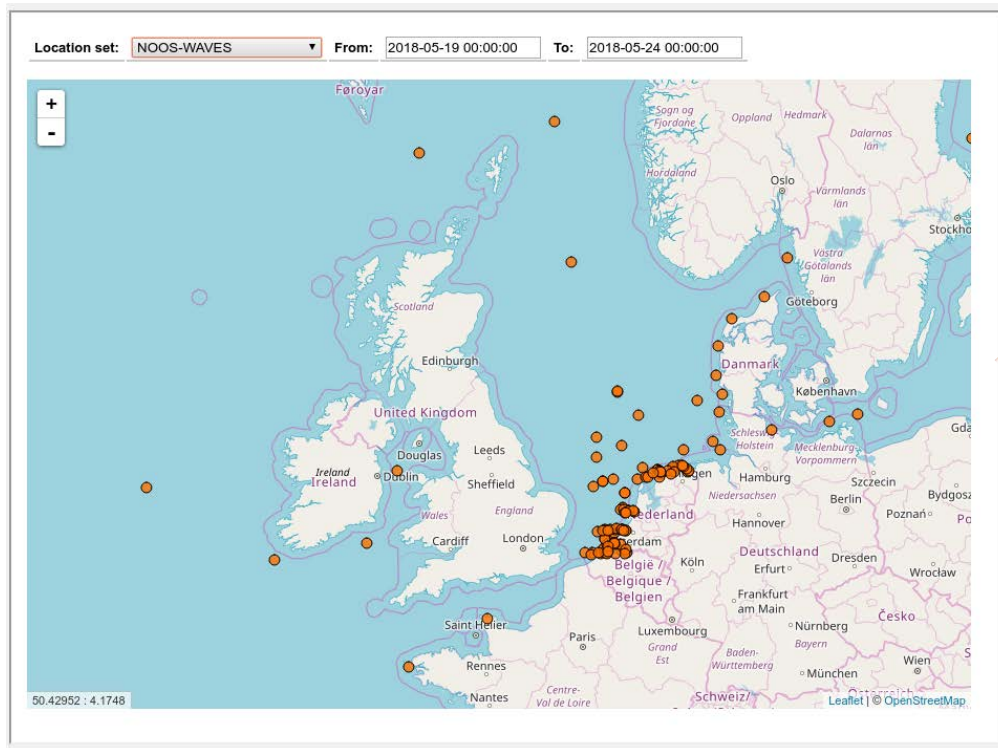
Sea level and storm surge Ensemble modelling (RWS)

NEW

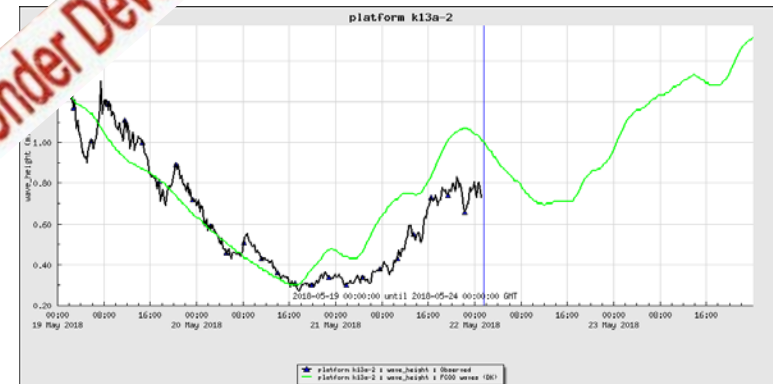


Waves

Integration of observation and multi-models ensemble forecast



Under Development



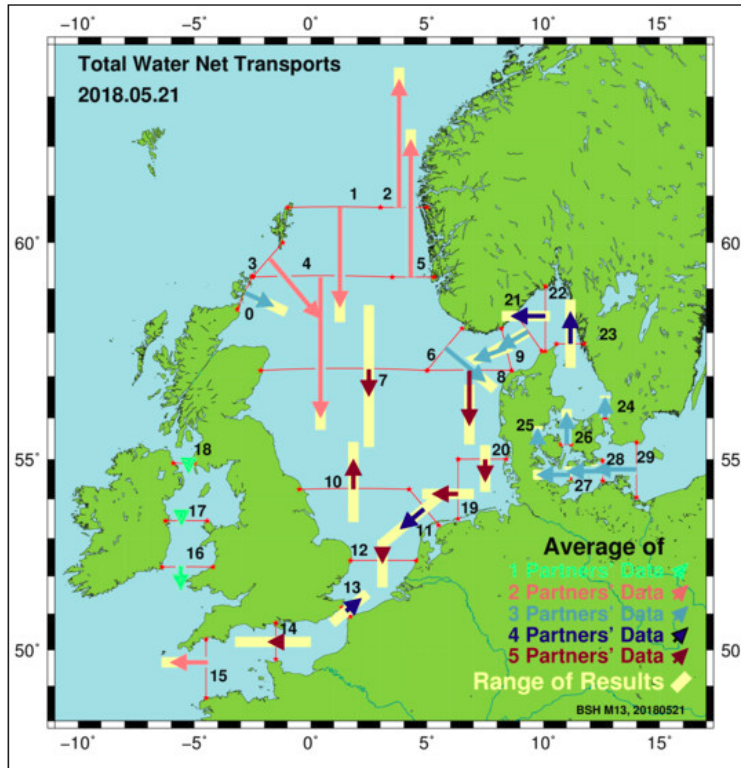
Assessing the variability of Mass, heat and salt transport

North Sea Transports



Computed Water Transports (Average Results of the BSH, OD Nature, DMI, MetOffice and FCOO Circulation Models)

Total [Surface](#)



Current Charts and Transects

- 21. May 2018 ▲
- 20. May 2018
- 19. May 2018
- 18. May 2018
- 17. May 2018
- 16. May 2018
- 15. May 2018 ▼

time series of 5 partners' data ▼

Online Archive:

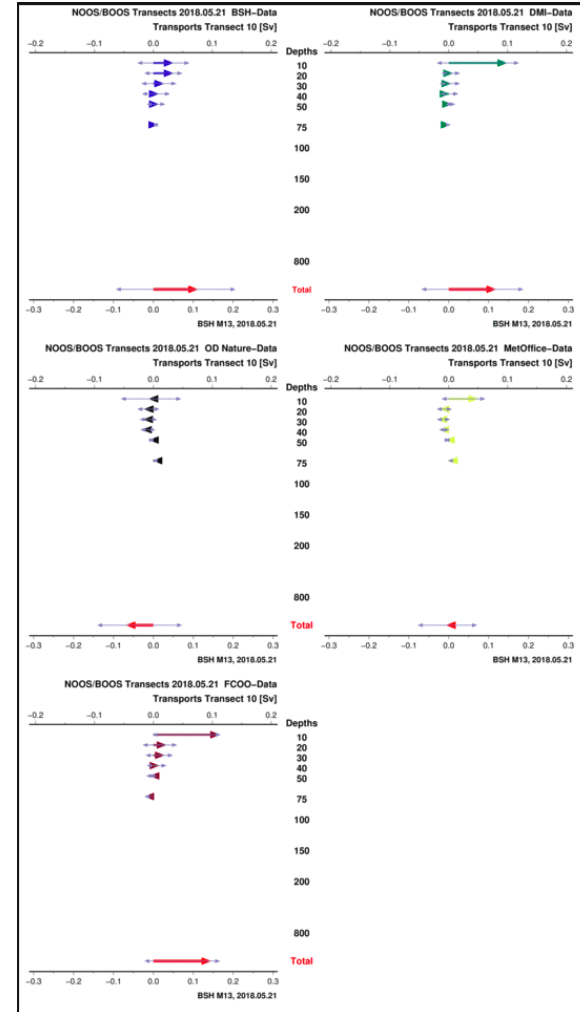
(Type a Date)

20180521

submit

Overview

- BSH
- OD Nature
- DMI
- MetOffice
- FCOO



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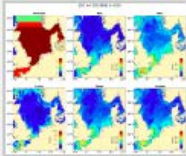
<http://noos.eurogoos.eu/>

Multi-models ensemble forecast (MME)

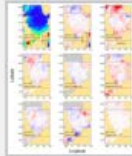


Currents and Transports

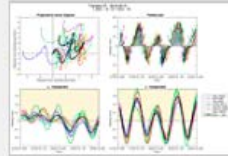
Surface Currents



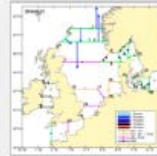
SSC Difference



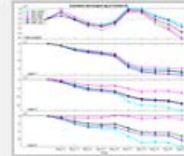
PVD of Currents



Water Transports

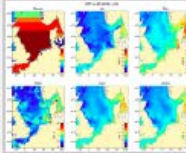


Salt Transports

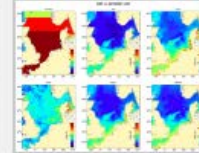


Temperature

Surface



Bottom



SST Difference

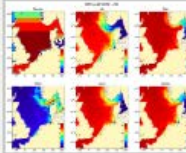


SBT Difference

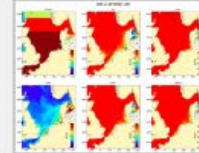


Salinity

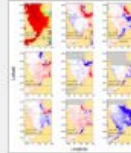
Surface



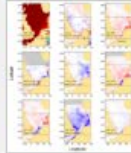
Bottom



SSS Difference

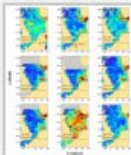


SBS Difference



Monthly Validation

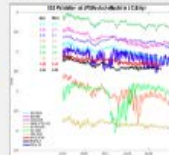
SST satellites



Temperature

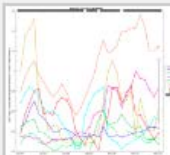


Salinity

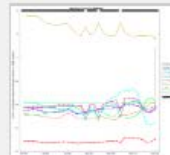


Warning System

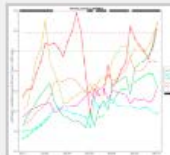
SST



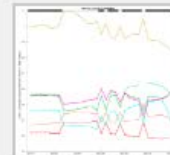
SSS



SBT



SBS



Multi-Models ensemble of multi-years products (2002-2012)

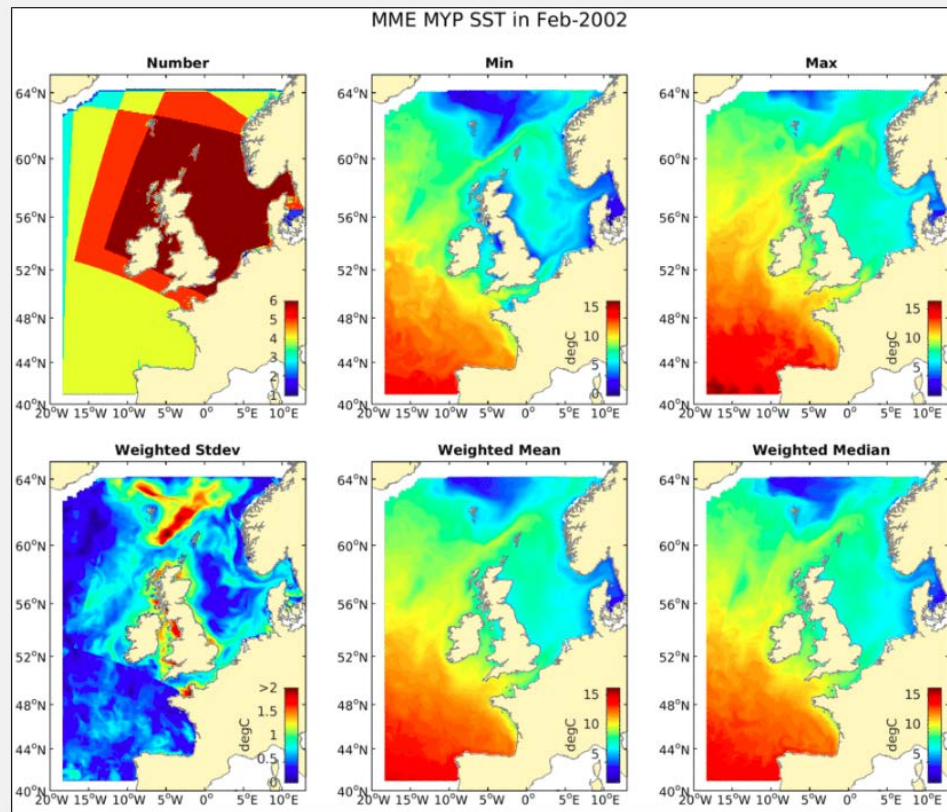
NEW

Multi Model Ensemble of Multi Year Products

Sea Surface Temperature

2002 February

Overview [Multi Year Products](#)



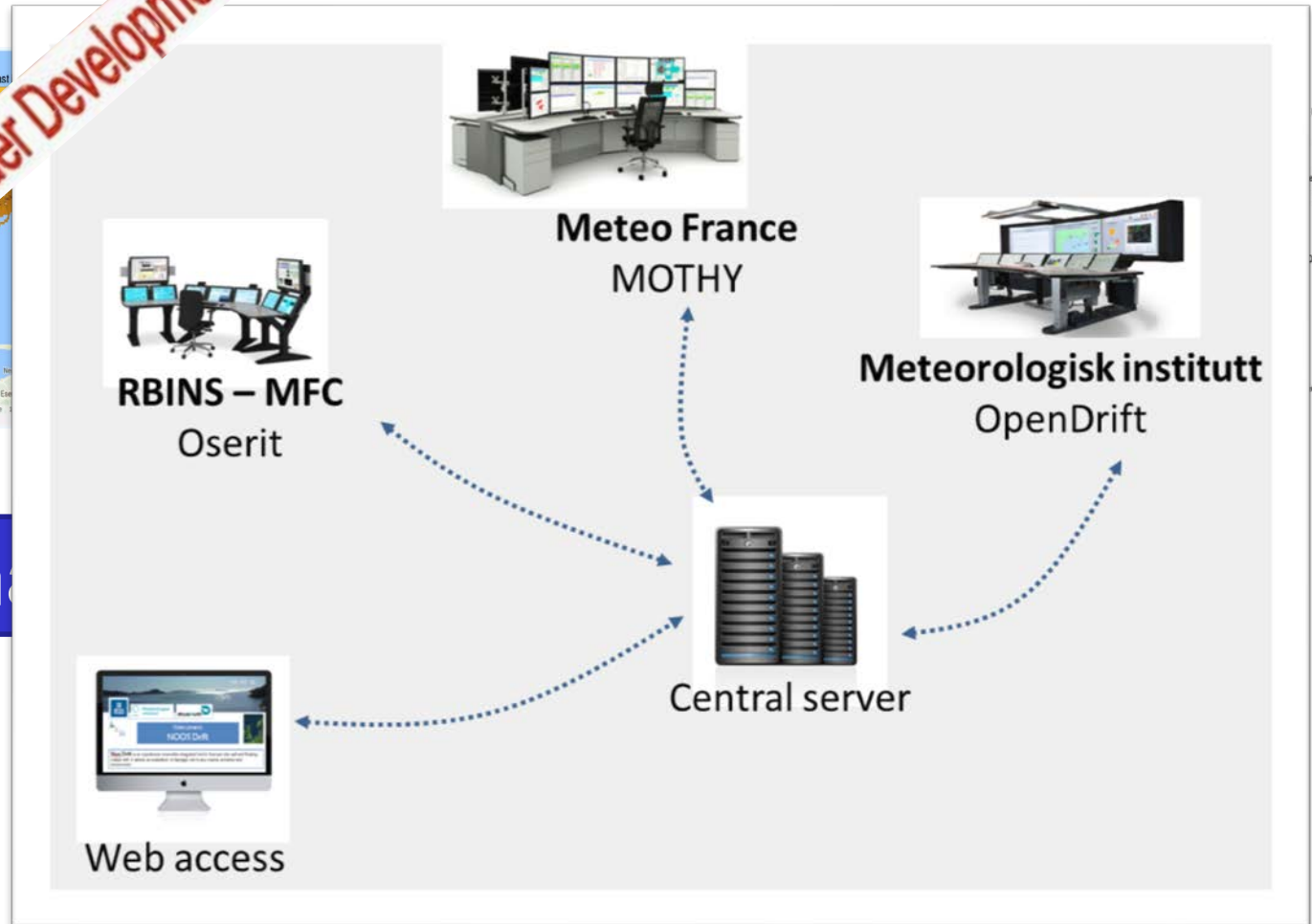
NOOS-Drift (CMEMS DEM4-Lot 5, May 2018 - Nov 2019)

multi-models ensemble system to assess and improve drift forecast accuracy



Under Development

These models



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Challenges for the next few years

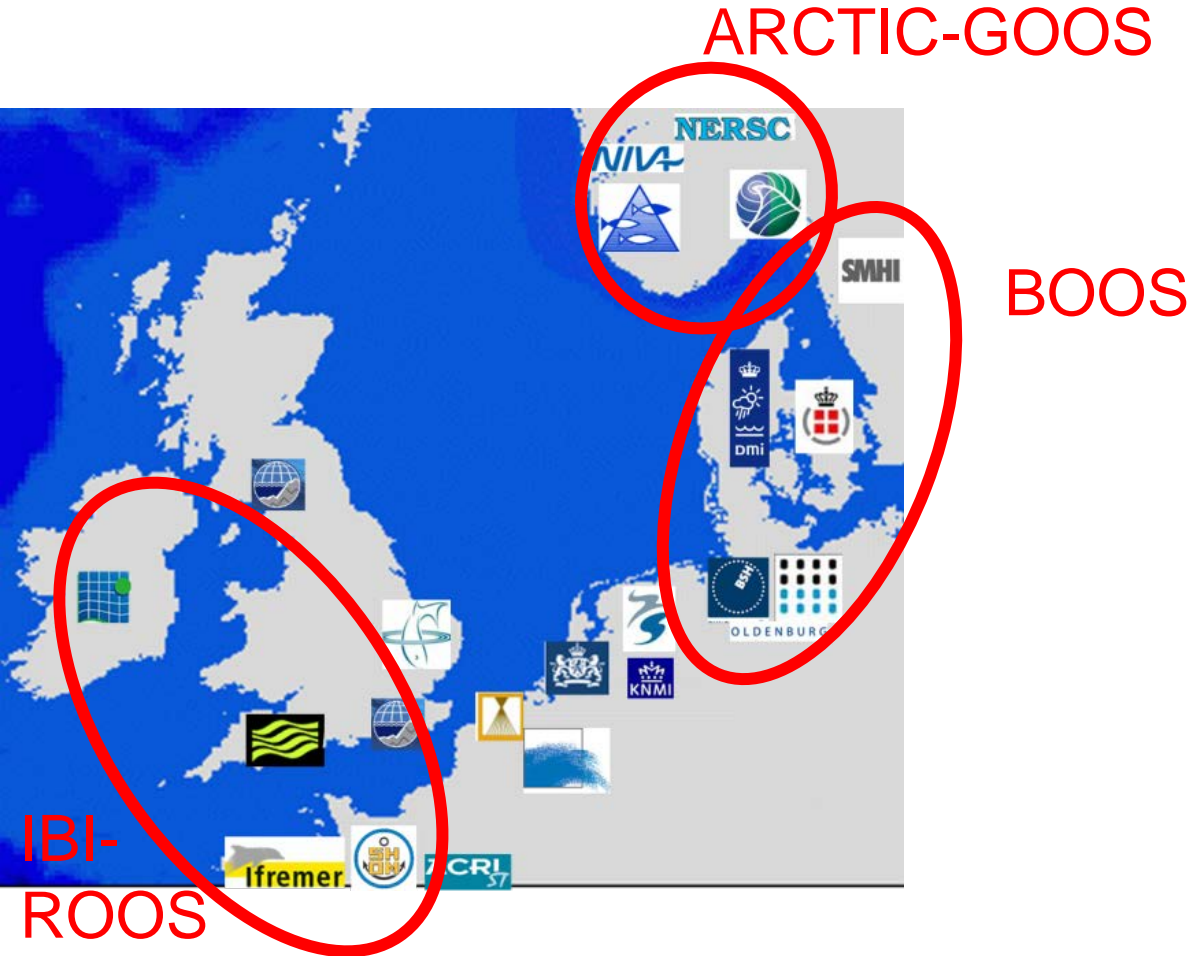


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Collaboration with the neighboring ROOSes

Collaboration with EuroGOOS Task Teams and WGs



Strengthening the connections with our stakeholders

- Ourselves,
National institutes that serve our national users
 - ICES
 - OSPAR
- } ➔ Move towards ocean health
(NOOS future driver? EOOS? MSFD?)
- Bonn Agreement
 - EMSA
 - DG-ECHO
- } Maritime safety
- JRC
 - ...
- Be sure they don't duplicate what we are doing

Take home messages

NOOS membership is stable,
even if we are missing some 'silent' members

NOOS activities are organized around long-term services:
May look as business as usual from outside BUT
continuous improvements & new initiatives

NOOS aims to strengthen collaborations with neighboring ROOSs

Move towards Ocean Health...

