BOOS Annual Meeting 2015

Member report

Country	Denmark
Institution(s)	FCOO
Observations **Status and new initiatives**	Collecting profiles from navy vessels.
Modelling **Status and new initiatives**	**Wave modelling:** Present: + Three one-way nested setups of model WAVEWATCH III covering the North Atlantic, North Sea – Baltic Sea and the Inner Danish waters, respectively. + WAVEWATCH III for the Arctic Ocean with special focus on waters around Greenland. **Circulation modelling:** Present: + Three oneway nested setups of the General Estuiarine Transport Model (GETM) covering the North Atlantic, North Sea – Baltic Sea and the Inner Danish waters, respectively. New: + Couple a thermodynamic ice module to the GETM setups that cover the North Sea – Baltic Sea region, and the Inner Danish waters. + Study model internal variability, given small perturbations in initial field or met.forcing **Particle/Oil spreading:** FCOO operates, maintains and develops the oil drift forecasting system Seatrack Web. The development of Seatrack Web is a cooperation between FCOO, SMHI, BSH and FMI. Seatrack Web is an on-demand, user operated, online system that operates both in forecast and backtracking mode, with the possibility to combine oil spill trajectories with AIS ship track information. Present status: + Seatrack Web with java based GUI (the old STW that is still in operation) . + Seatrack Web with web based GUI, and an updated spreading code **Calibration/Validation:** "Operational" hindcast runs and analysis of all three operational setups. Statistics, and images showing time series and difference between experiments are presented on an internal web bases system. Sea level is validadated at coastal stations in the North Sea – Baltic Sea region. Salinity and temperature are validated from the eastern North Sea, to the central Baltic Sea, and velocities are validated for the Danish Straits. The open source code pyncview are used for statistical computations, to generate images showing time series. **Operational system, DevOps:** FCOO uses a so-called DevOps approach to development and operations. The purpose of this approach (or mindset) is to break down barriers between development and operations thus facilitating agile, fast release and deployment cycles. We do this by having both development and operations in the same department, training some developers so that they can fulfill both roles and by automatizing deployment, 24/7 surveillance and response. The result is that the time it takes to go from development into production is very small and that developers quickly get feedback on the products facilitating further product improvements. Regarding operations, FCOO utilises a partly self-developed automatic 24/7 surveillance and response system.

Dissemination **Status and new initiatives**	Present: Marine Forecase: http://marineforecast.dk Geolocated Forecasts http://metoc.fcoo.dk Navy/SARIS, Search-and-rescue tool in Danish waters New: First release of new version of Marine Forecast based on new Web Map Service (WMS) with METOC data: Desktop: http://app.fcoo.dk/ifm-maps/denmark/ Mobil: http://app.fcoo.dk/ifm-maps-staging/denmark/
Relevant national projects	
Relevant International projects	EuroGOOS NOOS BOOS ArcticROOS – new member in 2014
Additional information	