BOOS Annual Meeting 2018

Member report

Institution	Centre for Materials and Coastal Research (HZG)
Country	Germany
Observations	In-situ observations are available via COSYNA Portal
Modelling	**Status:** • WAM wave model for the North Sea and Baltic Sea with spatial resolution of 2 nm is running in hindcast mode • NEMO structured hydro-dynamical model for the North Sea and the Baltic Sea with spatial resolution of 2 nm is running in hindecast mode (coupled to LIM3 ice model and WAM wave model) • GETM structured hydro-dynamical model for the North Sea and the Baltic Sea with spatial resolution of 3 nm is running in pre-operational mode (coupled to WAM wave model and data assimilation module with SST and HF Radar surface currents) • SCHSIM unstructured hydro-dynamical Model for the North Sea and Baltic Sea with a spatial resolution between 220 m and 8.5 km is running in hindcast mode (coupled to FESIM ice model) New initiatives: Coupling wave and circulation modelling activities (WAM and NEMO) Further coupling of NEMO and WAM with the atmospheric model COSMO
Data, product and service	**HZG COSYNA-Portal** (https://www.hzg.de/institutes_platforms/cosyna) • GETM daily pre-operational forecasts of hydrodynamic model derived parameters (e.g., tides, currents, temperature, salinity) for the North and Baltic Sea • daily SST reanalysis for the North Sea and the Baltic Sea based on GETM model forecasts and satellite observation analysis (OSTIA) • delayed daily and monthly mean Chlorophyll-a (MODIS on Aqua or Terra; Skagerrak, Kattegat and Danish Straits)
Projects including BOOS partners	**CEASELESS (**Copernicus Evolution and Applications with Sentinel Enhancements and Land Effluents for Shores and Seas**);** DHI - Institute of Water and Environment (DK) **JERICO NEXT** (Joint European Research Infrastructure Network for Coastal Observatory – Novel European expertise for coastal observatories); Finnish Environment Institute SYKE (FI), Finnish Meteorological Institute (FI), Swedish Meteorological and Hydrological Institute (SE); (https://www.hzg.de/science/eu_projects/h2020/earth/060466/index.php.en) **WAVE2NEMO** Coupled ocean-wave model development in

	forecast environment, https://www.mercator-ocean.fr/portfolio/wave2nemo-2/ TUT, Estonia
Other relevant projects	**WAVEFLOW (**Consistent wave-mean flow modelling in coupled atmosphere-wave-ocean models**);** (https://www.hzg.de/science/eu_projects/h2020/earth/075692/index.php.en) **ESM** (Advanced Earth System Modelling Capacity): A contribution to solving Grand Challenges, http://www.esm-project.net/ **CMEMS BS-MFC** (Black Sea – Monitoring Forecasting Centre) http://marine.copernicus.eu/black-sea-monitoring-forecasting-centre-bs-mfc/ **WIPAFF:** (Wind Park Far Field): http://www.windfors.de/english/wipaff.html
Involvement in BOOS tasks	None
Involvement in EuroGOOS WGs, TTs	EuroGOOS HFR TT; Development of standards for data formats and validation, GODAE COSS-TT Member, WAVE-NEMO Working group, EuroGOOS Coastal Modelling Group, CMEMS STAC
Suggestions to BOOS future activities	-Synergy between newly available satellite data (e.g. from SENTINEL), in-situ observations and numerical modelling -Enhance coupled model activities, focus on wave-circulation coupling for improving Baltic Sea forecasting capabilities - Use advance assimilation methodology in combination with high resolution in-situ and remote sensing observations - Improved observational strategy focused on Baltic Sea processes, e.g. transition waters; upwelling, mesoscale dynamics -Marine liters
Additional information	