

BOOS Annual Meeting 2019

Member report

Institution	DMI
Country	Denmark
Observations	<ul style="list-style-type: none"> - DMI has transferred the responsibility for current monitoring in the Danish Straits to Joint GeoMETOC Support Center - Upgrade of the remaining old DMI tide gauges to dual radar-pressure gate stations in the coming years, to ensure high, uniform quality and low maintenance costs.
Modelling	<p>Status:</p> <p>Resources:</p> <ul style="list-style-type: none"> - New staff member for KlimaAtlas - New staff member for hydrological forecast (to be started in Autumn) - New staff member for NEMO development <p>HBM-WAM:</p> <ul style="list-style-type: none"> - HBM and WAM ensemble forecasting (11 members) - HBM-WAM 0.5nm resolution Baltic setup and simulation - Including wave radiation stress in HBM - Better currents simulation by improving turbulence mixing at the surface (GoF, Limfjord) - HBM Eulerian tracer module for microplastic drift modelling (sedimentation and biofouling) <p>NEMO:</p> <ul style="list-style-type: none"> - NEMO4 implementation, tests and validation, comparable results with NEMO-Nordic - NEMO4-Agrifs (1nm – 0.25 nm two-way nested grid) experiments (external NEMO consultancy) <p>Data Assimilation:</p> <ul style="list-style-type: none"> - PDAF-HBM for SST assimilation - PDAF-NEMO for SST assimilation <p>Coastal climate change adaptation:</p> <ul style="list-style-type: none"> - Analyze the extreme wind speeds using CORDEX 23 members - Employ lateral boundary temperature and salinity values from EC-EARTH simulations - Prepare and perform the climate simulations for two scenarios RCP 4.5 and RCP 8.5 using HBM (with HRIHAM5 and RCA4 forcing) <p>Plans:</p> <ul style="list-style-type: none"> - PDAF-NEMO4 for SST+T/S assimilation should be ready in 2019, aiming for producing a new reanalysis in 1nm resolution - HBM Eulerian Tracer module and HBM-WAM interaction terms will be further improved
Data, product and service	<ul style="list-style-type: none"> - ECMWF wave forecast intercomparison - Source mapping of microplastics in the Baltic Sea catchment - Flooding forecast on the net - A paper on “Developing marine information service for blue growth sectors” (accepted for JTOO) - Ocean state report (silent storm surge Jan. 2017, summer heatwaves in 2018)
Projects including BOOS partners	<p>Completed: TASSEEF (DMI, AU), BSCP (DMI, FMI, MSI, SMHI, SMA)</p> <p>On-going:</p> <ul style="list-style-type: none"> - BAL MFC (DMI, BSH, FMI, MSI, SMHI) - CLAIM (DMI, MSI) <p>New:</p> <ul style="list-style-type: none"> - Baltic+: BALSEAL – DMI, FMI etc - EuroSea: DMI, MSI - BMIP (IOW, DMI...) <p>Proposals submitted:</p>

	<ul style="list-style-type: none"> - FORCOAST (H2020, DMI, HZG) - JERICO-S3 (H2020, DMI, HZG, FMI, MSI, SMHI, SYKE...) - EU-CN International Ocean Governance (DMI, SMHI)
Other relevant projects	CoDEC (C3S Storm surge service), DABAI (flooding forecast)
Involvement in BOOS tasks	<ul style="list-style-type: none"> - BOOS Modelling Program (BMP) - Multi-Model-Ensemble (MME) - Cal/Val - Data Assimilation - Rapid ship data delivery (working on Danish part) - BOOS Communication (lead) - BOOS visibility (lead, BOOS-NOOS, BOOS-EMODnet, BOOS-HELCOM, BOOS-CMEMS) - BOOS website - BOOS SG (lead) - Organize BOOS Annual meeting and workshop 2018, together with EuroGOOS
Involvement in EuroGOOS WGs, TTs	<p>Scientific Advisory Working Group (lead)</p> <p>Coastal WG</p> <p>Tide Gauge TT</p>
Suggestions to BOOS future activities	<ul style="list-style-type: none"> - BOOS (basin and local scale) modelling working group - BOOS operational ecology working group - BOOS coastal climate adaptation working group - Remote sensing working group - Integrated observing working group
Additional information	<ul style="list-style-type: none"> - Joint BOOS SG- MSF Marine Board paper on “Integrated coastal and biological observations” (Accepted, lead) - Joint BOOS SG-Baltic Earth paper on the cooperation (in review, lead)