BOOS Annual Meeting 2018

Member report

Institution	Finnish Environment Institute SYKE
Country	Finland
Observations	Status and new initiatives In 2018-2019 Operational ferrybox/alga@line observations have been carried out on board Finnmaid and Silja Serenade. Finnmaid (transect Helsinki- Travemünde) has been operating well. Observations include salinity, temperature, turbidity, fluorescence of Chla, CDOM, phycocyanin and phycoerythrin. IOW measures pCO_2 and CH_4. In spring 2019 Chelsea Technology Group has been testing their new fluorometer V-Lux on board Finnmaid, as part of Jerico-Next funded TNA action. Maintenance SYKE. Silja Serenade (transect Helsinki-Stockholm) has been operating during ice-free period. Observations include salinity, temperature, turbidity, pH, fluorescence of Chla, CDOM, phycocyanin, and phycoerythrin. FMI measures pCO_2. In spring 2019 ANB Sensors has been testing their new pH sensor on board Silja Serenade as part of Jerico-Next funded TNA action. Maintenance SYKE. Utö Atmospheric and Marine Research Station has been operating, but had a break of 2 months (May-June 2018) due to fault in underwater pump. Observations by SYKE include salinity, temperature, turbidity, pH, fluorescence of Chla, CDOM and phycocyanin, spectral fluorescence and phytoplankton imaging in flow with Imaging Flow Cytobot (July – October 2018).
Modelling	Status and new initiatives The first two phases of the Finnish coastal ecosystem model were completed in 2018. The model system, including a 3D hydrography model, and a water quality model (FICOS) is running for the Finnish coasts of the Gulf of Finland, the Archipelago Sea and the Bothnian Sea. In the two first coastal areas the grid is 0,25 Nm and in the Bothnian Sea 1 Nm. Water quality parameters are calculated according to the nutrient loading from land, sea bottom, point sources and open sea. The parameters are total nutirents and algal biomass and cyanobacteria biomass. The model can be used to evaluate the effects of changing nutrient loading, e.g. a new point source, to each grid point, and by pooling the grid points wider areas like coastal water bodies. The third phase on completing the geographical area to the Quark and the Bothnian Bay is due in 2019 to 2020. The model development and verification utilizes all available in situ and EO data.
Data, product and service	Status and new initiatives Data has been delivered through CMEMS, EmodNET and European FerryBox Database.

	Silja Serenade new online data visualization at http://swell.fmi.fi/Algaline/ Utö online data visualization at http://swell.fmi.fi/Uto/ Data used in weekly algae reports during summer 2018 https://www.syke.fi/en-US/Current/Summary_of_algal_bloom_monitoring_2018_S(47752)
Projects including BOOS partners	Project full title/acronym and involved BOOS partner names, weblink SYKE coordinates national Finnish Marine Research Infrastructure (FINMARI) which combine all major components of the Finnish marine research community. www.finmari-infrastructure.fi [include SYKE, FMI]
Other relevant projects	Project full title/acronym, weblink, relevance to operational oceanography or BOOS (if applied) Syke participates in Jerico-NEXT, Emodnet-Chemistry, Emodnet-Biology, SeaDataCloud , AQUACOSM, Copernicus CMEMS insitu TAC, Copernicus CMEMS OC TAC
Involvement in BOOS tasks	Progresses and on-going activities
Invovlement in EuroGOOS WGs, TTs	Progresses and on-going activities Participation in Ferrybox TaskTeam
Suggestions to BOOS future activities	
Additional information	