

We present the new update of the data assimilation system used by the Copernicus Marine Environment Monitoring Service (CMEMS) Baltic Sea system in the operational mode and to delayed-time mode to produce physical reanalysis for the whole Baltic Sea area, including the Transition Area and part of the North Sea.

Important updates include transition to the new ice-ocean model NEMO-Nordic version (NEMO-4.0, Nucleus for European Modelling of the Ocean) and also use of the Parallel Data Assimilation Framework (PDAF) system with the LSTKF assimilation scheme.

The observation types used in the data assimilation (sea surface temperature and profiles of salinity and temperature) remained the same as in the previous version of the reanalysis, but the assimilation cycle is being updated from 72-hour cycling to daily for SST and 48-hour cycling for profiles.

Here we will discuss major results of the data assimilation scheme development and tuning both for near-real time operational system and for reanalysis.