WINDS   PREDICTION
CURRENTS   OBSERVATION
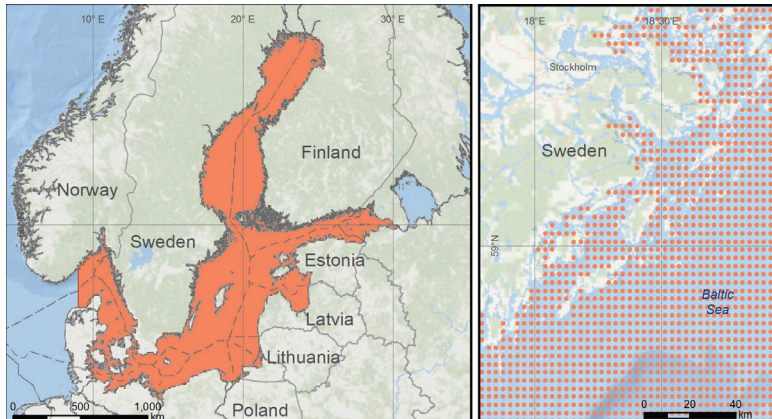
GLOBAL
REGIONAL
LOCAL

EDS CATALOG
COPERNICUS BALTIC SEA

The Copernicus Baltic Sea operational Forecast is run and delivered by Baltic Monitoring Forecasting Centre (BAL MFC) under Copernicus Marine Environment Monitoring Service (CMEMS). BAL MFC is coordinated by a consortium of five operational oceanography centers around the Baltic Sea: Bundesamt für Seeschifffahrt und Hydrographie (BSH, Germany), Danish Meteorological Institute (DMI), Finnish Meteorological Institute (FMI), Swedish Meteorological and Hydrological Institute (SMHI) and the Marine Systems Institute (MSI, Tallinn University of Technology, Estonia). The forecasting system is based on Nucleus for European Modelling of the Ocean (NEMO) version 4.0 which is a primitive equation ocean model for both global and regional circulation simulations. The bathymetry dataset used in the system is GEBCO (at 0.5-minute resolution) while the atmospheric fields for forcing the ocean model comes from the HARMONIE (2.5km resolution) and European Centre for Medium-Range Weather Forecasts (ECMWF) model. The HARMONIE model is operated by the Meteorological Cooperation on Operational Numerical Weather Prediction (MetCoOp) which is a collaboration between between FMI, Norwegian Meteorological Institute (MET Norway) and SMHI. The HARMONIE system is used for the first 2.5 days and ECMWF forcing is leveraged for the remaining 3.5 days. Data assimilation of sea surface temperature observation is used in this model application.

Data Provider: https://marine.copernicus.eu/

Key details

EDS Data Product	Copernicus, Baltic Sea
Coverage	Regional [53.00 to 66.00]°N, [9.00 to 30.00]°E
Owner/Provider	CMEMS
Type of Data	Current Predictions
Forecast Length	144 hours
Vertical Coordinate	Z-Level
Min and Max water Depth	0m and 700m below Mean Sea Level
Number of Vertical Layers	56
Depth of Surface Layer	1m
Horizontal Grid Size	0.0278°x 0.0167° (~2km x ~2km)
Model Run Frequency	Daily
Time Step	1 hour
Wind Forcing	MetCoOp-HARMONIE + ECMWF
River Flow	Yes
Tides	Yes

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