

## Germany

<b>Institution</b>	Federal Maritime and Hydrographic Agency (BSH)
<b>Model Name</b>	BSH circulation model (BSHcmod)
<b>Characteristics</b>	baroclinic three-dimensional prognostic HN model finite differences interactively coupled nested grids ice dynamics and thermodynamics included flooding and falling dry of tidal flats
<b>Area Covered</b>	Sea Area: North Sea and Baltic Sea
<b>Variables Predicted</b>	water levels, currents, salinity, temperature, eddy coefficients, ice thickness and compactness
<b>Operational / Pre-operational</b>	Operational
<b>Source of Atmospheric Forcing</b>	Meteorological forecast models of German Weather Service (DWD) GME (Global Model) and LM (Local Model)
<b>Length of Forecast</b>	84 hours
<b>How many forecast cycles per day, i.e. how often is the model run?</b>	once / day

<b>Additional Information</b>	tidal forcing, river runoff, calculation of heat fluxes atmosphere – ocean, ice model included
<b>Numerical basis of the model</b>	Model Area course grid (6 n.m.): Lon 04°05'W Lat 48°33'N Lon 30°20'E Lat 65°51'N fine grid (1 n.m.): Lon 06.18°E Lat 53.225°N Lon 14.82°E Lat 56.392°N  Number of grid points in X-Y axis course grid (6 n.m.): 207 / 174 fine grid (1 n.m.): 312 / 191  Number of vertical levels 14
<b>Resolution (° or km)</b>	course grid: 6 n.m. fine grid: 1 n.m.

<b>Computer used</b>	Sun Server E10000
<b>Validation method</b>	monthly and annual error statistics for water levels, temperatures, salinities, currents using tide gauge and MARNET/SEANET data
<b>Use of model</b>	Research: national and international projects Public: water level prediction, storm surge warning, SAR support, tourism, support of fisheries Governmental: water level prediction, storm surge warning, defence Commercial: provision of data or special investigations