

HINDCAST RUN

ABSTRACT

Hindcast with E-HYPE version 1.0 has been performed for the period 1980 to 2008. All data can be downloaded from the E-HYPEWeb (www.e-hypeweb.smhi.se). Calculations have been made with a daily time-step for water quality and volume flux and the results are made available as daily or monthly mean values. All results presented on E-HYPEWeb are from an not fully calibrated version of the E-HYPE application, i.e. the internal parameters are calibrated using data from the Baltic Sea drainage basin. Results should therefore be regarded as only preliminary and only intended to demonstrate the data delivery capabilities of this model application. New results are expected towards the end of 2012 with calibration against a full European data set.

A similar hindcast has also been produced for a Baltic Sea application with higher spatial resolution and with more reliable nutrient loads. These data are available on request.

Results from these models can be used for many different purposes. Discharge and nutrient load results along the coastal boundary of the model domain may be used to examine the impact of freshwater and nutrient influxes to seas. Discharge and water quality results at smaller areas within the model domain can be used for characterisation of water body status, establishment of environmental goals, planning of remedial measures and development of monitoring strategies for the European Water Framework Directive (EWFD).

Many water bodies do not have monitoring programmes, thus, modelled data can be a valuable tool for expert judgments. The models can also be used to describe variability in hydrological and nutrient load variables in a present climate, but can also be run using climate model data to predict future conditions.



Figure 1. Map showing the five sub-regions for the E-HYPE application.

Nutrients were included in the hindcast run but no validation has been done for these variables for the Atlantic sub-region. A larger data base of nutrient concentrations is available for the Baltic Sea drainage basin.