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Numerical simulation of the dynamics of phytoplankton blooms in the Baltic Sea

Lidia Dzierzbicka-Glowacka, Jaromir Jakacki, Maciej Janecki, and Artur Nowicki
Institute of Oceanology PAN, Physical Oceanography, Sopot, Poland (arturnowicki@gmail.com)

Dynamics of phytoplankton blooms in the Baltic Sea has been analyzed applying the numerical ecosystem model 3DCEMBS. The model consists of the hydrodynamic model (POP, version 2.1) and the ice model (CICE, version 4.0), which are imposed by the atmospheric data model (DATM7). The ecosystem module of the 3D-CEMBS model has been activated in 2012 in the operational mode. It consists of 11 main variables: biomass of small-size phytoplankton and large-size phytoplankton – diatoms and cyanobacteria, zooplankton biomass, dissolved and molecular detritus, dissolved oxygen concentration, as well as concentrations of nutrients, including: nitrates, ammonia, phosphates and silicates.

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