

# Diagnostic model of wind and density driven currents in the Baltic Sea

**Andrzej Jankowski,**

Institute of Oceanology of Polish Academy of Sciences  
ul. Powstancow Warszawy 2, 81-967, Sopot, PO 68, Poland

**Zygmunt Kowalik**

Institute of Meteorology and Water Management, Maritime Branch,  
ul. Waszyngtona 42, 81-342 Gdynia, Poland

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## **Abstract**

A hydrodynamic numerical model of steady, wind, density and river-driven circulation in the Baltic Sea for the summer period is considered. The model is based on the numerical solution of the unsteady equations of mass transport and sea level. The forces generating the currents, i.e. wind stress and density field, are calculated from the average multi-year observations of the atmospheric pressure, water temperature and salinity for August. The computed fields of mass transport, sea level and currents are presented. Comparison of the calculated sea level and the observed one depicts surprisingly good agreement of both values.