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Modelling Climate over Baltic Sea and North Sea Regions Using a Coupled Regional Ocean-Atmospheric Model

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In to study an experiment of one month January 1990 simulation for climate over Baltic Sea and North Sea regions was implemented the regional climate model COSMO-CLM (the climate mode of COnsortium for SMall scale MOdel) coupled with the regional ocean model TRIM-NP (the "nested and parallel" model which was developed in Helmholtz-Zentrum Geesthacht, Germany, on the basis of TRIM3D model developed at the University of Trento, Italy) by the coupler the Ocean-Atmospheric-SeaIce-Soil model version 3 (OASIS3) of CERFACS (France). COSMO-CLM is setup with a horizontal grid mesh size of 50km and 32 vertical levels. The initial and boundary conditions are from the reanalysis data ERA-interim updated by 6-hour interval. The non-hydrostatic ocean model TRIM-NP is setup with a horizontal grid mesh size of 12.8km and 50 vertical levels. Currently, COSMO-CLM is 1-way coupled to TRIM-NP through sea surface temperature SST as the lower boundary condition. Because the integration domain of TRIM-NP is smaller than that of COSMO-CLM the SST data over the outer area of TRIM-NP is kept as from ERA-interim.