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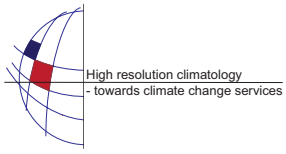

Analysis of simulated wind climate of the Carpathian basin using PRECIS outputs

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Since wind speed is a key meteorological parameter related to wind energy potential, the aim of this poster is to analyze the wind-related outputs (i.e. wind speed and direction calculated from the daily mean zonal and meridional components) of regional model PRECIS in the Carpathian Basin. For analyzing the possible regional climate change in the region, the model PRECIS have been adapted at the Department of Meteorology, Eötvös Loránd University. PRECIS is a hydrostatic regional climate model (HadRM3P) developed at the UK Met Office, Hadley Centre, and nested in HadCM3 global climate model (GCM). It uses 25 km horizontal resolution transposed to the Equator and 19 vertical levels with sigma coordinates. First, we evaluate the model capability of reconstructing the present climate (1961-1990) using two different sets of boundary conditions, (i) from the European Centre for Medium Range Weather Forecast ERA-40 reanalysis database, (ii) from the HadCM3 GCM output data. Validation of simulated data is accomplished using wind observations in Hungary. Then, we compare the model results for the periods 2071-2100 (using the HadCM3 GCM outputs as boundary conditions taking into account the SRES A2 and B2 emission scenario) and 1961-1990 (as the reference period).