



## **Regional climate change expected in the Carpathian Basin in case of SRES A2 scenario using the model PRECIS**

**I. Pieczka, A. Hunyady, P. Kardos, J. Bartholy, R. Pongrácz**

Dept. of Meteorology, Eötvös Loránd University, Budapest, Hungary  
(pieczka@nimbus.elte.hu / +36 1 372 2904)

The results from coarse resolution global climate models (GCM) can only be considered as a first-guess of regional climate change consequences of global warming. Regional climate models (RCM) nested in GCMs may lead to better estimations of future climate conditions in the European subregions since the horizontal resolution of these RCMs is much finer than the GCMs. Moreover, high resolution model results are essential for the generation of national climate change scenarios, as it is recommended by the United Nations Development Programme (UNDP). For analyzing the possible regional climate change in the Carpathian Basin, we have adapted the model PRECIS at the Department of Meteorology, Eötvös Loránd University. The model PRECIS is a hydrostatic regional climate model HadRM3P developed at the UK Met Office, Hadley Centre, and nested in HadCM3 GCM. It uses 25 km horizontal resolution transposed to the Equator and 19 vertical levels with sigma-coordinates. In this poster, we compare the model results for the periods 2071-2100 (using SRES A2 scenario) and 1961-1990 (as the reference period). Thus, we estimate the regional climate change (i.e. annual, seasonal and monthly mean temperature and precipitation) by the end of the 21<sup>st</sup> century.