

# Comparing potential models for projecting regional climate change in the Carpathian Basin

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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. We already accomplished detailed comparison of several GCM outputs for the Central/Eastern European region using the MAGICC/SCENGEN package, which is based on an upwelling diffusion energy balance model (developed by Wigley et al. at NCAR). 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. In this poster, the potential use of two different RCMs (adapted at the Department of Meteorology, Eötvös Loránd University) are discussed: (1) model PRECIS developed at the UK Met Office, Hadley Centre with 25 km horizontal resolution and 19 vertical levels, (2) model RegCM3 developed by Giorgi et al. in ICTP - we are planning to run it with both 25 km and 10 km horizontal resolution. Both RCMs are 3-dimensional, sigma-coordinate, primitive equation models. Our analyses cover the entire Central/Eastern European region with special focus on the Carpathian Basin and Hungary.