



Analysis of climate projections for the Carpathian Region using dynamical downscaling

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Hungarian national climate and adaptation strategies have been recently revised, and a National Adaptation Geo-information System (NAGIS) is currently under development. This platform will serve as a central data collection for various end-users, impact researchers, and decision makers on national level in Hungary. In order to satisfy the demands for climate projection inputs within this framework, RegCM4.3 is one of the regional climate models used to provide results for detailed regional scale analysis and specific impact studies.

RegCM is a 3-dimensional, sigma-coordinate, primitive equation model, originally developed by Giorgi et al. Currently, it is available from the ICTP (Abdus Salam International Centre for Theoretical Physics). We have already completed experiments with 50 km horizontal resolution covering both the second half of the past century (1951-2005), and the future (i.e. the 21st century, 2006-2100) using HadGEM2 global model outputs as initial and lateral boundary conditions. The outputs of the 50 km runs drive the further downscaling experiments using 10 km as a horizontal resolution for a smaller domain covering Central Europe with special focus on the Carpathian Region. For the future, RCP4.5 scenario run is analysed in this poster, and moreover, preliminary results of the RCP8.5 scenario run are also presented.