



Plans for RegCM4 CORDEX-CORE simulations

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One of initiatives of the next phase CORDEX activities is the so-called CORDEX-CORE program, by which a core set of regional climate models (RCMs) will downscale a core set of Global Climate Model (GCM) 21st century projections over all, or most, CORDEX continental scale domains. This effort is aimed at providing a homogeneous set of RCM-based projections across land regions of the world, for use in impact assessment studies. The RegCM4 model will participate to this effort through contributions from its user community (the Regional Climate research NETWORK, or RegCNET). Although the final details of the CORDEX-CORE experiment protocol have yet to be finalized by the CORDEX community, it is envisioned that ensembles of RegCM4 projections for the period 1950-2100 (or minimally 1970-2100), downscaling 3-6 GCMs over all CORDEX domains (except for the polar ones) will be produced, with forcing from a high end (likely RCP8.5) and a low end (likely RCP2.6) GHG concentration pathway. Depending on the availability of GCM simulations, CMIP5 and/or CMIP6 GCMs will be downscaled. The model grid spacing will be 20-25 km, except for the European domain, where it will be 12.5 km. The newest version of the model, RegCM4.6, will be used, which includes several new physics options compared to previous ones. The model will be validated and customized for the different domains via ERA-Interim driven simulations for the period 1979-2014. The simulations will be conducted by the International Centre for Theoretical Physics (ICTP) team, as well as several institutes located in the different CORDEX regions, and the data will be stored in CORDEX output format at different repositories. Analysis teams and targeted workshops will be organized to carefully assess the simulations. This presentation will describe the RegCM4 CORE experiment framework and will discuss preliminary results over different CORDEX domains from the ERA-Interim driven simulations.