



High resolution dynamical downscaling for Germany - 350 years on 10 km

D. Jacob, P. Lorenz and H. Goettel

Max-Planck-Institute for Meteorology, Hamburg, Germany (jacob@dkrz.de)

Climate changes often have local consequences. One methodology to investigate global climatic changes locally is the dynamical downscaling technique. During the last decade regional climate models with horizontal resolutions of about 50 km have been developed, validated against observations and applied to downscale IPCC SRES scenarios, which have been carried out by global climate models on much coarser resolutions.

In this context a very high resolution dynamical downscaling has been performed with the regional climate model REMO. REMO was used on 10 km horizontal resolution for Germany, Austria and the Swiss region for the time period from 1950 to 2100. It was nested into the newest IPCC simulations (A1B, B1 and A2), which have been carried out with ECHAM5-MPI-OM at the Max-Planck-Institute for Meteorology.

For the time period 1979 to 2004 a re-analyses has been downscaled to 10 km as a validation experiment and the results have been compared to observations.

Results from all experiments will be presented focussing on the added value, which is achievable through the high resolution.