



Regional Climate Scenarios for Europe and the Greater Alpine Region : ZAMG's contribution

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For the last century high quality data sets of station data and derived gridded data is available for the Greater Alpine Region (GAR). This makes it possible to analyse the changes in the mean but also the extremes in temperature and precipitation over this time. Information on changes in the past in other relevant variables, where no long time series of observation data are available, but also an estimation on possible future changes can only be provided by climate modeling.

The main objective of the Austrian national project “reclip:century” (in cooperation with three Austrian research institutions) is to provide high resolution data sets (50km by 50km for Europe, 10km by 10km for the GAR) to impact research groups. As a first phase an ensemble of several RCM/GCM-combinations are carried out (for the time periods 1961-2000 and 2001-2050) including an assessment of the uncertainties.

The participating RCMs are the COSMO-CLM (applied at Austrian Institute for Technology (AIT), WegCenter and Central Institute of Technology (ZAMG)) and the MM5 (applied at University of Natural Resources and Applied Life Sciences (BOKU-Met)), the GCMs providing the forcing data are the ECHAM5 (A1B, B1) and the HadCM3 (A1B). Simulations will be added where both models are forced by the ERA40 reanalysis data 1961-2000.

All results will be available for further research and shall reflect the impact of climate change via at least two reasonable scenarios. The provided data sets will be the basement for further analysis of regional effects on climate change and for the development of first strategies for adaptation and mitigation of these effects.

First evaluation results of the simulations carried out at ZAMG will be shown. These are CCLM Simulations forced by ERA40 and ECHAM5 B1.