Geophysical Research Abstracts
Vol. 13, EGU2011-7564, 2011
EGU General Assembly 2011

EVACLIM - a process-orientated evaluation of climate simulations for Europe and the Greater Alpine Region

Klaus Haslinger, Ivonne Anders, Michael Hofstaetter, and Maja Zuvela-Aloise
Central Institute for Meteorology and Geodynamics, Vienna, Austria (klaus.haslinger@zamg.ac.at)

To assess future climate impacts in Austria high resolution data sets for past, present and future climate are required. These imperative data sets shall be provided by the project "reclip:century" in cooperation with other Austrian research institutions. The main objective of the project is to provide a data set for climate impact research including an assessment of the uncertainties. Due to limitation in projects budget, man power and time, this last part can only contain basic evaluation.

The ZAMGs project EVACLIM is a one year project with focus on the evaluation of the ERA40 hindcast simulations for the time period 1961-2000 for Europe (50km) and for the Greater Alpine Region (GAR, 10km). With this project we have the possibility to extend the evaluation carried out in reclip:century to other observational data sets. They encompass global and European domain datasets like CRU, GPCC4 and E-OBS which were used for the analysis of the 50km run, as well as higher resolution datasets for the 10km run covering the GAR like e.g. the new gridded HISTALP dataset (spatial: 5', temporal: monthly, domain: GAR) for temperature, precipitation and fraction of liquid precipitation and the gridded STARTCLIM dataset (spatial: 1km, temporal: daily, domain: Austria) for temperature, precipitation and snow height.

The evaluation of the 50km run was limited to simple bias calculation between model output and observations for the whole domain and for the PRUDENCE regionalisation on a monthly and seasonal basis. The evaluation of the 10km run is more detailed. In comparison to the HISTALP dataset biases, trends, correlations, seasonal cycles and pattern correlations have been calculated on a monthly basis. The high resolution START-CLIM dataset on a daily temporal resolution has been used to investigate frequency distributions for different classifications: for a climatologic regionalisation of Austria, for three classes of altitude and for different weather patterns.