

Climate change simulation over Europe using the regional climate model REMO

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To assess ecological and economic impacts of climate changes in Europe and to develop mitigation and adaptation strategies it is necessary to get detailed regional information on a possible future climate. In this study, which is part of the EU project PRUDENCE, a high resolution climate change simulation is performed with REMO for the European region for the years 2071 - 2100 consistent with the SRES A2 emission scenario. Additionally a control simulation for the years 1961 - 1990 is made to compare the future climate with todays climate. REMO is driven by global model output from the Hadley Centre Atmospheric Model HadAM3H at the lateral boundaries. The following questions should be answered during the evaluation of the model results: How will the mean climate state change? How will the climate variability? Do we have to expect more extreme events such as heavy storms, excessive droughts or floods? Which European regions are mostly affected by the climate changes? First results concerning these questions will be presented.