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Sensitivity of domain selection and parameterization in high resolution regional climate model: Preliminary results of simulations in EC FP6 project CECILIA

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Project EC FP6 CECILIA - Central and Eastern Europe Climate Change Impact and Vulnerability Assessment is studying the impact of climate change on agriculture, forestry, hydrology and air-quality in complex terrain of the Central and Eastern Europe in high resolution. Resolution of regional climate simulation is an important factor affecting the accuracy of dynamical downscaling of the global changes. In CECILIA project a few tests were performed to estimate the sensitivity of the results for different size of domain in complex terrain of Central Europe as well as to the choice of parameterization of selected processes. Special attention was given to convection parameterization and its impact to precipitation and temperature in the region. The results of the simulations performed with the resolution of 10 km using ERA 40 reanalysis are presented and compared to our “official” CECILIA simulation, validation based on the station observations from the Czech Republic.