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Extremes in high resolution regional climate model: Preliminary results of RegCM simulations in EC FP6 project CECILIA

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Resolution of regional climate simulation is an important factor affecting the accuracy of dynamical downscaling of the global changes. Especially the extremes are strongly dependent on the terrain patterns as shape of orography or land use, which can contribute to extreme temperatures or precipitation appearance. In connection with 2002 floods in Czech Republic we started to analyze whether RCMs are capable to reproduce extremes, which can be quite important feature of changing climate. Here the reliability of the RegCM in reproducing extremes at very high resolution is again studied in the experiment with the perfect boundary conditions driving in simulations for EC FP6 project CECILIA dealing with climate change impact and vulnerability assessment in Central and Eastern Europe. The preliminary results of simulations performed with the resolution of 10 km using reanalysis ERA 40 are presented and compared with previous experiments in coarser resolution with the emphasis on extreme temperature and precipitation characteristics, validation based on the station observations from the Czech Republic.