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Regional Climate Change Scenarios in High Resolution for Impact Assessment in Central and Eastern Europe – 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 and distribution. Project EC FP6 CECILIA (Central and Eastern Europe Climate Change Impact and Vulnerability Assessment) is studying the impact of climate change in complex topography of the Central and Eastern Europe in very high resolution of 10 km. The impacts on agriculture, forestry, hydrology and air-quality are studied within the project, and precise information from regional climate simulations is necessary. Basic validation and verification of ERA40 driven simulations by RegCM and ALADIN-Climate used for simulations in targeted regions as well as discussion of the climate change signal in these regions for time slices 2021-2050 and 2071-2100 is provided with respect to control period 1961-1990. Some impact applications in the sectors mentioned above will be shown as well.