



## **Testing reliability of selected methods of future precipitation extremes projections. A Central Europe case.**

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Global climate models (GCMs) give the projections of future climate in the low spatial resolution, with the skillful scale about 1000 km. However impact models need a detailed information in local scale. To obtain such projections it is necessary to downscale GCMs output. There are two conceptually different ways of doing it: regional climate models (RCMs) with model output statistic technics (MOS) or statistical downscaling. The aim of this paper is to evaluate a few downscaling procedures of prediction of future temperature extremes.

Data used in this paper consists of series of daily precipitation totals from different RCMs driven by different GCMs from Central Europe and the period 1951-2010 and gridded datasets of appropriate precipitation observations from the period 1951-2010 (E-OBS datasets).

The period 1951-2010 is divided into two parts, the reference period and the evaluation one. Each of analysed projection procedures is calibrated in reference period and then used in the evaluation period. Obtained projections are compared with station data and their quality is assessed.

Different projection methods are to be tested: simple bias correction, distribution based bias correction, simple delta change and distribution based delta change as well as weather generators.

Series of evaluation measures have to be used, checking the quality of assessment of the dry days frequencies, frequencies of daily precipitation amounts in selected intervals and precipitation amounts with specific return periods.

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