



## **CECILIA climate indices: Analysis of temperature extremes in Central and Eastern Europe**

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The EU-project CECILIA (Central and Eastern Europe Climate Change Impact and Vulnerability Assessment) aims at delivering a climate change impacts and vulnerability assessment in targeted areas of Central and Eastern Europe. This region appears particularly vulnerable with regard to future changes in extremes (Christensen and Christensen 2003, Schär et al. 2004), likely due to regional specificities such as highly varying topography and continentality, and to changes in soil moisture content (Seneviratne et al. 2006).

The project includes the analysis of extreme weather events in present day climate in the target region. For this purpose, a list of 130 precipitation and temperature indices was defined. The indices were calculated for various periods (e.g., 1961-1990, 1961-1970, 1966-1975, 1971-1980, etc., as well as yearly for 40 core indices) and time frames (i.e., monthly, seasonal and annual) using the software ProClimDB (Stepanek 2006). Observational data used for the indices calculation comes from the European Climate Assessment Dataset project (ECAD, Klein Tank et al. 2002) and from station data of the local partners in Central and Eastern Europe. Moreover, the same indices were also calculated for a selection of pre-existing RCM/GCM datasets (PRUDENCE, ENSEMBLES).

Here, we present results from the analysis of the temperature extreme indices, both for the observations and model data. This includes the investigation of possible trends

in the occurrence of extreme weather events in the period 1961-2005, as well as the validation of the model-derived indices with the observations.

References:

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