

## UNCERTAINTIES IN DEVELOPING THE SITE-SPECIFIC CLIMATE CHANGE SCENARIO

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The climate change impact studies require the climate change scenarios which are often related to the single site or a small area. This contribution will discuss uncertainties involved in developing the site-specific scenarios for Czechia.

The scenarios of changes in four surface weather characteristics (daily average temperature, daily temperature range, global solar radiation and precipitation) are based on time series (1960-2099) of monthly means derived from the transient runs of seven GCMs available from the IPCC-DDC [[http://ipcc-ddc.cru.uea.ac.uk/dkrz/dkrz\\_index.html](http://ipcc-ddc.cru.uea.ac.uk/dkrz/dkrz_index.html)]. The scenarios are derived either by comparing the statistics for the target period (e.g., 2040-2069) with the baseline period (1961-1990), or by the pattern scaling technique. The pattern scaling technique consists in multiplication of the standardised scenario by change in global annual mean temperature. The change in global annual mean temperature may be estimated by simple climate model (e.g., MAGICC).

The following uncertainties in developing the climate change scenario are discussed: a) choice of the GCM, choice of the site, within-GCM uncertainty (based on analysis of the ensemble of four integrations by HadCM-2 model); b) uncertainties related to the pattern scaling technique: the validity of the technique, and the choice of the emission scenario and climate sensitivity which are used as input parameters to the MAGICC model in estimating the change in global mean temperature.