Statistical approaches to describe changes in the extremes under future climate conditions

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There is a good deal of uncertainty in climate scenarios when it comes to describing the potential future changes of mean values. These uncertainties are even larger when the future behaviour of extremes is considered. The presentation will focus on statistical approaches to improve the description of temperature and precipitation extremes in a changing climate using conditions prescribed by the SRES scenarios. In the temperature domain changes in the extremes are shown to be of a comparable or smaller magnitude than the the changes in the daily mean values. In the precipitation domain, there is a tendency to an increase in the far reaches of the distributions superimposed by a general tendency for reduced monthly precipitation amounts. Examples from regional studies in several German States are given.