EPISODES - Empirical Statistical Downscaling for Seasonal, Decadal up to Climate Time Series

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Impact-Modellers are developing their models based on observed data. The resulting impact models are fitted and tuned to those station data. Many of those developers prefer to use climate projection data based on station data sets. Due to the fitting of impact models towards observed data, it is necessary that those projection data are bias free.

To serve those needs the German Meteorological Service started a project to develop a tool to statistically downscale global climate projections towards station based time series. The project description includes several requirements. First, the results have to be consistent for all meteorological elements needed for hydrological simulations and have to be consistent for an entire hydrological catchment. Second, the method has to be usable for the time scale from seasonal prediction towards climate projections.

To fulfil all named requirements a two step procedure is intended. A downscaling tool will be developed to provide regional climate change information. Based on those results a multi-element and multi-side weather generator will provide synthetic time series based on stations.

The presented poster will present the structured concept and first results.