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Statistical downscaling of GCM scenarios – what can we learn from using different models as forcing sources?

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As the saying goes "if you have one clock you know what time it is, but if you have several you cannot be all too sure . . .". Rather often the basic information for an investigation and perhaps an ensuing decision process is derived from *one* run of *one* large scale circulation model. The study presented here applies the output of different global models, and, if applicable, different model runs, to a statistical downscaling model. All other things being equal it enables to obtain insight of the statistical model's variability and its sensitivity concerning different forcing sources. The results presented include an analysis of the accuracy with which the downscaled information reproduces the current climate conditions as well as insight into the bandwidth of future climate projections according to the different forcing models.