



A combined analysis of dynamically downscaled precipitation intensity from different global climate scenarios for Northern Europe

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Using the HIRHAM atmospheric regional climate model for the Northern Europe with adjacent ocean areas, the SRES B2 scenarios calculated with global climate models at the UKMO Hadley Centre and at the Max-Planck-Institute for Meteorology have been dynamically downscaled. From the Hadley Centre, also the SRES A2 scenario has been downscaled. The time-periods are 1961-90 and 2071-2100, and the grid-resolution 0.5 degrees. This is a first step in a telescoping towards catchment resolved downscaling.

The presentation will in particular discuss results for diurnal precipitation amounts over the Scandinavian mountains, and in particular extreme cases in both ends of the interval (dry spells, high intensities, and return frequencies) will be discussed. It will be demonstrated how apparently small differences in the two global models' responses in regional flow patterns considerably influence the precipitation statistics. We combine the results from the downscaled runs to obtain a priori more physically sound statistics, given that the response from the two global scenarios are equally likely.