



Changes in seasonal mean European temperature and precipitation climate from an ensemble of transient RCM simulations driven by several AOGCMs

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In this study we investigate possible changes in seasonal mean temperature and precipitation on a regional scale over Europe from recent (1961-1990) to future (2011-2040, 2041-2070, 2071-2100) time periods. We use an ensemble of regional climate model (RCA3) integrations driven by several AOGCMs, emission scenarios, different initial conditions and different horizontal resolution. This set of simulations allows us to investigate different sources of uncertainty in future climate change. For the recent past climate (1961-1990) the results show that the ensemble mean in general performs better than the downscaling of individual AOGCMs for most areas. In accordance with earlier work the results show that the main uncertainties by the end of the century are related to the choice of AOGCM and emission scenario. But, for the next few decades the results also clearly show how the climate change signal can be obscured by natural variability.