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Forecasting the weather
- ensemble techniques
in probabilistic weather prediction

Downscaled climate change scenarios of temperature and precipitation over Spain

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Changes of maximum and minimum temperatures and precipitation over Spain for XXI century and for three emission scenarios SRES (A2, A1B and B1) are analyzed based on all global information currently available. A statistical downscaling procedure based on analogues has been applied to regionalize all the available information from global models. A total of 18 global models, providing daily information, from CMIP3 (contributing to AR4-IPCC) and from the ENSEMBLES Project has been used in an attempt to give a better description of uncertainties coming from global models and emission scenarios. The statistical regionalization has been applied to 374 temperature and 2324 precipitation observation points densely covering the whole Spanish territory, including the Peninsular Spain, and the Balearic and Canary Islands. The usage of such a large number of global models avoids degradation, during the downscaling process, of the uncertainty information coming from global models. Integrated results are shown in terms of averages and standard deviation, as a measure of uncertainty, for different emission scenarios, periods and seasons.