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WRF-Cordex simulations for Europe: mean and extreme precipitation for present and future climates

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The Weather Research and Forecast (WRF-ARW) model, version 3.3.1, was used to perform the European domain Cordex simulations, at 50km resolution. A first simulation, forced by ERA-Interim (1989-2009), was carried out to evaluate the models performance to represent the mean and extreme precipitation in present European climate. This evaluation is based in the comparison of WRF results against the ECAD regular gridded dataset of daily precipitation. Results are comparable to recent studies with other models for the European region, at this resolution. For the same domain a control and a future scenario (RCP8.5) simulation was performed to assess the climate change impact on the mean and extreme precipitation. These regional simulations were forced by EC-EARTH model results, and, encompass the periods from 1960-2006 and 2006-2100, respectively.