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Regional climate simulations with WRF model

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Regional climate models are commonly used to provide more detailed information on climatic conditions at local or regional scale. Model WRF (Weather Research and Forecasting) is frequently used as a regional climate model (e.g. in CORDEX activities). This work presents evaluation of the simulations with different setting of the WRF model for whole Europe for years 1991–2000. Different options are tested for radiation and convective parameterization and validated against E-OBS reference data. Radiation parameterization RRTM and Goddard for long wave and short wave, respectively, together with Tiedtke and Grell-Devenyi convective schemes, provides the best results for full domain of Europe. Next, this work presents validation of WRF simulation results within the same domain, with this settings, but for years 1961–1990 driven with ERA40 Reanalysis, against other simulations performed within ENSEMBLE project and EuroCORDEX activity in terms of basic comparison of monthly series in PRUDENCE regions.