



Effects of increased horizontal resolution from reanalysis-driven HadGEM3-RA on the European domain

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The new Hadley Centre regional climate model HadGEM3-RA has been used for three integrations driven by ERA-Interim at different horizontal resolutions (grid length of 50km, 25km and 12.5km), on the CORDEX European domain.

The role of the the increased horizontal resolution will be investigated, in particular the effects on the representation of the mean climate in the continent, the ability to reproduce large scale patterns and the resolve mesoscale features not explicitly resolved by the larger scale reanalysis. The effects on temperature and precipitation will be analysed, in order to estimate possible improvements due to the more refined representation of the physiography of the continent and to the explicit resolution of finer scale in the spectrum of the atmospheric motion, in particular for small scale, short lived processes responsible for extremes.