

Meta data description for RCM model simulations in ENSEMBLES RT3

ERA40@50 Simulations

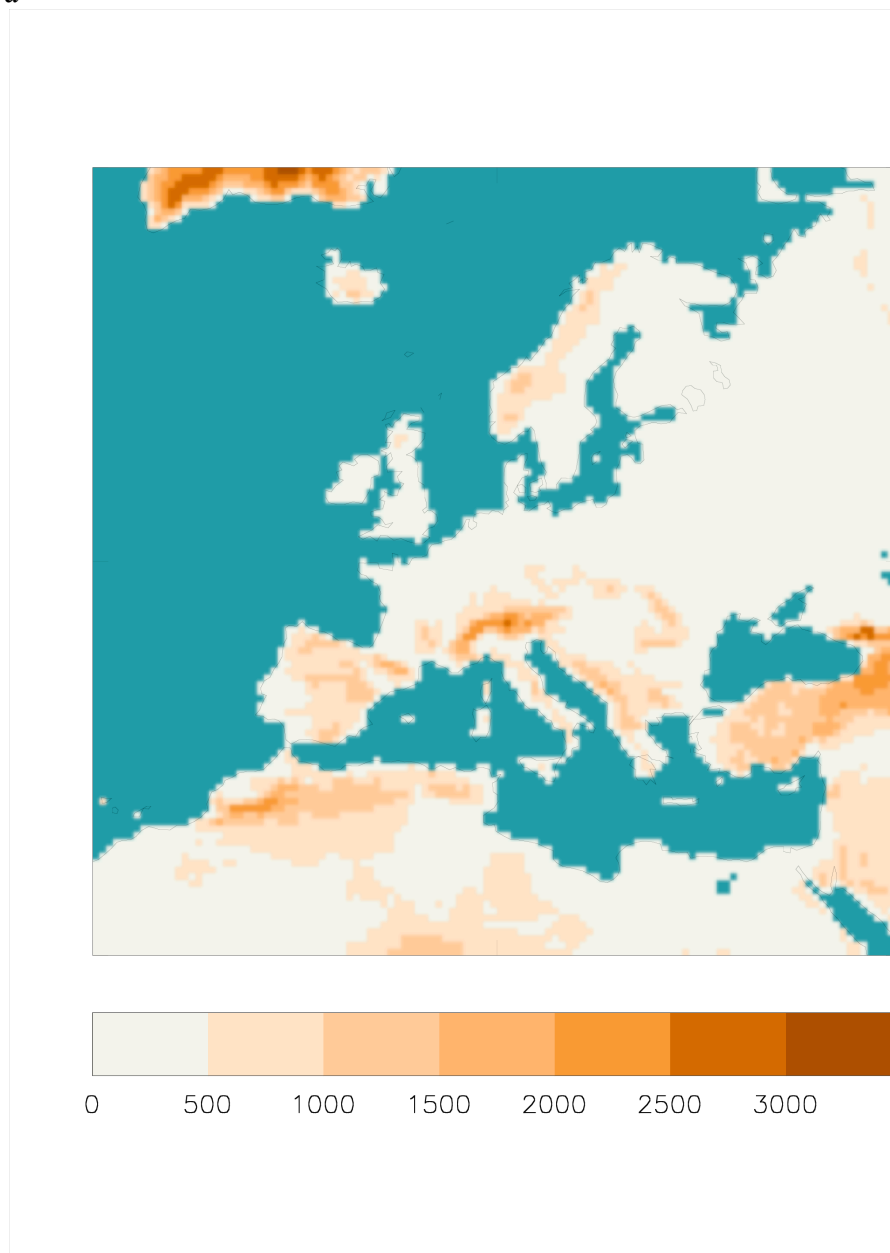
1. General:

1.1 Name of model: HadRM3.0

1.2 Version n/a

1.3 Reference: Collins et al, 2006, Clim. Dyn., DOI 10.1007/s00382-006-0121-0 (for HadCM3.0 description)

1.4 URL: n/a



Model domain and orography for the 50km domain

2. Model setup:

2.1 Grid specifications

2.1.1 Projection: rotated pole, regular lat/long

2.1.2 Number of horizontal grid points: 115x118 (lat x long)

2.1.3 Number vertical levels 19

2.1.4 Type of vertical coordinate: hybrid

2.2 Soil and surface specifications

2.2.1 Name of soil and SVAT model: MOSES I (Cox, P.M. et al, 1999: Clim Dyn, vol. 15, pp183-203.)

2.2.2 Physiographical data

Land mask: HYDRO 1K

(from U.S. Geological Survey 1998. HYDRO 1K: Elevation derivative database, <http://edcwww.cr.usgs.gov/landdaac/gtopo30/hydro/index.html>, USGS EROS data Centre, Sioux Falls, S.D.)

Orography: US Navy 10' dataset

(<http://www.grid.unep.ch/data/summary.php?dataid=GNV34>)

Soil parameters: WHS (Wilson, MF and Henderson-Sellers, A., 1985, J. Clim, vol 5, pagg 119-143)

Vegetation parameters: WHS (Wilson, MF and Henderson-Sellers, A., 1985, J. Clim., vol 5, pagg-119-143)

2.3 External Forcings

Solar constant: fixed to 1365W/m²

green house gas concentration: HadCM3 setup (Johns et al., 2003, Clim.Dyn., Vol.20, No. 6, pp583-612, based on IPCC 1995)

ozone: HadCM3 setup (Johns et al., 2003, cit.)

Sulphur cycle:

Local emissions only are used in ERA-40 simulations

SO₂ and DMS: HadGEM setup (Stott et al, 2006, J. Clim., Vol . 19, pp 2763-2782)

oxidants: HadCM3 setup(Johns et al., 2003, cit.)

4. Additional information on model set up

The 50km ancillary file for SO₂ is wrong (not enough emission over continental Europe). A proper assessment of the performance will be carried out as soon as possible, in particular the comparison with the corresponding 25km will be done, in order to understand the effect of the SO₂ emission.

5. Information on the performance

The current configuration of the model has been used for the first time for this simulation.

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