Meta data description for RCM model simulations in ENSEMLES RT3
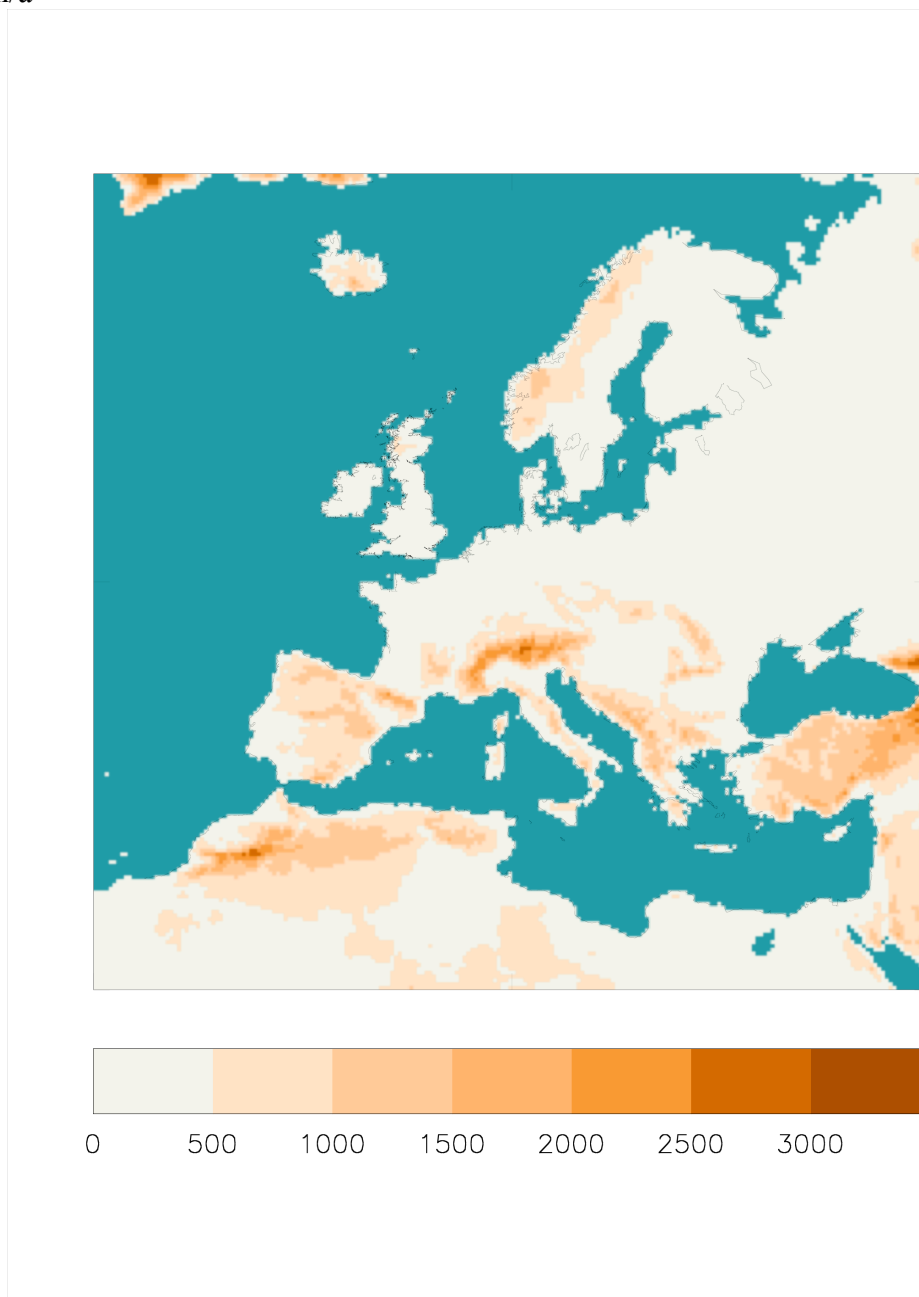
ERA40@25 Simulations

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 25km 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: 214x220 (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/m^2
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
  SO_2 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

Diffusion coefficients and RHcrit have been changed with respect to the 50km configuration
to take into account of the increased horizontal resolution.

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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