

REA FTP-Server

We provide selected parameters of the regional reanalysis COSMO-REA6 at https://opendata.dwd.de/climate_environment/REA/. Please respect the [terms of use](#).

Note that the regional reanalysis was developed within a research project. For this reason it contains a few missing time steps (see [help](#)). An operational production is planned for the near future.

You may follow changes here:

https://opendata.dwd.de/climate_environment/REA/Change_log_REA_OD.txt

and/or subscribe to the CDC-Newsletter:

<http://www.dwd.de/DE/klimaumwelt/cdc/cdc.html>

Future changes are announced in:

https://opendata.dwd.de/climate_environment/REA/Announce_log_REA_OD.txt

Data on the REA opendata-server

Parameter

Many **two-dimensional** parameter fields are provided in [hourly](#), [daily](#), and [monthly](#) resolution in grib1 format such as **pressure**, **precipitation**, **temperature**, **solar radiation**, and **wind speed components** at a height of 10m and 100m. **Wind speed** and **wind direction** at different fixed heights between 40m and 200m above ground are provided in netCDF format also in [hourly](#), [daily](#), and [monthly](#) resolution. A detailed list of two- and three-dimensional parameters can be found [here](#).

Three-dimensional parameter fields are provided in [hourly](#), [daily](#), and [monthly](#) resolution for **temperature**, **specific humidity**, **wind speed components**, and **turbulent kinetic energy**. For the three-dimensional fields, the lowest 6 COSMO model levels are available. The heights are invariant in time but change with topography. Over the ocean, the lowest 6 model levels correspond to a height of 10m, 35m, 69m, 116m, 178m and 258m.

Constant parameters, e.g., the height of the model levels, the model surface, etc., are stored in https://opendata.dwd.de/climate_environment/REA/COSMO_REA6/constant/. In addition, the geographical latitudes and longitudes relate to COSMO's rotated longitude-latitude grid.

Temporal and spatial coverage

For the period 1995 to August 2019, Europe (Cordex EUR-11 region) is covered with hourly grids of 6km x 6km resolution. COSMO-REA6 cannot be extended further because the boundary conditions of ERA-Interim we use were discontinued since August 2019.

Format

The fields are provided in the original COSMO format (DWD grib1). For convenience, the data are packed according to the parameter, e.g., wind components, temperature, etc. The hourly and daily files of the 2D parameters are packed into monthly archives. The daily files of the 3D parameters are packed into hourly archives. They are compressed with *bzip2* resulting in sizes of 1 and 0,1 GB per archive, respectively. After decompressing with *bunzip2* the *.grb files can be processed with the *ecCodes* (grib tool by ECMWF), the *CDO* (climate data operators), or the outdated tool *wgrib*, see [first steps](#) and [examples](#).

Other servers

COSMO-REA2 is a regional reanalysis with 2km x 2km resolution, covering Germany and adjacent areas, for 2007-2013. A recent continuation extended the data set to 2018 which, however, still needs to undergo internal quality control checks. The data is available from University of Bonn (see <http://reanalysis.meteo.uni-bonn.de>).

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