DATA SET DESCRIPTION

Gridded daily minimum near-surface (2 m) air temperature for Europe (project DecReg/MiKlip)

Version v001 superseded version

Cite data set as: Brinckmann, S., Bissolli, P., Krähenmann, S.: Gridded daily minimum near-surface (2 m) air temperature for Europe (project DecReg/MiKlip). version v001, 2015, DWD Climate Data Center (CDC), DOI:10.5676/DWD_CDC/DECREG0110v1.

INTENT OF THE DATASET

This describes the freely available data of the DWD Climate Data Centre which were produced by project DecReg/MiKlip. The aim was to generate a dataset for validation of decadal regional climate prediction. As there is an error in the netcdf-headers of v001, this version is superseded by corrected version v002.

POINT OF CONTACT

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DATA DESCRIPTION

Spatial coverage	Europe (CORDEX domain)
Temporal coverage	01.01.2001 - 31.12.2010
Spatial resolution	0.044 degree, i.e., approximately 5 km x 5 km
Temporal resolution	daily
Projection	rotated regular grid, virtual North Pole at 39.25 N, 162.00 W (rotated coordinates)
Format(s)	netCDF
Parameters	Minimum air temperature [K] relating to near-surface (2m) is given in the files named tasmin_*.nc.
Uncertainties	Interpolation uncertainty is estimated by means of the kriging variance and regression uncertainties (see Brinckmann et al., 2015). Resulting inter-quartile ranges (IQR) are provided in separate files named tasminIQR_*.nc. Depending on region and season the 1-sigma standard deviation varies between 0.7 and 3.6 °C (estimated using the 5 % and 95 % quantile of all gridded IQR data in 2010).

DATA ORIGIN

Origin of the used station data is the MIRAKEL database of the Deutscher Wetterdienst (SYNOP), supplemented by station data from the ECA&D database (www.ecad.eu). We acknowledge the data providers in the ECA&D project: Klein Tank, A.M.G. and Coauthors, 2002. Data and metadata available at http://www.ecad.eu.

VALIDATION AND UNCERTAINTY ESTIMATE

See Brinckmann et al., 2015.

CONSIDERATIONS FOR APPLICATIONS

See Brinckmann et al., 2015.

REFERENCES

Brinckmann, S., Krähenmann, S., and Bissolli, P.: High-resolution daily gridded datasets of air temperature and wind speed for Europe, Earth Syst. Sci. Data Discuss., 8, 649-702, doi:10.5194/essdd-8-649-2015, 2015.

Klein Tank, A.M.G. and Coauthors, 2002. Daily dataset of 20th-century surface air temperature and precipitation series for the European Climate Assessment. Int. J. of Climatol., 22, 1441-1453.

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REVISION HISTORY

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