DATA SET DESCRIPTION

Multi-annual grids of number of summer days over Germany

Version v1.0

Cite data set as: DWD Climate Data Center (CDC): Multi-annual grids of number of summer days over Germany, version v1.0.

INTENT OF THE DATASET

The grids are derived from DWD stations and legally and qualitatively equivalent partner stations in Germany run for climatological and climate related applications, considering the height dependencies.

POINT OF CONTACT

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DATA DESCRIPTION

Spatial coverage	Germany
Temporal coverage	01.01.1961 - 31.12.2010
Spatial resolution	1 km x 1 km
Temporal resolution	30 years multi-annual
Projection	3-degree Gauss-Kruger zone 3, Ellipsoid Bessel, Datum Potsdam (central point Rauenberg), EPSG:31467, see http://spatialreference.org/ref/epsg/31467/. o define the spatial projection in GIS, the file https://opendata.dwd.de/climate_environment/CDC/help/gk3.prj can be used. Help is given on importing into ESRI ArcGIS in https://opendata.dwd.de/climate_environment/CDC/help/Hilfe_Gauss-Krueger-Raster2GIS.pdf.
Format(s)	The file in ESRI-ascii-grid-format has in the header the coordinates for the lower left grid cell, including the definition of its center [XLLCENTER],[YLLCENTER] or its corner [XLLCORNER],[YLLCORNER]. It contains a table of 654 x 866 numbers. Each row goes from West to East. The first row is the northernmost one (654 values with 4 digits). Missing values are marked with -999.
Parameters	Number of summer days. Definition of summer day: maximum air temperature >= 25°C.
Uncertainties	Uncertainties are caused by the interpolation method, and erroneous or missing observations. When comparing grid fields for different periods, it should be considered that the measurement network has changed over time.

DATA ORIGIN

The multi-annual grids are calculated from the respective annual grids.

VALIDATION AND UNCERTAINTY ESTIMATE

The given resolution of 1 km x 1 km is the resolution of the employed digital height model. The gridded data miss processes relevant for local climate (like urban heat island or cold air pools) which are not covered by observations of the station network or cannot be reproduced by the gridding method explained above. The actual information density depends on the station network.

CONSIDERATIONS FOR APPLICATIONS

These grids are visualized within the German Climate Atlas www.dwd.de/klimaatlas.

REFERENCES

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REVISION HISTORY

This document is maintained by DWD division National Climate Monitoring, last edited 18.12.2018.