

DATA SET DESCRIPTION

Multi-annual grids of the begin of the vegetation period in Germany

Version 0.x

Cite data set as: DWD Climate Data Center (CDC): Multi-annual grids of the begin of the vegetation period in Germany, version 0.x, current date.

INTENT OF THE DATASET

This document describes the freely available data of the DWD Climate Data Center (CDC). The grids are calculated from the annual grids of the begin of the vegetation period. The begin of the vegetation period is specified by the phenological phase forsythia - beginning of flowering and indicated the begin of first spring.

POINT OF CONTACT

Deutscher Wetterdienst
CDC - Vertrieb Klima und Umwelt
Frankfurter Straße 135
63067 Offenbach
Tel.: + 49 (0) 69 8062-4400
Fax.: + 49 (0) 69 8062-3987
Mail: klima.vertrieb@dwd.de

DATA DESCRIPTION

Spatial coverage	Germany
Temporal coverage	1.1.1992 - last year
Spatial resolution	1 km x 1 km
Temporal resolution	multi-annual, mean values of all years
Projection	3-degree Gauss-Kruger zone 3, Ellipsoid Bessel, Datum Potsdam (central point Rauenberg), EPSG:31467, see http://spatialreference.org/ref/epsg/31467/ . The appropriate prj-file can be downloaded at: ftp://ftpcdc.dwd.de/pub/CDC/help/gk3.prj .
Format(s)	The ascii file 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	Values in the grids are running days of the respective year (with 28th and 29th February counted as a single day).
Uncertainties	Uncertainties are caused by the interpolation method, and erroneous or missing observations. When comparing grid fields for different years, it should be considered that the measurement network has changed over time. Every kind of interpolation is difficult whenever the phase occurrence is observed in successive waves. Such waves occur especially at the early observations in a year caused by cold weather periods where flowering is interrupted and starts in other adjacent regions later. In this case the interpolation fits a date in the cold period, which is not correct.
Quality information	without quality flags

DATA ORIGIN

For each year all available data of the phenological annual reporters will be included for interpolation. Germany is divided in 20 regions of overlapping circles of the same size. All observations within each region were processed by a multiple linear regression. Regression coefficients are height, longitude and latitude. The calculated regression coefficients of the four surrounding circles for a given location were weighted with the distance to circle centres. This form of interpolation does not match the observation days at each location, but yields a most plausible smoothed fit.

VALIDATION AND UNCERTAINTY ESTIMATE

The resulting grids depend strongly on the used interpolation. Plausibility tests showed good performance.

REFERENCES

COPYRIGHT

The instructions in ftp://ftp-cdc.dwd.de/pub/CDC/Terms_of_use.pdf should be followed. The DWD website provides comprehensive copyright information.

REVISION HISTORY

This document is maintained by DWD unit KU11, last edited on 19.12.2018.