DATA SET DESCRIPTION

Annual grids of meadows - beginning of turning green in Germany

Version 0.x

Cite data set as: DWD Climate Data Center (CDC): Annual grids of meadows - beginning of turning green 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 derived from the observations of the annual phenological network.

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 01.01.1992 - last year

Spatial resolution 1 km x 1 km

Temporal resolution annual

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 Februay counted as a single day) for following plant stage:
DGRERG meadows - beginning of turning green

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 occure 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 The grids are published without rating.

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 depended strongly on the used interpolation. Plausibility tests of the interpolation method have shown good results and reproduce typical idealised distribution without reproducing potential local characteristics.

REFERENCES

COPYRIGHT

REVISION HISTORY

This document is maintained by DWD unit KU21, last edited on 19.12.2018.