

DATA SET DESCRIPTION

REGNIE grids of multi-annual precipitation

Version recent

Cite data set as: DWD Climate Data Center (CDC): REGNIE grids of multi-annual precipitation, last accessed: <date>.

INTENT OF THE DATASET

This describes the freely available data of the DWD Climate Data Center (CDC). These grids for 1961-1990, 1971-2000, 1981-2010 were derived from station measurements with the method REGNIE.

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, for each calendar month and season, and for the whole year
Projection	There are 611 grid points along the west-east direction and 971 grid points along the north-south direction. The latitudinal resolution is 60 geogr. seconds, the longitudinal resolution is 30 geogr. seconds, see REGNIE description https://opendata.dwd.de/climate_environment/CDC/grids_germany/daily/regnie/REGNIE_Beschreibung_20170304.pdf , section 4.3, for formulas for the calculation of longitudes and latitudes.
Format(s)	The 30-year periods YY-yy have their separate TAR-archives (YYyy.tar). The multi-annual means of the REGNIE grids are in one zipped ascii file for each calendar month RASYyy.MMM.gz (where MMM denotes the calendar month) as well as for each season, i.e., spring (March, April, May): *FR.gz, summer (June, July, August): *SO.gz, autumn (September, October, November): *HE.gz, winter (December, January, February): *WI.gz, and for the whole year (*JAH.gz). The winter mean contains the December of the previous year. Unused grid points are marked with -999.
Parameters	30-year mean of precipitation height in mm.

DATA ORIGIN

The method REGNIE determines gridding daily precipitation by interpolating observed station anomalies relative to multi-annual means and consists of two main steps: calculation of background fields and calculation of precipitation fields, details

see section 4. of the REGNIE description https://opendata.dwd.de/climate_environment/CDC/grids_germany/daily/regnie/REGNIE_Beschreibung_20170304.pdf.

VALIDATION AND UNCERTAINTY ESTIMATE

see Rauthe et al., 2013.

ADDITIONAL INFORMATION

Based on the precipitation measurements at the stations, a preliminary daily product is produced routinely (observation span 5:50 UTC to 5:50 UTC next day), considering all automatically transmitted data. The remaining data are included afterwards when quality control is completed, resulting in the final REGNIE grids.

REFERENCES

DWD, 2017: Abteilung Hydrometeorologie: REGNIE (REGionalisierte NIEederschläge): Verfahrensbeschreibung & Nutzeranleitung, DWD internal report, Offenbach 2017.

Rauthe, M., Steiner, H., Riediger, U., Mazurkiewicz, A., Gratzki, A., 2013: A Central European precipitation climatology – Part I: Generation and validation of a high-resolution gridded daily data set (HYRAS) Meteorologische Zeitschrift Vol. 22 No. 3, p. 235 – 256, 2013. <https://doi.org/10.1127/0941-2948/2013/0436>.

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REVISION HISTORY

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