CDC ftp-server

You have free access to the climate data of the DWD Climate Data Center (CDC).

Please consider the copyright.

We provide at the CDC ftp-server ftp://ftp-cdc.dwd.de/pub/CDC/

- observed parameters from DWD stations
- derived parameters at the station locations
- gridded fields covering Germany
- regional averages for Germany and its federal states
- global climate station data

at hourly, daily, monthly, annual or multi-annual resolution (details see below).

Regularly versioned data are sorted into the two subdirectories: '*recent*' and '*historical*'. *Recent* data have not yet completed the full quality control. *Historical* data have completed the operational quality control.

As a consequence of our permanent quality control, there may be errors detected at a later stage and subsequently corrected in the archived data. Also, the on-going digitization of historical data extends the time series continuously. Thus, the archived climate data are versioned. At the CDC ftp-server you will find the most recent valid version in the sub-directory 'historical'.

The time series can include in homogeneities (i.e., caused by change of station location or instrument). Data users are urged to study the accompanying station metadata and the data set descriptions.

Please be aware that not all meteorological parameters are provided at all temporal resolutions, and that release dates of new data may vary.

Data on the CDC ftp-Server:

1. Parameters observed at DWD stations

Historical and recent meteorological parameters, e.g., **air temperature, soil temperature, precipitation, humidity, pressure, wind speed and direction, solar irradiance, sunshine duration**, and **cloud cover**.

The data are zipped according to station, including the station meta-data (in German language). Available resolution: hourly, daily, monthly , and multi-annual values (1961-90, 1971-2000, 1981-2010). Approximately 400 climate stations are currently active. The station list can be found here.

Precipitation data from a dedicated precipitation observation network (with about 2000 active stations) are available at daily and monthly. The precipitation station list can be found here.

Phenological data are collected at about 1200 active stations. The state of development of selected plants (e.g., apple, birch, snow drops, goose berry, wheat, wine etc) is reported by annual reporters and immediate reporters. The list of phenological stations can be found here.

2. Parameters derived at the station locations

Soil parameters include the **potential and real evaporation over grass and sandy clay**, **the soil moisture below sand and sandy clay**, **the calculated soil temperatures at 5cm, 10cm, 20 cm, 50 cm and 100cm depth below bare soil**, and the **maximal frost penetration depth**. Available resolution: daily, monthly and multi-annual. The soil parameters are calculated for about 320 stations since 1991. The soil station list can be found here together with a map.

3. Gridded fields covering Germany

Gridded fields cover Germany at different temporal resolutions (not every parameter is given at all resolutions). Following **precipitation data** are given: *RADOLAN* precipitation fields are derived from radar together with station data (hourly , daily). *REGNIE* precipitation fields are derived from precipitation stations only (daily). Precipitation fields derived from climatological stations only are given with monthly resolution.

Soil moisture, soil temperature at 5cm depth, potential and real evaporation are available at daily, monthly, and multi-annual resolution

Air temperature (mean, max, min), sunshine duration, drought index, as well as the **numbers of days with snow, frost days, or exceeding certain thresholds for temperature or for precipitation** are given at monthly or multi-annual resolution.

Solar irradiance fields are derived from satellite data and ground-based stations at monthly, annual and multi-annual resolution.

Wind energy related parameters derived from station measurements are given as multi-annual mean.

4. Regional averages for Germany and its federal states

These monthly, seasonal und annual averages (of air temperature, precipitation and sunshine duration) are derived from the gridded fields covering Germany.

5. Global climate station data

Historical and recent monthly station data from CLIMAT-messages (quality controlled) for air temperature (Mean, Max, Min), precipitation, number of days with precipitation, sunshine duration, pressure , vapour pressure , and derived multi-annual means. In addition, the monthly files of CLIMAT-messages, checked for month, year and format are provided, these contain more parameters.

What you will not find on this CDC ftp-server:

Satellite data, refer to **CM SAF**.
Global precipitation, refer to **GPCC**.
Long-term European climate, refer to **RCC.**

Other tools for accessing the climate data:

- WESTE-SOLAR (with station selection, limited data amounts)
- WebWerdis and GISC (selection with map, limited data amounts)
- Metadata catalogues GISC and Webwerdis

Consultancy and individual help with data selection:

We would gladly put together an individualized offer serving your climate data needs. For more information on the climate data service and on additional services, see website www.dwd.de/klimadaten.