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Deutscher Wetterdienst
Wetter und Klima aus einer Hand

DATASET DESCRIPTION

Recent daily station observations (temperature, pressure, precipitation, sunshine duration, etc.) for Germany, quality control not completed yet

Version: v23.3

Publication date: 2023

Cite data set as:	Recent daily station observations (temperature, pressure, precipitation, sunshine duration, etc.) for Germany, quality control not completed yet, Version v23.3
Dataset-ID:	urn:x-wmo:md:de.dwd.cdc::obsgermany-climate-daily-kl-recent
Dataset-URL:	https://opendata.dwd.de/climate_environment/CDC/observations_germany/climate/daily/kl/recent/

ABSTRACT

They are obtained from DWD stations and legally and qualitatively equivalent partner stations operated for climatological and climate related applications. Comprehensive station metadata (station relocation, instrument change, time zones, change of algorithms) are included.

The data are versioned up to and including the previous year, see date of issue.
For more recent data the quality control has not yet been completed.

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 8062-4499
E-Mail:klima.vertrieb@dwd.de

DATASET DESCRIPTION

Parameter	precipitation parameters, form of precipitation, vapor pressure, air temperature near ground, air pressure at station level, precipitation height, wind velocity, snow depth, sunshine duration, relative humidity, air temperature at 2 m, wind gust, cloud coverage
Unit(s)	eighth, beaufort, °C, %, mm, m/s, cm, hPa
Statistical processing	time series, daily mean, daily max, daily min, daily sum
Temporal coverage	now-P500D -- ...
Spatial coverage	stations in Germany
Projection	WGS 84 (EPSG:4326)
Format description	A zip archive is provided for each station. This zip archive contains the data and meta-informations of the station, instruments and algorithms. The naming schema of the zip-archives is: tageswerte_{product_code}_{station_id}_akt.zip

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application schema

csv dialect description

delimiter	line terminator	header	quote char
;	\\r\\n	true	\"

csv content description

column name	description	uom	type	format
STATIONS_ID	Station ID		VARCHAR2	
MESS_DATUM	reference date		NUMBER	YYYYMMDD
QN_3	quality level of the following columns		NUMBER	numerical code
FX	daily maximum of windgust	m/s	NUMBER	9990.0
FM	daily mean of wind velocity	m/s	NUMBER	9990.0
QN_4	quality level of the following columns		NUMBER	numerical code
RSK	daily precipitation height	mm	NUMBER	9990.0
RSKF	precipitation form	numerical code	NUMBER	
SDK	daily sunshine duration	h	NUMBER	9990.0
SHK_TAG	daily snow depth	cm	NUMBER	9990.0
NM	daily mean of cloud cover	1/8	NUMBER	9990.0
VPM	daily mean of vapor pressure	hPa	NUMBER	9990.0
PM	daily mean of pressure	hPa	NUMBER	9990.0
TMK	daily mean of temperature	°C	NUMBER	9990.0
UPM	daily mean of relative humidity	%	NUMBER	9990.0
TXK	daily maximum of temperature at 2 m height	°C	NUMBER	9990.0
TNK	daily minimum of temperature at 2m height	°C	NUMBER	9990.0
TGK	daily minimum of air temperature at 5 cm above ground	°C	NUMBER	9990.0

Quality Information

The QUALITAETS_NIVEAU (QN) shows the quality control procedure applied for a data report (of several parameters) for a certain reporting time.

Data before and including 1980 can reach as best quality check level QN=5. Data after 1980 can reach QN=10 as best quality check level.

QN = 1 : only formal control;
QN = 2 : controlled with individually defined criteria;
QN = 3 : automatic control and correction;
QN = 5 : historic, subjective procedures;
QN = 7 : second control done, before correction;
QN = 8 : quality control outside ROUTINE;
QN = 9 : not all parameters corrected;
QN = 10 : quality control finished, all corrections finished.

The QUALITAETS_BYTE (QB) denotes whether the value was objected to and/or corrected.

QB = 0 : denotes not flagged,
QB = 1 : had no objections (either checked and not objected, or not checked and not objected, this can be interpreted only when considering QN);
QB = 2 : corrected;
QB = 3 : confirmed with objection rejected;
QB = 4 : added or calculated;
QB = 5 : objected;
QB = 6 : only formally checked;
QB = 7 : formal objection;
QB = -999 : quality flag does not exist.

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DATA ORIGIN

The data are taken from the station measuring networks of Deutscher Wetterdienst as well as its predecessor organisations.
The dataset is regularly updated with recent as well as with recovered historical data.
From 1997 onwards, the data have been imported operationally into the central specialist database and archived, see Behrendt et al., 2011, and Kaspar et al., 2013.
Note that when going back to historical times, guidelines on observation procedure, instruments and observation times were issued by the authority in charge (see, e.g., Freydank, 2014), and might be incompletely recorded in the metadata.
As explained in Kaspar et al., 2013 in the early years numerous meteorological agencies were active in the area of todays Germany. After establishment of the der International Meteorological Organization (IMO) in 1873, the various standards were gradually harmonized, resulting in a single standard 1936.
After 1945, the standards in East and West Germany developed differently, and were harmonized again after re-unification in 1990.
Between the end of the nineties and 2009 many stations were changed from manual to automated.

RESOURCE MAINTENANCE

In the directory recent/ the data files are updated daily. On a rolling basis, the data of the last 500 days - up to yesterday - are exchanged.

VALIDATION AND UNCERTAINTY ESTIMATE

The quality control (see Spengler, 2002) of this data is not completed yet. Various levels of quality control (see Kaspar et al., 2013) are in progress.

UNCERTAINTIES

The stations are nowadays selected and operated according to WMO guidelines. Though these guidelines aim at minimizing possible local effects, still some applications of certain parameters may require the consideration of local and regional effects.

CONSIDERATIONS FOR APPLICATIONS

For any data analysis, the metadata available in the *.zip files should be taken into account.

ADDITIONAL INFORMATION

For extending the time series into the past, see subdirectories ../historical/. When data from both directories "historical" and "recent" are used together, the difference in the quality control procedure should be considered. For the long term stability consider the uncertainties explained in the data set descriptions within subdirectories /historical/.

LITERATURE

Behrendt, J., et al.: Beschreibung der Datenbasis des NKDZ. Version 3.5, Offenbach, 15.02.2011.

Kaspar, F., et al.: Monitoring of climate change in Germany – data, products and services of Germany`s National Climate Data Centre. Adv. Sci. Res., 10, doi:10.5194/asr-10-99-2013, 99–106, 2013.

DWD Vorschriften und Betriebsunterlagen Nr. 3 (VuB 3), Beobachterhandbuch (BHB) für Wettermeldestellen des synoptisch-klimatologischen Mess- und Beobachtungsnetzes, März 2014a.

DWD Vorschriften und Betriebsunterlagen Nr. 2 (VuB 2), Wetterschlüsselhandbuch Band D, Nov 2013.

DWD Vorschriften und Betriebsunterlagen Nr. 3 (VuB 3), Technikerhandbuch (THB) für Wettermeldestellen des synoptisch-klimatologischen Mess- und Beobachtungsnetzes, März 2014b.

Spengler, R.: The new Quality Control- and Monitoring System of the Deutscher Wetterdienst. Proceedings of the WMO Technical Conference on Meteorological and Environmental Instruments and Methods of Observation, Bratislava, 2002.

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REVISION HISTORY

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