



## DATASET DESCRIPTION

### Daily grids of mean soil moisture under spruce for Germany

**Version:** v1.0

**Publication date:** 2024

**Cite data set as:** Daily grids of mean soil moisture under spruce for Germany, Version v1.0

**Dataset-ID:** urn:wmo:md:de-dwd-cdc:7a97aabd-e22d-4b3d-a7be-a1c826942d29

**Dataset-URL:** [https://opendata.dwd.de/climate\\_environment/CDC/grids\\_germany/daily/soil\\_moisture/spruce](https://opendata.dwd.de/climate_environment/CDC/grids_germany/daily/soil_moisture/spruce)

#### ABSTRACT

The daily grids of soil moisture are calculated for 10 cm layers up to a depth of 2 meters and for predefined layer thicknesses of 0-30, 0-60 and 0-90 cm for four different species using a DWD modified version of the LWF-Brook90 model (v0.3.2). The meteorological data required for the calculation input fields must be in hourly resolution and are provided by interpolated weather station data. Furthermore, the model with soil information from the soil guide profiles of the usage-differentiated soil overview map (BÜK 1000 N) parameterized by the Federal Institute for Geosciences and Natural Resources (BGR). If the type of soil is the same, the soils differ depending on their use. In addition, the depth of the soil and the skeletal content (coarse soil > 2 mm) in the various soil layers are taken into account.

The data has a spatial resolution of 1 x 1 km and is completely comprehensive Germany from. Data outside of Germany or in settlement areas with sealed areas have an incorrect identifier -9999. All information about the grid is stored in the metadata of the netcdf file.

#### 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](mailto:klima.vertrieb@dwd.de)

#### DATASET DESCRIPTION

<b>Parameter</b>	soil moisture
<b>Unit(s)</b>	% nFK
<b>Statistical processing</b>	daily value
<b>Temporal coverage</b>	1991-01-01 -- ...
<b>Temporal resolution</b>	1 day
<b>Spatial coverage</b>	Germany
<b>Spatial resolution</b>	1 km x 1 km
<b>Projection</b>	DHDN / 3-degree Gauss-Kruger zone 3 (EPSG:31467)
<b>Vertical coverage</b>	-200cm
<b>Vertical resolution</b>	-10cm

**Format description** [{YYYY}/grids\\_germany\\_daily\\_soil\\_moisture\\_spruce\\_{YYYY}\\_{UPPERDEPTH}-{LOWERDEPTH}\\_v{VERSION}.nc](#) :

Filename:

- grids\_germany\_daily\_soil\_moisture\_{Culture}\_{Year}\_{Upperdepth}-{Lowerdepth}\_v{Version}.nc
- {Upperdepth} is the upper depth of the layer in cm (10, 20, 30, ..., 200)
- {Lowerdepth} is the lower depth of the layer in cm (10, 20, 30, ..., 200)
- {Year} is the year in YYYY-Format
- {Culture} Name of agricultural plant type
- {Version} Version number for dataset (e.g. 1)

Example:

- grids\_germany\_daily\_soil\_moisture\_spruce\_2021\_20-30\_v1.nc

## DATA ORIGIN

The calculations are carried out using the DWD's Centre for Agricultural Meteorological Research (ZAMF) modified version of the LWF-Brook90 model (v.0.3.2). The LWF-Brook90 can be operated in a fine grid in 1 x 1 km resolution over Germany in order to achieve better spatial representation.

This improved spatial representation is further enhanced by the fact that the typical regional soils used in the calculation are taken from the soil overview map BÜK 1000N of the Federal Institute for Geosciences and Natural Resources (BGR) (BGR, 2007). More detailed information can be found in Hammel and Kennel (2001), Federer (2002) and Federer et al. (2003), among others.

## RESOURCE MAINTENANCE

The data for the current year is updated on the 3rd of each month.

## LITERATURE

[BGR \(2007\): Bodenübersichtskarte der Bundesrepublik Deutschland 1:1.000.000 \(BÜK 1000\). Bundesamt für Geowissenschaften und Rohstoffe \(BGR\), Hannover](#)

## COPYRIGHT

[The Creative Commons BY 4.0 - Licence 'CC BY 4.0' apply.](#)

## REVISION HISTORY

This document is maintained by Deutscher Wetterdienst, KU31 Agrarmeteorologie, last edited at 2025-01-03.