# Soil moisture deficit during the vegetation growing season, annual time-series, 2000-2019, Sep. 2020

The dataset consists of a collection of annual soil moisture (SM) anomalies during the vegetation growing season (GS) for the years 2000-2019 across EEA 38 area and the United Kingdom. The vegetation growing season is defined by EEA´s phenology data series "Vegetation growing season length 2000-2016", available in the EEA website and in this catalogue.

The anomalies are calculated based on the European Commission's Joint Research Centre European Drought Observatory (EDO) Soil Moisture Index (SMI) with respect to the 1995–2019 base period. The yearly start and end of GS periods are dynamic and calculated according to the EEA Phenology Indicators. A positive anomaly indicates that the observed SM was wetter than the long-term SM average for the base period, while a negative anomaly indicates that the observed SM was drier than the reference value. Because SM anomalies are measured in units of standard deviation from the long-term SMI average, they can be used to compare annual deficits/surplus of SM between geographic regions.

EDO is one of the early warning and monitoring systems of the Copernicus Emergency Management Service. As the dataset builds on EDO's SMI, it therefore contains modified Copernicus Emergency Management Service information (2019).
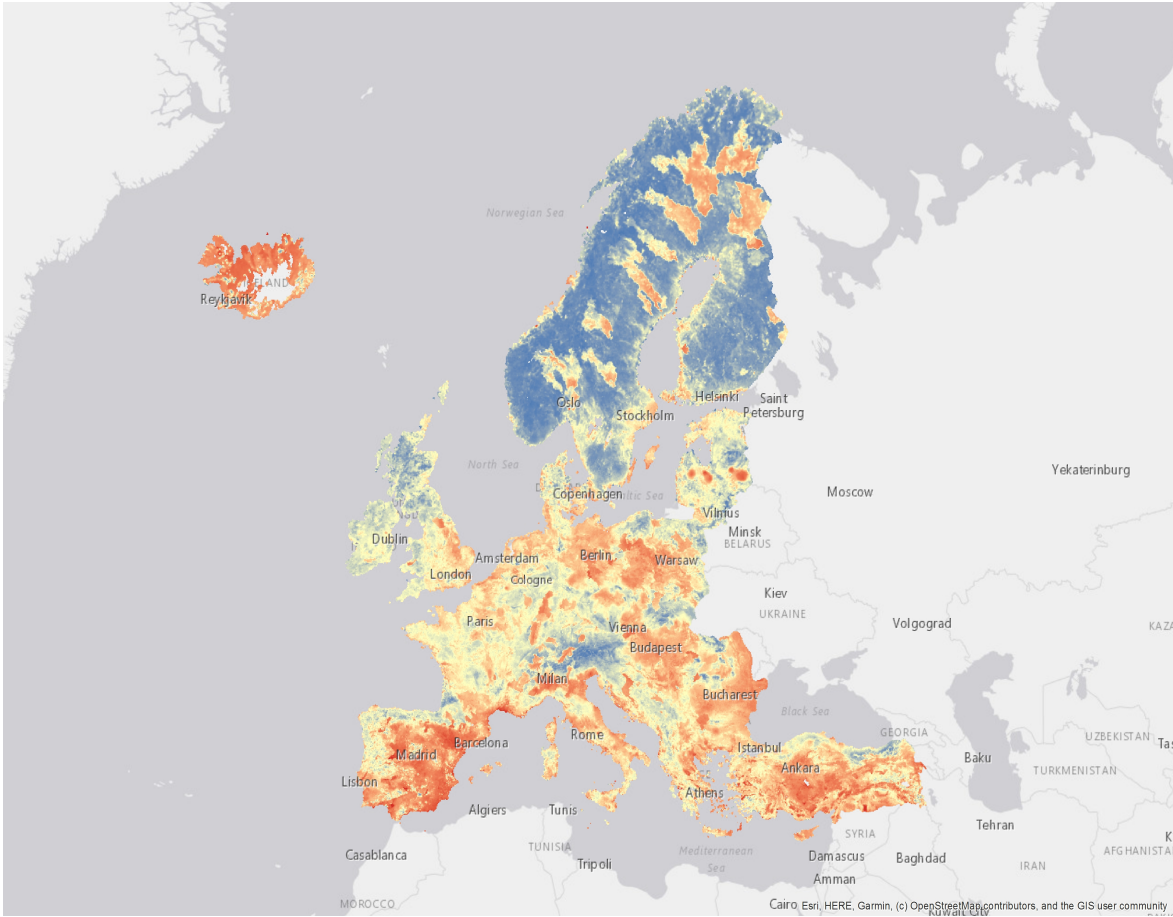
## Simple

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| **Date (Creation)** | 2020-09-28T00:00:00 |
| **Date (Publication)** | 2020-09-28T00:00:00 |
| **Edition** | 01.00 |
| **Citation identifier** | eea_r_3035_5_km_smoisture-anomalies-gs-2019_p_2000-2019_v01_r00 |
| **Citation identifier** | DAT-247-en |
| **Status** | Superseded |

**Point of contact**

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|---|---|
| **Maintenance and update frequency** | Annually |
| **GEMET - INSPIRE themes, version 1.0** | • Soil |
| **Keywords** | |
| **Keywords** | |
| **GEMET** | • soil moisture<br>• climate change adaptation<br>• drought<br>• land use<br>• environmental pressure<br>• ecosystem degradation |
| **Continents, countries, sea regions of the world.** | • EEA38 (from 2020)<br>• United Kingdom |
| **Temporal resolution** | • Annually |

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| Spatial scope | • European |
| EEA topics | • Agriculture and food<br>• Climate adaptation<br>• Soil<br>• Biodiversity |
| EEA Management Plan | • 2020 1.8.2 |
| Access constraints | Other restrictions |
| Other constraints | no limitations to public access |
| Use constraints | Other restrictions |
| Other constraints | This dataset is derived from the European Commission's Joint Research Centre European Drought Observatory (EDO) Soil Moisture Index (SMI), which as a component of the Copernicus Emergency Management Service, follows the Terms and Conditions of Access as stated here: https://edo.jrc.ec.europa.eu/edov2/php/index.php?id=1044.<br><br>As an EEA derived product, the EEA standard re-use policy also applies: unless otherwise indicated, re-use of content on the EEA website for commercial or non-commercial purposes is permitted free of charge, provided that the source is acknowledged ( http://www.eea.europa.eu/legal/copyright). Copyright holder: EEA, European Union. |
| Spatial representation type | Grid |
| Distance | 5  km |
| Language of dataset | English |
| Topic category | • Climatology, meteorology, atmosphere<br>• Environment |
| Begin date | 2000-01-01 |
| End date | 2019-12-31 |

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| **Coordinate reference system identifier** | EPSG:3035 |
| **Distribution format** | • GeoTIFF ( ) |

**OnLine resource**

| Protocol | Linkage | Name |
|---|---|---|
| EEA:FILEPATH | https://sdi.eea.europa.eu/webdav/datastore/public /eea_r_3035_5_km_smoisture-anomalies-gs-2019_p_2000- 2019_v01_r00 /SM_5x5km_LongTerm_mean_GS_00_19_crs3035.tif | |
| WWW:URL | https://sdi.eea.europa.eu/data/a21e58ad-ff91-436c-866a- fcbcf2615841 | Direct download |
| OGC:WMS | https://land.discomap.eea.europa.eu/arcgis/services/Drought /Growing_Season_Mean_Soil_Moisture_2000_2019/MapServer /WMSServer?request=GetCapabilities&service=WMS | |
| ESRI:REST | https://land.discomap.eea.europa.eu/arcgis/rest/services /Drought/Growing_Season_Mean_Soil_Moisture_2000_2019 /MapServer | |

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| **Hierarchy level** | Dataset |

## Conformance result

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| **Title** | Commission Regulation (EU) No 1089/2010 of 23 November 2010 implementing Directive 2007/2/EC of the European Parliament and of the Council as regards interoperability of spatial data sets and services |
| **Date (Publication)** | 2010-12-08 |
| **Explanation** | See the referenced specification |
| **Statement** | Annual soil moisture (SM) anomaly values are calculated based on a time-series of the European Commission's Joint Research Centre European Drought Observatory (EDO) Soil Moisture Index (SMI). The SMI dataset is gridded at 5km spatial resolution and measures the ratio between local wilting point and field capacity of the soil profile on a 10-day temporal frequency. SM anomalies are measured in units of standard deviation from the long-term SMI average (i.e. values are ranging between 0 and 1) with respect to the 1995–2019 base period.<br><br>More information about the SMI on: https://edo.jrc.ec.europa.eu/documents/factsheets/factsheet_soilmoisture.pdf. |
| **Source** | • Annual above ground vegetation season length time-series 2000-2016 - version 1, Aug. 2018 |

## Data quality info

No information provided.

## Metadata

| | |
|---|---|
| **File identifier** | a21e58ad-ff91-436c-866a-fcbcf2615841 XML |

| Metadata language | English |
|---|---|
| Character set | UTF8 |
| Hierarchy level | Dataset |
| Date stamp | 2023-06-14T11:53:53.103Z |
| Metadata standard name | ISO 19115/19139 |
| Metadata standard version | 1.0 |

| Metadata author | Organisation name | Individual name | Electronic mail address | Website Role |
|---|---|---|---|---|
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## Overviews



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