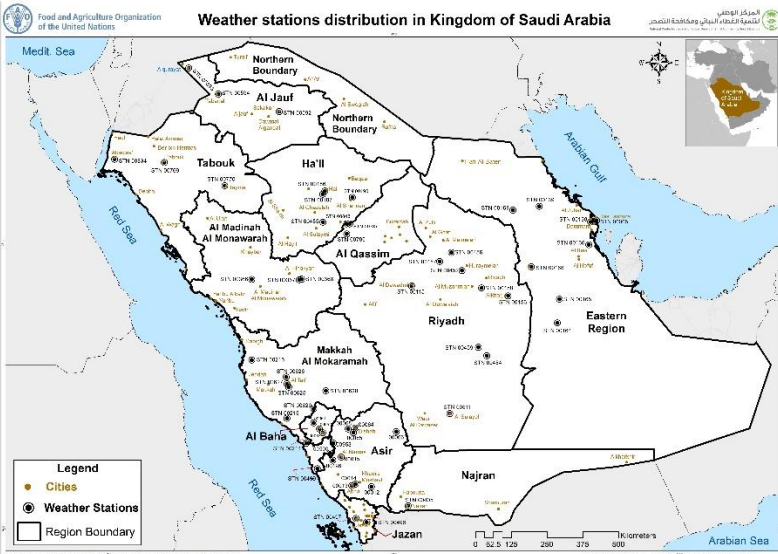


Metadata – NCM Monthly Weather Data of Saudi Arabia (1968–2016)

Part 1: Basic Metadata (Mandatory)

1.01 Thumbnail

Prepare small thumbnail that represents this dataset. Create and save thumbnail. Insert thumbnail in the space provided and indicate the file name.

Create and save thumbnail	Enter file name
	

1.02 – Title

Descriptive title for this data. Should provide sufficient information to external users.

Enter Data Title

Monthly Weather Data of Saudi Arabia -National Center for Meteorology (NCM)

1.03 – Abstract

Provide a short and concise abstract which summarizes what this data is about. Similar to the abstracted provided in a scientific paper.

Enter data abstract

This dataset contains monthly climate observations collected from weather stations operated by the National Center for Meteorology (NCM) across Saudi Arabia. The data spans from 1968 through 2016, covering nearly five decades of climate monitoring.

The network consists of 61 weather stations located throughout the country's 12 administrative regions. These stations record 18 different climate variables on a monthly basis, including air temperature (both maximum and minimum values), relative humidity measurements, rainfall amounts, solar radiation levels, wind patterns, soil temperatures at various depths, sunshine duration, and evaporation rates.

With approximately 454,896 individual monthly records, this dataset supports various research applications such as analyzing long-term climate trends, monitoring drought conditions, assessing land degradation processes, and validating satellite-based climate products. A national map showing

the locations of all NCM weather stations is included with this dataset. Each station shown on the map has corresponding monthly climate data available in the accompanying time series files. While this dataset is well-suited for climate trend analysis and satellite product validation work, users should note that it is not appropriate for real-time weather forecasting or for analyzing extreme events that occur on sub-daily time scales.

1.04 – Date type

Provide all three type of dates - Creation date, Publication date, and Revision date.

Identification of when a given event occurred

Creation	1968
Publication	2024
Revision	2025
relevant date	2025

1.05 – Group

The group, department or unit to which this data belongs.

Enter group name

Registered Members,
FAO Spatial Data Group,
Natural Resources Management Component NRM - FAO KSA
National Center for Meteorology (NCM), Saudi Arabia

1.06 – Category

Provide one primary category to which this data belong. Select from the list provided. Possible categories related to the SRADP project are highlighted in green color.

Field declared Mandatory by the Metadata Schema

Select one of the following : (highlighted by Yellow)

Imagery Base Maps Earth Cover
Society
Economy
Utilities Communication
Environment
Oceans
Biota
Health
Elevation
Geoscientific Information
Planning Cadastre
Inland Waters
Boundaries
Structure
Transportation

1.07 – Free-text Keywords

Keywords helps Search Engines such as Google find data requested by users. Use FAO AGRIS to select the most appropriate keywords for this data. To make the data discoverable, provide a minimum of 5 keywords.

A space or comma-separated list of keywords. Use the Widget to select from Hierarchical tree.

REQUIRED: Common-use word or phrase used to describe the subject of the data set. (Provide 5 keyword minimum)

Field survey
Saudi Arabia
NCM
Meteorology
Weather
Stations
Rainfall
Temperature
Humidity
Wind
Climate
Monitoring
FAO
NCVC
CHIRPS

Intelligence Military	Validation
Location	Land Degradation
Climatology Meteorology Atmosphere	Environmental
Farming	Analysis
Population	Synoptic

Part 2: Location and Licenses (Mandatory)

2.01 Language

Provide data language

Language used within the dataset

Enter data language

English

2.02 License

Provide the type of license under which this data is published and intended to be used.

License of the Dataset

Select one of the following License: (highlighted by Yellow)

NextView

Not Specified

Open Data Commons Open Database License / OSM

Public Domain

Public Domain / USG

Varied / Derived

Varied / Original

2.03 Attribution

Identify the entity or agency with authority and responsibility over this data.

Authority or function assigned, as to a ruler, legislative assembly, delegate, or the like.

*Field declared Mandatory by the Metadata Schema

Enter attribution for this data

Produced by the National Center for Meteorology (NCM). Data is provided to the National Center for Vegetation Cover and Combating Desertification (NCVC) as an affiliate and partner center of the NCM. Redistribution or modification requires authorization from NCM and NCVC

2.04 Regions

Identify the region that the data covers. You can provide several regions.

Enter global or specific regions

12 administrative regions of Saudi Arabia, including:

Riyadh, Makkah, Madinah, Asir, Al Bahah, Jazan, Tabuk, Hail, Al Jawf, Eastern Province, Najran, and Qassim.

2.05 Data quality statement

Statement on the data quality. This allows any known issue about the data quality to be documented and shared with data user so that they can use the data appropriately.

Provide data quality statement

The dataset was compiled from official NCM archives and quality-controlled monthly climate records.

This collection includes 61 weather stations distributed across 12 administrative regions of Saudi Arabia. Station coverage varies by region: Al Baha (3 stations), Al Riyadh (9 stations), Al Jouf (3 stations), Al Madinah (3 stations), Al Qassim (6 stations), Aseer (9 stations), Eastern (8 stations), Hail (3 stations), Jazan (5 stations), Makkah (8 stations), Najran (1 stations), and Tabouk (3 stations).

The dataset measures 18 different climate parameters: Evp, Maxhum, Maxtmp, Minhum, Mintmp, Mspddr, Mspdhr, Rain, Slrddt, Soiltmp05cm, Soiltmp100cm, Soiltmp10cm, Soiltmp20cm, Soiltmp50cm, Soiltmpsurface, Spdday, Sunhrs, Tprwndd. Data quality and station continuity tend to be higher in earlier years of the record. More recent years show the effects of network modernization efforts and gradual expansion of the monitoring network. The period from 1968 to 2016 represents a time of relatively complete national coverage. Data after 2016 reflects ongoing network updates and station improvements.

2.06 Restrictions

Indicate any known restriction on this data. You could consider the following when assessing data restriction:

- (1) Exclusive right to the publication, production, or sale of the rights to a literary, musical, or artistic work, or to the use of a commercial print or label, granted by law for a specified period of time to an author, composer, artist, distribution
- (2) Rights to financial benefit from and control of distribution of non-tangible property that is a result of creativity
- (3) Formal permission to do something
- (4) Government has granted exclusive right to make, sell, use or license an invention or discovery
- (5) Produced or sold information awaiting a patent
- (6) Withheld from general circulation or disclosure
- (7) Name, symbol, or other device identifying a product, officially registered and legally restricted to the use of the owner or manufacturer
- (8) Other restrictions

Limitations Placed upon the access or use of the data

** Field declared Mandatory by the Metadata Schema*

Enter any known data use restriction information

(3) Formal permission to do something

This data can be used for presentation and View, if there is any kind of modification, coordination with NCM, NCV is required.

2.07 Other constraints

Identify any other constraints on this data that would be important to document and share with the data users

Enter other constraints on this data

Station continuity vary over the record period, which may be attributed to network upgrades and phased expansion of monitoring stations.

Part 3: Other Data Description (Optional)

3.01 Edition

If the data is linked or resulting from work that has editions, indicate the edition for this dataset.

Version of the cited resource

Enter Edition

Not Identified

3.02 DOI

The DOI (Digital Object Identifier) will be assigned by the Metadata Administrator.

DOI will be added by Admin before publication

Create and enter the data DOI

Not Identified

3.03 Purpose

The purpose for which this dataset and related studies were undertaken.

Provide data purpose

To provide long-term national climate data for monitoring weather patterns, validating satellite products, and supporting climate related studies including drought, land degradation, and agricultural productivity among others. The dataset can be used for trend analysis, climate modeling, and calibration of CHIRPS and NDVI-based indices.

3.04 Maintenance frequency

The frequency for data update.

Frequency with which modifications and deletions are made to the data after it is first produced

Select one of the following : (highlighted by Yellow)

Frequency of maintenance for the data is not known

Data is repeatedly and frequently updated

There are no plans to update the data

Data is updated each day

Data is updated every year

Data is updated as deemed necessary

Data is updated each month

Data is updated every two weeks

Data is updated in intervals that are uneven in duration

Data is updated on weekly basis

Data is updated twice each year

Data is updated every three months

3.05 Spatial representation type

How the spatial data is presented, Method used to represent geographic information in the dataset

Select one of the following : (highlighted by Yellow)

Grid data is used to represent geographic data

Three-dimensional view formed by the intersecting homologous rays of an overlapping pair of image

Textual or tabular data is used to represent the geographic data

Triangulated irregular network

Vector data is used to represent geographic data

Scene from a video recording

3.06 Supplemental information (Remarks)

Provide any additional supplemental information about this data that could help the user when using this data

Enter supplemental information / Remarks

The dataset includes 61 weather stations spread across 12 administrative regions. Regional station counts are: Al Baha (3 stations), Al Jouf (3 stations), Al Madinah (3 stations), Al Qassim (6 stations), Al Riyadh (9 stations), Aseer (9 stations), Eastern (8 stations), Hail (3 stations), Jazan (5 stations), Makkah (8 stations), Najran (1 stations), and Tabouk (3 stations). The dataset contains 18 climate parameters with roughly 454,896 monthly observations covering the period from 1968 to 2016. Climate parameters measured include: Evp, Maxhum, Maxtmp, Minhum, Mintmp, Mspddr, Mspdhr, Rain, Slrddt, Soiltmp05cm, Soiltmp100cm, Soiltmp10cm, Soiltmp20cm, Soiltmp50cm, Soiltmpsurface, Spdday, Sunhrs, Tprwdd.

3.07 Temporal extent Start and End

Provide temporal extent start and end that may have bearing on this data.

Temporal extent start		Temporal extent end	
Date	Time	Date	Time
Enter temporal start date	Enter temporal start time	Enter temporal end date	Enter temporal end time
January 1968		December 2016	

3.08 Responsible Parties / Point of Contact

Who can be contacted about this data? This is usually the metadata administrator.

Admin Name

Enter Metadata Admin

Dr. Njeru Jeremiah – Chief Technical Advisor of Natural Re Management NRM – FAO KSA

Dr. Ouerchefani, Dalel – Technical Adviser, FAOSA

Mr. Gabriel Vincent Sanya - GISRS and Land Cover Mapping Expert -FAOSA

Mr. Haitham Abdullah – GIS Specialist – FAO KSA

3.09 Responsible and Permissions / Owner

Who is the responsible over this data? This is usually the person that led or supported the creation of the data

Data Responsible / Owner

Enter data owner

National Center for Meteorology (NCM)
NCVC Geo-Spatial Unit
FAO

3.10 Metadata Author

Who is the author of the metadata? This is usually the person that led or supported the creation of the data.

Data Responsible / Owner**Enter Metadata Admin**

GIS Department, FAO Saudi Arabia

Part 4: Part 4 - Data Attributes (Optional)**4.01 Key data features and attributes**

Detailed description of the data layer features and attributes will be provide in a separate custom template for data features and attributes description. Here, the key features and attributes (objects) for this data are provided.

Description of key features and attributes

Attribute / Feature	Description
<i>Enter the attributes of this Layer</i>	<i>Enter the description of the attributes</i>
<i>RecID</i>	<i>Unique record identifier</i>
<i>Station_Number</i>	<i>Official NCM station code</i>
<i>Station_Name</i>	<i>Name of the weather station</i>
<i>Elevation</i>	<i>Station elevation (meters above sea level)</i>
<i>Latitude</i>	<i>Latitude in decimal degrees (WGS84)</i>
<i>Longitude</i>	<i>Longitude in decimal degrees (WGS84)</i>
<i>Region</i>	<i>Administrative region of Saudi Arabia</i>
<i>Governorate</i>	<i>Local administrative area</i>
<i>Year</i>	<i>Year of observation</i>
<i>Month</i>	<i>Month of observation</i>
<i>Parameter</i>	<i>Climatic variable (e.g., Rainfall, Air Temperature Max, Min, Mean, Relative Humidity, Wind)</i>
<i>Value</i>	<i>Observed monthly value</i>
<i>Remarks</i>	<i>Notes or NULL where no observation was recorded</i>
<i>Data_Source</i>	<i>National Center for Meteorology (NCM), Saudi Arabia</i>
<i>Update_Frequency</i>	<i>Annual</i>