FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

ETHIOPIAN METEOROLOGICAL INSTITUTE

METEOROLOGICLA DATA AND CLIMATOLOGY LEAD EXECUTIVE

REMOTE SENSING AND CLIMATOLOGICAL DESK

MONTHLY CLIMATE BULLETIN

May2024

Some Applications of Climate Information

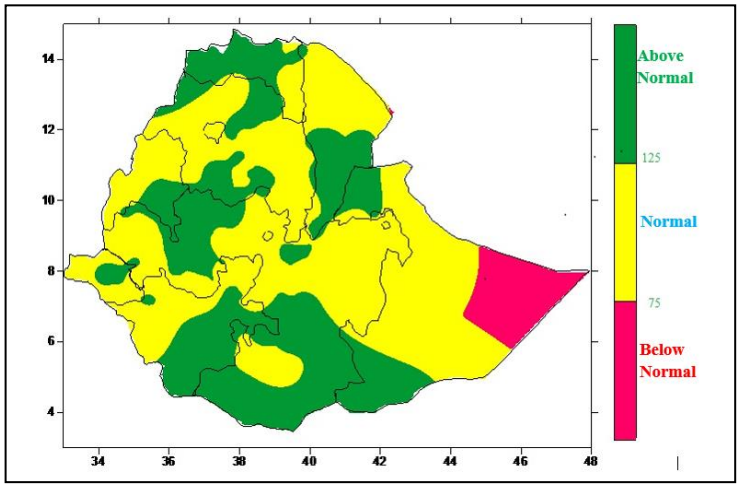
HIGHLIGHTS

During May 2024, days remained warm over some parts of Ethiopian lowlands, particularly Gambella, and Afar regions, Specifically, the extreme maximum temperature values were as high as 42, 44.8, 41.8,43.2,43.8, And 44.6°C over Awash Arba, Elidar, Fugnuido, Gambella, Gewane, and Semera stations respectively.

On the other hand, the recorded extreme minimum temperature values were below 8°C in some highland areas of Amhara, some parts of Oromia, and Tigray regions. Specifically, the extreme minimum temperature values were 6.5, 5.5, 7.5, 5.8, 7, 6.8, 4 and 7.6 over Adelle, Ambamariam, Arise robe, Bui, Dangla, D/Brehan and Sholagebaya stations respectively

During May 2024, the monthly rainfall amount exceeded 250 mm or heavier rainfall was occurred over Central Ethiopia, South West Ethiopia, South Ethiopia, and the southern western part of Oromia regions. In particular, the monthly total rainfall values of May 2024 were as high as 256, 291.2, 288.9, 267.9, 286.9, 305.7, 315.6, 300.1, 396. 267.4, 285.8, and 291.7 mm over Arba Minch, Nekemte, Arejo, Bedelle, Bore, Dilla, Dolomena, Gatira. Gidaayana, Laiber, Tepi, and Wolaita Sodo stations respectively.

The observed daily rainfall values were more than 60mm over Nekemte, Aykel, Bore, Gidaayana, Jinka, Laiber, Masha, Moyale, and Wolaita Sod stations. These stations reported 67, 66, 67, 80.4, 79.8, 71.7. 78, 85.4, and 99.9mm respectively. In general, the monthly total rainfall amount of May 2024 was normal in eastern and southern Amhara, central and eastern Tigray, some eastern and southern Somali, and central Oromia, regions. On the other hand, it was above normal in the south, west northwest parts of the country and western Amhara regions. The rainfall was below normal in southeastern tips of Somali region.



Percent of normal rainfall of May 2024

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Foreword

This climate bulletin is prepared and disseminated by the Ethiopia Meteorological Institute (EMI). It is aimed at providing climatological information to different services of the community involved in various socio-economic activities and giving some highlights about major synoptic situations.

The information contained in this bulletin is believed to assist planners, decision-makers and the community at large by providing details of the climatic conditions of the nation in a given period.

This bulletin differs from the other real time and near real time bulletins issued by the Institute, which for their input depend only on meteorological stations equipped with single side band radio for data transmission. Though this bulletin is not real time, published with a delay of at least two months, the information contained in this bulletin is based on data coming from a much larger number of meteorological stations. Moreover, the information contained in this bulletin is not sector-specific and a wide range of users can benefit from it. The Institute disseminates monthly, seasonal and annual climatological bulletins in which all-necessary climatological information and significant climatic anomalies are highlighted.

We have a strong belief that various socio-economic activities related to planning disaster mitigation, water resources management, construction, environmental protection, transportation, recreation, tourism and others will be benefited most by the careful and continuous use of this bulletin. Meanwhile, your comments and constructive suggestions are highly appreciated to make the objectives of this bulletin successful.

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1. Synoptic Situation

1.1 Surface

The Mascarene high with a mean central pressure value of above 1020hPa was centered at about 32°S, 60°E.

The St. Helena high with a mean central pressure value of above 1018hPa was centered at about 33°S, 9°E.

The Azores high with a mean central pressure value of 1018hPa was centered at about 35°N, 5°W.

1.2 Lower Troposphere (850 hPa vector wind)

Easterly flow with below 4 - 8m/s mean vector wind flow originating from the Arabian Sea and the Indian Ocean.

2. Tropical Oceanic and Atmospheric Highlights

During May 2024, sea surface temperatures (SSTs) continued to decrease across the equatorial Pacific. The latest monthly Niño indices were -0.7°C for the Niño 1+2 region, +0.3°C for the Niño 3.4 region, and +0.7°C for the Niño 4 region The depth of the oceanic thermocline (measured by the depth of the 20°C isotherm) was below-average across the equatorial Pacific. The corresponding sub-surface temperatures were 1-7°C below average in the far eastern equatorial Pacific.

Reference: NOAA, climate diagnostic bulletin of May 2024

3. Weather

3.1 Temperature

During May 2024, days remained warm over several parts of Ethiopian lowlands, such as Gambella, Somali, south, east and central Afar region, eastern Benishangul Gumuz, south and central parts Amhara and northern Tigray regions (Fig. 3.1.2). Specifically, the extreme maximum temperature values were as high as 42, 44.8, 41.8, 43.2, 43.8, and 44.6°C for Awash Arba, Elidar. Fugnuido, Gambella, Gewane, and Semera stations, respectively (Table 3.1.1).

Extreme minimum temperatures of less than 8°C were reported in various parts of the country, including central and southern Amhara, some pocket areas of Oromia, and the Tigray region (Fig. 3.1.1). Adelle, Ambamariam, Arise Robe, Bui, Dangla, D/Brehan and Sholagebaya reported exceptional minimum temperatures of 6.5, 5.5, 7.5, 5.8, 7, 6.8 and 4 , respectively (Table 3.1.2).

In general, the May 2024 Mean monthly temperature values were partially cooler than normal in most parts of the Tigray region except the central, south, and central parts of the Afar region, most portions of Amhara except the central parts, south and western Benishangul, western and central Oromia, and the south, north, and eastern areas of the southern region. (Fig. 3.1.3).

Table 3.1.1 Stations with extreme maximum temperature values of greater than or equal to 40^0c during May 2024

Stations	Extreme maximum temperature (^{o}c)	Date
Awash Arba	42	30
Elidar	44.8	31
Fugnuido	41.8	6
Gambella	43.2	12
Gewane	43.8	30
Semera	44.6	29

Table 3.1.2 Stations with extreme minimum temperature values of

below or equal to 8°c during May 2024

Stations	Extreme minimum temperature (°c)	Date
Adelle	6.5	14
Ambamariam	5.5	11
Arise Robe	7.5	21
Bui	5.8	31
Dangla	7	2
D/Brehan	6.8	28
Sholagebaya	4	10

3.2 Rainfall

Normally, May is the last month of the smallest rainy season, Belg (FMAM) rain-benefiting areas of the country. The mean monthly rainfall amount exceeds 250 mm over western and southern Oromia, most of southern and western parts of the country, with higher mean values over Oromia.

In May 2024, the monthly rainfall amount exceeded 250 mm in several sections of Amhara, as well as the western, east, and south parts of Oromia, with higher rainfall episodes happening in the country's centeral part and west. In particular, the monthly total rainfall values of May 2024 were as high as 256, 291.2, 288.9, 267.9, 286.9, 305.7, 315.6, 300.1, 396, 267.4, 285.8, and 291.7mm over Arba Minch, Nekemte, Arjo, Bedelle, Bore, Dilla, Dolomena, Gatira, Gidaayana, Laiber, Tepi, and Wolaita Sodo stations respectively and extreme daily rainfall values greater than 60 mm within 24 hours were recorded.. The 24 hour daily rainfall values were as high as 67, 66, 67, 80.4, 79.8, 71.7, 78, 85.4 and 99.9 mm over Nekemte, Aykel, Bore, Gidaayana, Jinka, Laiber, Masha, Moyale,and Wolaita Sodo respectively recorded. (Table 3.2.1).

In general, the monthly total rainfall amount for May 2024 was normal to above normal in most part of the country, with the exception of some portions of southern sips of Somali (Fig. 3.2.3).

Table 3.2.1. Stations with more than 60mm of rainfall in 24 hours during May 2024

Stations	Amount (mm)	Date
Nekemte	67	28
Aykel	66	16
Bore	67	17
Gidaayana	80.4	14
Jinka	79.8	18
Laiber	71.7	27
Masha	78	26
Moyale	85.4	3
Wolaita Sodo	99.9	23

Table 3.2.2. Stations with more than 250 mm of monthly total rainfall during May 2024

Stations	Amount (mm)
Arba Minch	256
Nekemte	291.2
Arjo	288.9
Bedelle	267.9
Bore	286.9
Dilla	305.7
Dolomena	315.6
Gatira	300.1
Gidaayana	396
Laiber	267.4
Tepi	285.8
Wolaita Sodo	291.7

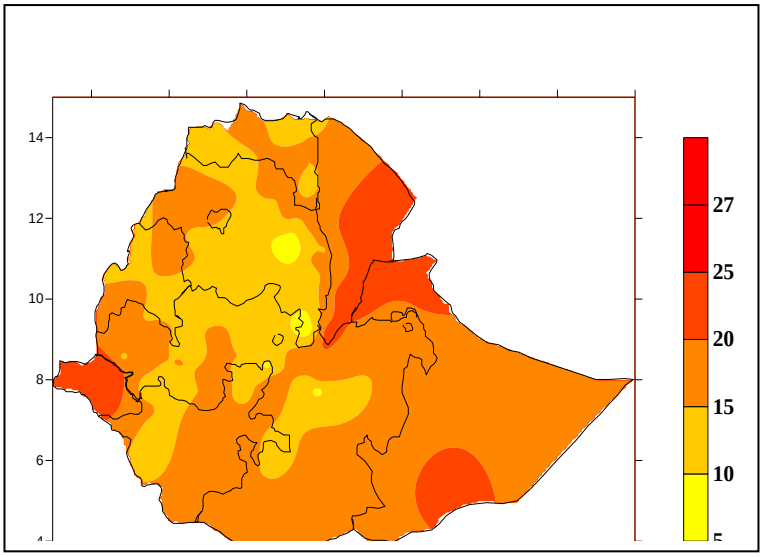

Fig. 3.1.1. Mean minimum temperature in ^{o}c during May 2024

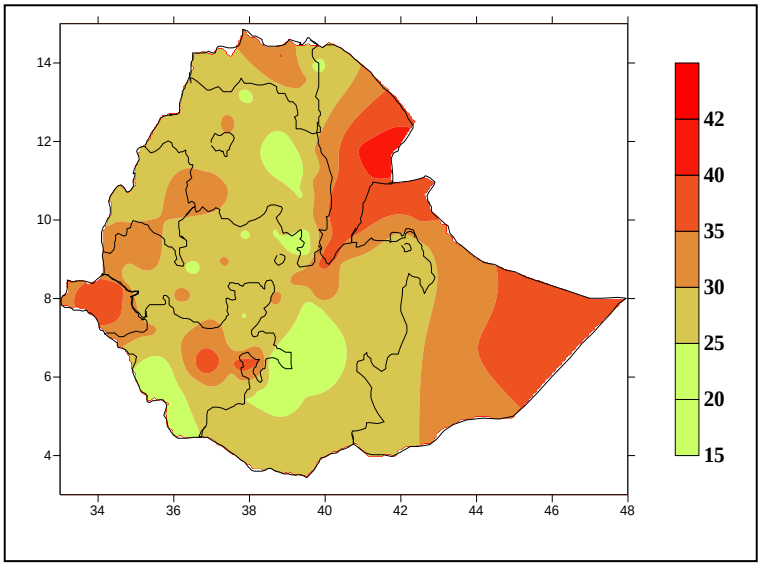

Fig. 3.1.2. Mean maximum temperature in **^{o}c** during May 2024.

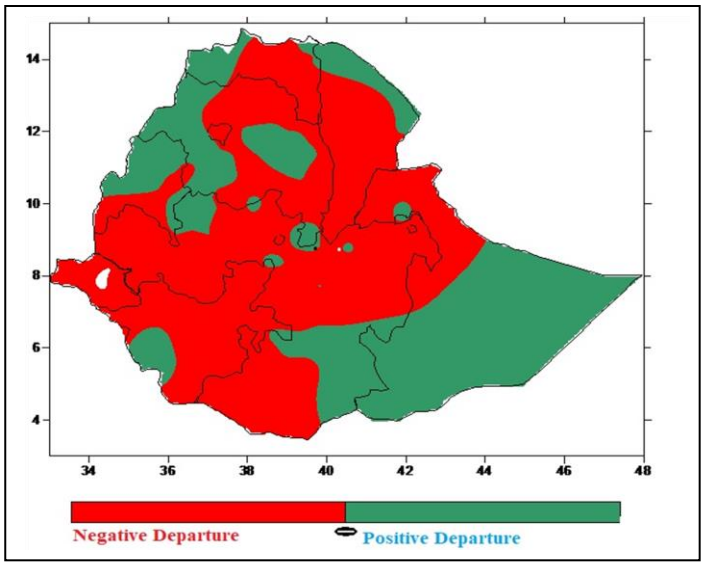

Fig.3.1.3. Departure of monthly average temperature from normal during May 2024.

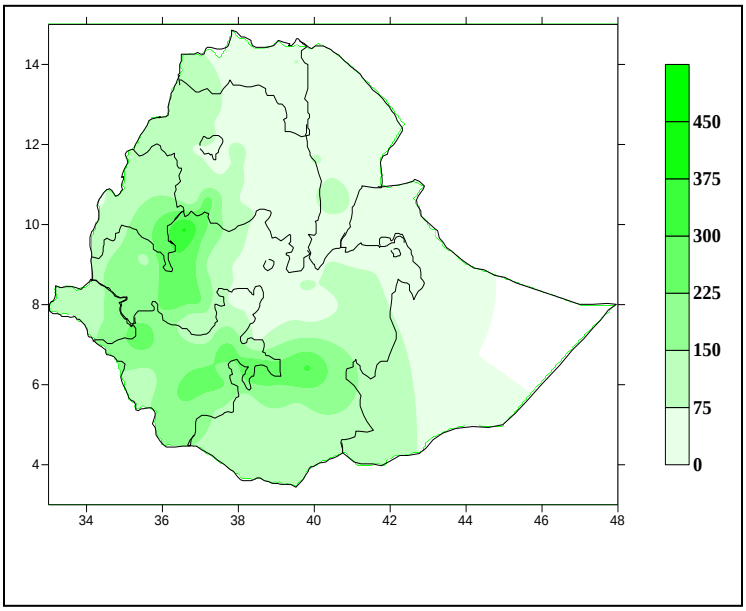

Fig.3.2.1. Monthly total rainfall in mm during May 2024.

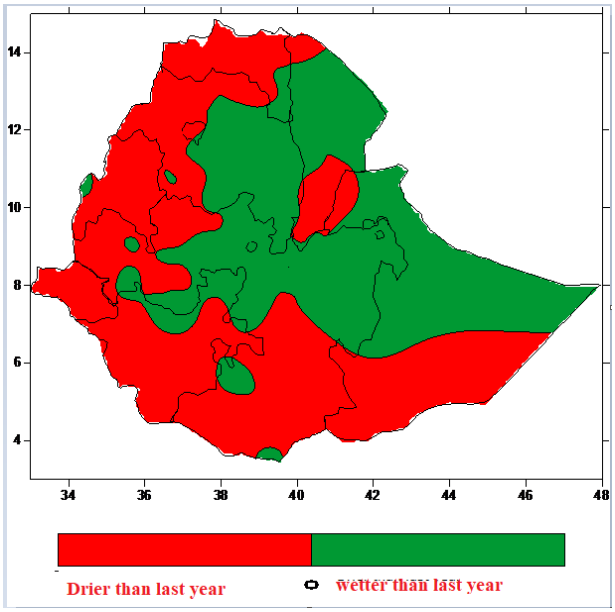

Fig. 3.2.3. Monthly total rainfall of May 2024 minus monthly total rainfall of May 2023

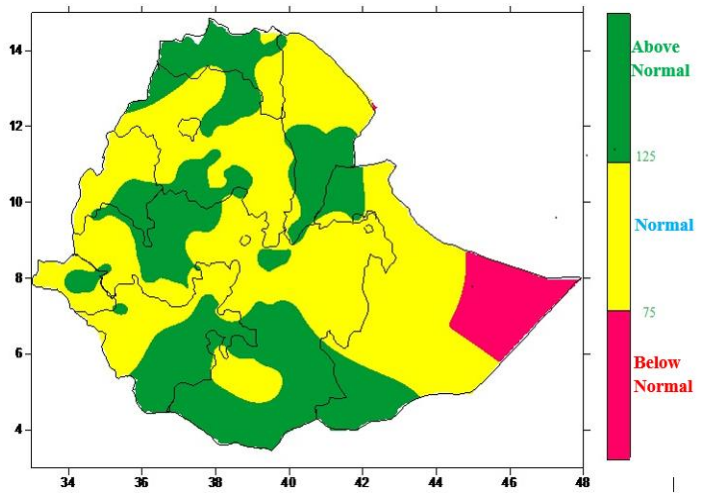

Fig. 3.2.2. Percent of normal rainfall during May 2024