FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

ETHIOPIAN METEOROLOGICAL INSTITUTE

METEOROLOGICAL DATA AND CLIMATOLOGY LEAD EXECUTIVE

REMOTE SENSING AND CLIMATOLOGICAL DESK

MONTHLY CLIMATE BULLETIN

May 2025

Some Applications of Climate Information

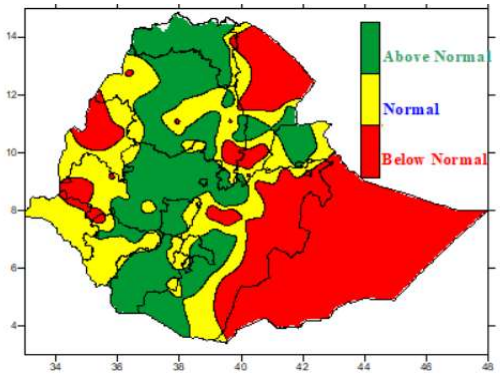
HIGHLIGHTS

During May 2025, days remained warm over several parts of the Ethiopian lowlands, such as Gambella, Somali, south, east, and central Afar region, eastern Benishangul Gumuz regions. Specifically, the extreme maximum temperature values were as high as 44.8, 43, 42.5, 42, 39.8, 39.5, and 39.5 for Gewane, Metema. Aysha, Awash Arba, Metehara (NMSA), Chifra, Fugnuido, Dire Dawa, and Gambella stations, respectively.

Extreme minimum temperatures of less than 7°C were reported in various parts of the country, including central and southern Amhara, some pocket areas of Oromia, and the Tigray region. Ambamariam, D/Brehan, Sholagebeya, Alemketema, Bui, Mehalmeda, Bore, Wegeltena, Adigrat, Arise Robe, and Debark reported exceptional minimum temperatures of 4, 5, 5, 5.5, 6, 6.2, 6.5, 6.6, 7, 7, and 7 in ^{0}c respectively.

Normally, May is the last month of the smallest rainy season, Belg (FMAM), in Belg rain-benefiting areas of the country. The mean monthly rainfall amount exceeds 255 mm over western and southern Oromia, most of southern and western parts of the country, with higher mean values over Oromia.

In May 2025, the monthly rainfall amount exceeded 255 mm in several sections of Amhara, as well as the eastern, eastern, and southern parts of Oromia, with higher rainfall episodes happening in the country's central part and west. In particular, the monthly total rainfall values of May 2025 were as high as 455.4, 379, 325.4, 297.8, 272.4, 265.5, 264.4, and 257.4 in mm over Gatira, Bore, Arejo, Tepi, Nekemte, Angerguten, Chira, and Hageremariam 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 88.7, 81.3, 70.2, 67.8, 65.9, 62.5, and 61.5 in mm over Abomsa. Jinka, Sirinka, Bilate. Masha, Nekemtem, and Hageremariam respectively.



Percent of normal rainfall for May 2025

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Foreword

This climate bulletin is prepared and disseminated by the Ethiopian Meteorological Institute (EMI). It aims to provide climatological information to various community services involved in socio-economic activities and highlight 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 each 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-sideband 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 benefit 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 above 1020 hPa, was centered at approximately 25°S, 25°E.

The St. Helena high, with a mean central pressure value above 1018 hPa, was centered at approximately 28°S, 8°E.

The Azores high, with a mean central pressure value of 1018hPa, was centered at about 38°N, 20°W.

1.2 Lower Troposphere (850 hPa vector wind)

Easterly flow with below 4 - 12m/s mean vector wind flow originating from the Arabian Sea and the Indian Ocean.

1.3 Middle Troposphere (500-hPa Geopotential height)

Cross-equatorial and southeastern flow of above 3 to 15m/s was observed over the northern and the western Indian Ocean, Arabian Sea, and the adjoining areas of the Horn of Africa.

1.4 Upper Troposphere (200 hPa vector wind)

The westerly wind, associated with the Subtropical westerly jet, had 0- 15 m/s and strengthened further, while the upper-level easterly flow, associated with the tropical easterly jet weakened further.

2. Tropical Oceanic and Atmospheric Highlights

During May 2025, sea surface temperatures (SSTs) were near-average across much of the equatorial Pacific. The latest monthly Niño indices were +0.2°C for the Niño 1+2 region and 0.0°C for both the Niño 3.4 region and the Niño 4 region. The depth of the oceanic thermocline (measured by the depth of the 20°C isotherm) was slightly below average across the east-central equatorial Pacific.

Reference: NOAA, climate diagnostic bulletin of May 2025

3. Weather

3.1 Temperature

During May 2025, days remained warm over several parts of the Ethiopian lowlands, such as Gambella, Somali, south, east, and central Afar region, eastern Benishangul Gumuz, regions (Fig. 3.1.2). Specifically, the extreme maximum temperature values were as high as 44.8, 43, 42.5, 42, 39.8, 39.5, 39.5, 39.5, 39.4, and 39.2 for Gewane, Metema. Aysha, Awash Arba, Metehara (NMSA), Chifra, Fugnuido, Dire Dawa, and Gambella stations, respectively (Table 3.1.1).

Extreme minimum temperatures of less than 7°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). Ambamariam, D/Brehan, Sholagebeya, Alemketema, Bui, Mehalmeda, Bore, Wegeltena, Adigrat, Arise Robe, and Debark reported exceptional minimum temperatures of 4, 5, 5, 5.5, 6, 6.2, 6.5, 6.6, 7, 7, and 7 in ^{0}c respectively (Table 3.1.2).

In general, the May 2025 Mean monthly temperature values were partially warmer than normal in most parts of the Tigray region except the northern south, west, and central parts of the Afar region, norther, and northwestern portions of Amhara, most of Oromia, Gambela, Benishangul gumuz and SNNP. On other hand cooler than normal over some parts of Tigray, SNNP, Benishangul gumuz and Oromia region and most parts of Amhara, Afar, and Somalia regions. (Fig. 3.1.3).

Table 3.1.1 Stations with extreme maximum temperature values of greater than or equal to 39 ^{0}c °C during May 2025

Stations	Extreme maximum temperature (^{o}c)	Date
Gewane	44.8	27
Metema	43	2
Aysha	42.5	20
Awash Arba	42	26
Metehara (NMSA)	39.8	27
Chifra	39.5	24
Fugnuido	39.5	19
Dire Dawa	39.4	29
Gambella	39.2	20
Dalifagi	39	2

Table 3.1.2 Stations with extreme minimum temperature values of below or equal to 7 ^{o}c during May 2025

Stations	Extreme minimum temperature(^{o}c)	Date
Ambamariam	4	17
D/Brehan	5	11
Sholagebaya	5	10
Alemketema	5.5	6
Bui	6	15
Mehalmeda	6.2	5
Bore	6.5	9
Wegeltena	6.6	21
Adigrat	7	29
Arise Robe	7	24
Debark	7	6

Table 3.1.3. New records of maximum temperature during May 2025.

Name	Previou record	New record	Date
Awassa	32.6	34.5	30
Adele	26.5	26.8	28
Alemaya	30	33	22
Cheffa SF	37.4	37.8	12
Fiche	27.6	28	23
Tepi	34	34.4	10

3.2 Rainfall

Normally, May is the last month of the smallest rainy season, Belg (FMAM), in the Belg rain-benefiting areas of the country. The mean monthly rainfall amount exceeds 255 mm over western and southern Oromia, most of southern and western parts of the country, with higher mean values over Oromia.

In May 2025, the monthly rainfall amount exceeded 255 mm in several sections of Amhara, as well as the eastern, eastern, and southern parts of Oromia, with higher rainfall episodes happening in the country's central part and west. In particular, the monthly total rainfall values of May 2025 were as high as 455.4, 379, 325.4, 297.8, 272.4, 265.5, 264.4, and 257.4 in mm over Gatira, Bore, Arejo, Tepi, Nekemte, Angerguten, Chira, and Hageremariam 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 88.7, 81.3, 70.2, 67.8, 65.9, 62.5, and 61.5 in mm over Abomsa. Jinka, Sirinka, Bilate. Masha, Nekemtem, and Hageremariam respectively (Table 3.2.1).

In general, the monthly total rainfall amount of May 2025 was below normal in most parts of Afar, eastern Oromia, most of Somalia, central and western Benishangul Gumuz, and some areas of Oromia. On the other hand, it was above normal in most parts of Tigray, south, north, and central Amhara, central Oromia, southern parts of SNNP. And finally, normal rainfall was in some parts of Oromia, Benishangul, Gumuz, Afar, and SNNP, and most parts of. Gambella. Region

Finally, during May 2025, most of Tigray and Amhara, central Oromia North and western Gambella pocket areas, Afar, south western SNNP and eastern Somalia regions, (Fig. 3.2.3).

Table 3.2.1. Stations with more than 60mm of rainfall in 24 hours during May 2025

Stations	Amount (mm)	Date
Abomsa	88.7	6
Jinka	81.3	21
Sirinka	70.2	5
Bilate	67.8	6
Masha	65.9	31
Nekemte	62.5	26
Hageremariam	61.5	13

Table 3.2.3. Stations with more than 255 mm of monthly total rainfall during May 2025

Stations	Amount (mm)
Gatira	455.4
Bore	379
Arejo	325.4
Tepi	297.8
Nekemte	272.4
Angerguten	265.5
Chira	264.4
Hageremariam	257.4

Table 3.2.3. New records of maximum rainfall in 24 hours during May 2025.

Name	Previous record	New record	Date
Jinka	65	81.3	21
Shahura	41.8	56	25
Sirinka	64.7	70.2	5
Tsitsika	28.6	37.8	3

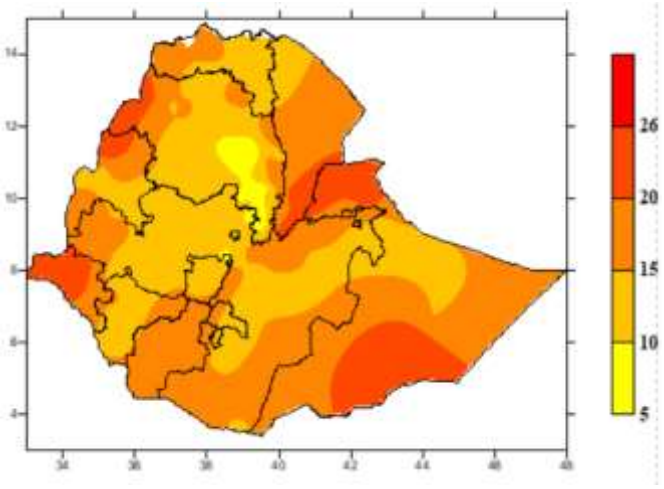

Fig. 3.1.1. Mean minimum temperature in oc during May 2025.

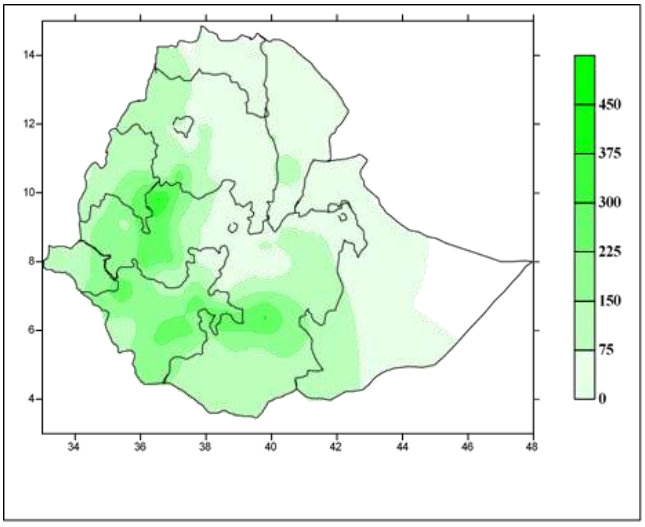

Fig.3.2.1. Monthly total rainfall in mm during May 292

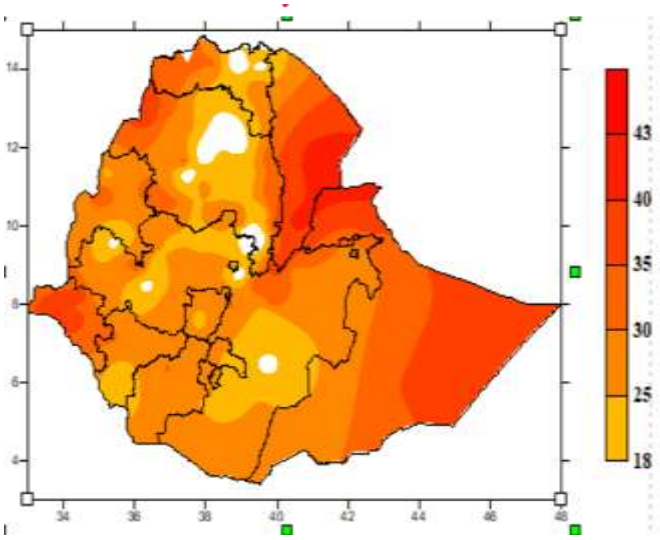

Fig. 3.1.2. Mean maximum temperature in ^{o}c During May 2025.

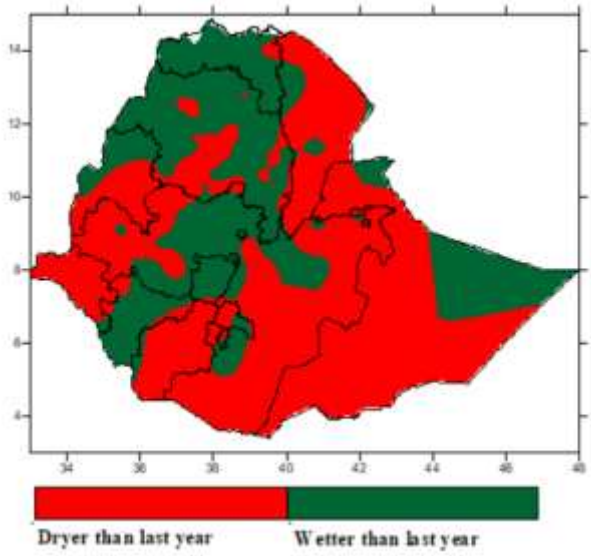

Fig. 3.2.3. Monthly total rainfall of May 2025minus the monthly total rainfall of May 2024.

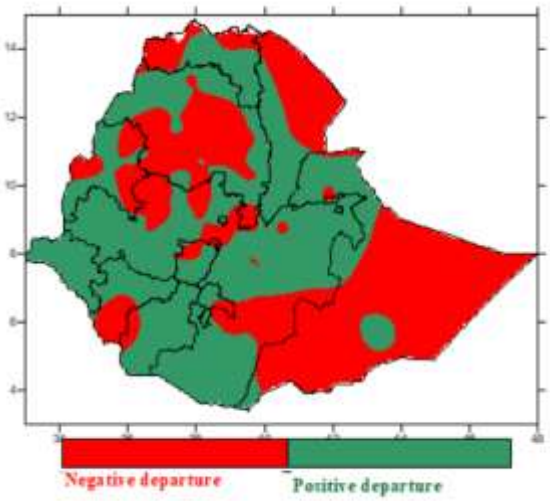

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Fig.3.1.3. Departure of monthly average temperature from normal during May 2025

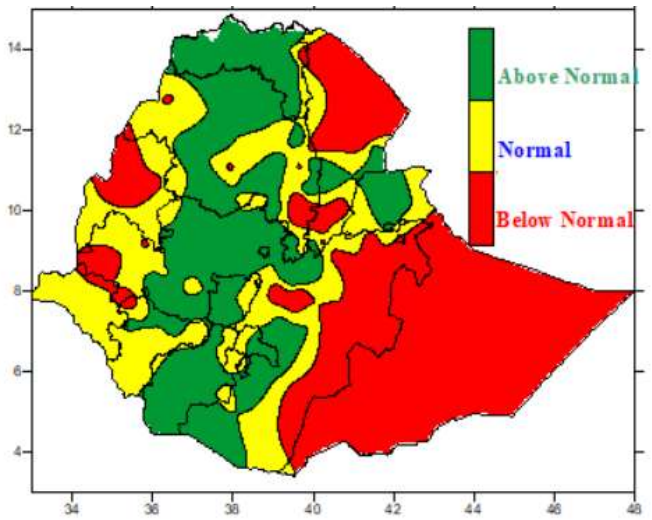

Fig. 3.2.2. Percent of normal rainfall during May 2025.