FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

ETHIOPIAN METEOROLOGICAL INSTITUTE

METEOROLOGICLA DATA AND CLIMATOLOGY LEAD EXECUTIVE

REMOTE SENSING AND CLIMATOLOGICAL DESK

MONTHLY CLIMATE BULLETIN

June 2024

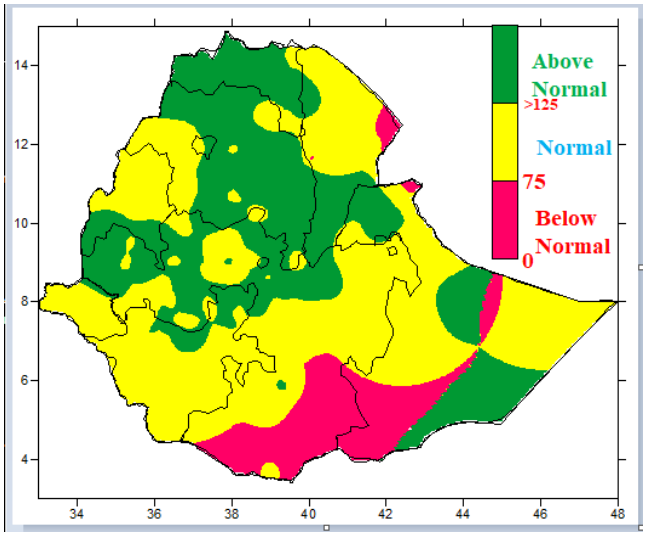
Some Applications of Climate Information

HIGHLIGHTS

During June 2024, days remained warm over some portions of Ethiopia especially the eastern, northeastern, and southeastern regions had experienced warmer weather conditions during the last June 2024. Warm temperatures were recorded in most of Afar, eastern Somalia, and Dire Dawa regions. Specifically, the extreme maximum temperature values were as high as 43, 41, 40, 40, 41.2, 45.8, 40.6, and 45.2 ^{o}C over Awash Arba, Aysha, Chifra, Dalifagi, Dire Dawa, Elidar, Metehara (NMSA), and Semera respectively.

During June 2024, the monthly rainfall amount exceeded 400 mm or heavier rainfall was occurring over most parts of western Oromia, western Amhara, and most parts of Benishangul Gumuz areas. The monthly total rainfall values of June 2024 were as high as 305.5, 306.2, 324.7, 331, 342.8, 352.2, and 434.3mm over Assossa, Gatira, Aira, Arjo, Limugenet, Nekemte, and Gimbi respectively. The daily rainfall values over Gelemso, Motta, Gidaayana, Gimbi, Nekemte, Chira, Debark, and Limugenet stations were 60, 60, 61.4, 68.7, 76.1, 83, 87.2, and 87.7mm respectively.

In general, the monthly total rainfall amount of June 2024 was below normal over parts of Somali, Afar, south, and southeastern Oromia, regions. On the other hand, it was above normal over some parts of Gambella, Benishangul Gumuz, and Somali, most parts of Amhara, western and northern parts of Oromia, and some parts of SNNPR regions. Eastern Tigray, central and northwestern Amhara, southern Benishangul Gumuz most northern part of SNNPR, southern and some pocket areas of Afar, and some portions of Oromia, were wetter than last year. On the other hand, all Somali, eastern Tigray, northern and central Afar, southern, and central parts of Oromia, Amhara, central Benishangul Gumuz, and most parts of Gambela areas in June 2024 were dryer than in June 2023.



Percent of normal rainfall of June 2024

☎ 011 551 22 99 ✉ 1090 011-552-8713/011-558-7910 E-mail nmsa@ethionet.et Web: www.ethiomet.gov.et

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.

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 Agency, 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 Agency 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 success.

Director General
Ethiopian Meteorology Institute
P.O. Box 1090
Tel: 251-11-558-56-00/011/011-551 22 99
Fax : +251-11-552-8713/011-551 70 66
E-mail: emi@ethionet.gov.et
Addis Ababa

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 above 1020hPa, was centered at about 32°S, 5°E.

The Azores high with a mean central pressure value of 1018hPa was centered at about 40°N, 10°W.

1.2 Lower Troposphere (850 hPa vector wind)

The strong cross-equatorial and northeasterly flow of below 4 to 12 m/s was observed over the northern and western Indian Ocean and southwesterly flow was dominant over the Arabian Peninsula

1.3 Middle Troposphere (500-hPa Geo-potential height)

When analyzing the geopotential height from the Climate Diagnostics Bulletin in Jun 2024, the fluctuation 500-hPa Geo- -potential height values over central and eastern Africa was 3 to 9 pm.

1.4 Upper Troposphere (200 hPa vector wind)

Equatorial stronger easterly winds 0-30 m/s were dominant in most parts of the horn of Africa. The subtropical easterly jet had strengthened further, while the upper-level westerly flow, associated with the tropical westerly jet weakened further.

2. Tropical Oceanic and Atmospheric Highlights

During June 2024, sea surface temperatures (SSTs) remained near average across the east-central and eastern equatorial Pacific. The latest monthly Niño indices were -0.7°C for the Niño1+2 region, +0.2°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. The corresponding sub-surface temperatures were 1-6°C below average in the far eastern equatorial Pacific.

Reference: NOAA, climate diagnostic bulletin of June 2024

3. Weather

3.1 Temperature

During June 2024, days remained warm over some portions of Ethiopia especially the eastern, northeastern, and southeastern regions that experienced warmer weather conditions during the last June 2024. In this regard, warm temperatures were recorded in most of Afar, eastern Somalia, and Dire Dawa regions. Specifically, the extreme maximum temperature values were as high as 43, 41, 40, 40, 41.2, 45.8, 40.6, and 45.2 oc over Awash Arba, Aysha, Chifra, Dalifagi, Dire Dawa, Elidar, Metehara (NMSA), and Semera respectively (Table 3.1.1). On the other hand, the extreme minimum temperature values were below 8°c over some parts of northern central and southern Pocket areas which mostly dominated highland parts of Amhara, some parts of Oromia, and central Ethiopia. In particular, Sholagebaya, Ambamarim, Bui, Alemketema, Bore, Mehalmeda, Wegeltena, Robe, and Adellehad extreme minimum temperature values of below 8oc during June 2024 (Table 3.1.2).

The monthly average temperature readings were generally above normal throughout southeast,

northeast, and northwest pockets of the country's southwest and below normal over western, western southwestern, and some parts of central Ethiopia. (Fig. 3.1.3).

Table 3.1.1 Stations with Extreme Maximum Temperature Values of Greater Than Or Equal To 40 ^{O}c During June 2024.

Station Name	Extreme Maximum Temperature (oc)	Date
Awash Arba	43	5
Aysha	41	19 & 23
Chifra	40	7 & 19
Dalifagi	40	7 & 21
Dire Dawa	41.2	4
Elidar	45.8	9
Metehara (NMSA)	40.6	2
Semera	45.2	9

Table 3.1.2 Stations With Extreme Minimum Temperature Values of Below or Equal To 8ºc During June 2024

Station Name	Extreme Minimum Temperature (^{O}c)	Date
Sholagebaya	4	19
Ambamariam	5	30
Bui	5.4	19
Alemketema	6	25
Bore	7	17
Mehalmeda	7.5	2
Wegeltena	7.5	2
Robe	8	16
Adelle	8	17

1.1 Rainfall

June typically falls within the rainy season in Kiremt (JJAS) rain-benefiting regions of the nation. Many parts of the country's north, northwest, southwest, and central regions receive an average monthly rainfall of more than 300 millimeters. During June 2024, the monthly rainfall amount exceeded 400 mm or heavier rainfall was occurring over most parts of western Oromia western Amhara, and most parts of Benishangul Gumuz areas. The monthly total rainfall values of June 2024 were as high as 305.5, 306.2, 324.7, 331, 342.8, 352.2, and 434.3mm over Assossa, Gatira, Aira, Arejo, Limugenet, Nekemte, and Gimbi respectively. The daily rainfall values over Gelemso, Motta, Gidaayana, Gimbi, Nekemte, Chira, Debark, and Limugenet stations were 60, 60, 61.4, 68.7, 76.1, 83, 87.2, and 87.7mm respectively. (Tables 3.2.1).

In general, the monthly total rainfall amount of In general, the monthly total rainfall amount of June 2024 was below normal over parts of Somali, Afar, south, and southeastern Oromia, regions. On the other hand, it is above normal over some parts of Gambella, Benishangul Gumuz, and Somali, most parts of Amhara, western and northern parts of Oromia, and some parts of SNNPR regions. Eastern Tigray, central and northwestern Amhara, southern Benishangul Gumuz most northern part of SNNPR, southern and some pocket areas of Afar, and some portions of Oromia, were wetter than last year. On the other hand, all Somali, eastern Tigray, northern and central Afar, southern, and central parts of Oromia, Amhara, central Benishangul Gumuz, and most parts of Gambela areas in June 2024 were dryer than in June 2023 (Fig. 3.2.2).

Table 3.2.1. Stations With More Than 60mm of Rainfall In 24 Hours During June 2024

Stations	Amount (mm)	Date
Gelemso	60	17
Motta	60	28
Gidaayana	61.4	5
Gimbi	68.7	11
Nekemte	76.1	8
Chira	83	27
Debark	87.2	25
Limugenet	87.7	27

Table 3.2.2. Stations with More Than 300mm of Monthly Total Rainfall During June 2024

Station	Amount
Assossa	305.5
Gatira	306.2
Aira	324.7
Arejo	331
Limugenet	342.8
Nekemte	352.2
Gimbi	434.3

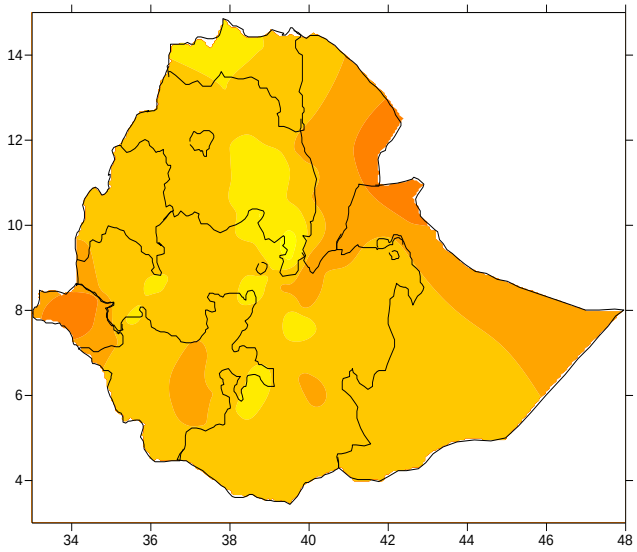


Fig. 3.1.1. Mean Minimum Temperature in ^{O}C During Jun 2024

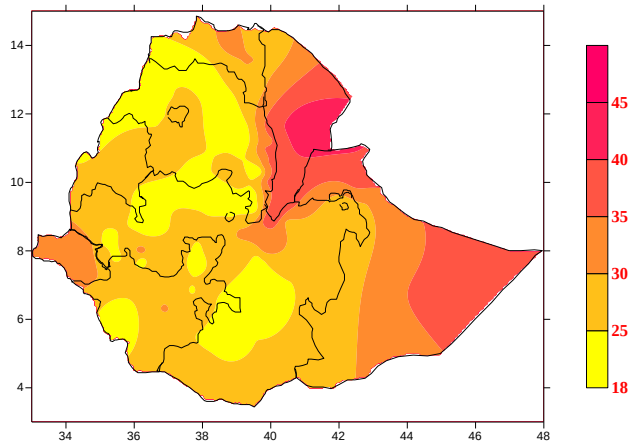


Fig. 3.1.1. Mean Maximum Temperature in ^{o}C During Jun 2024.

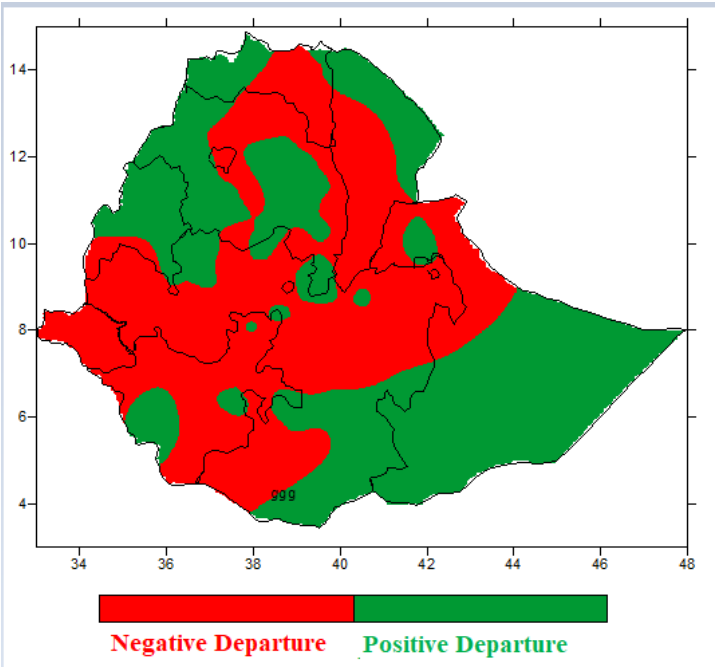


Fig.3.1.3. Departure of Monthly Average Temperature from Normal During June 2024

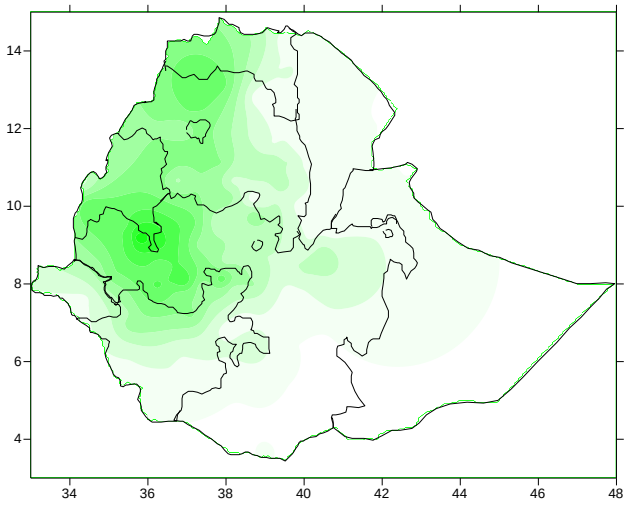
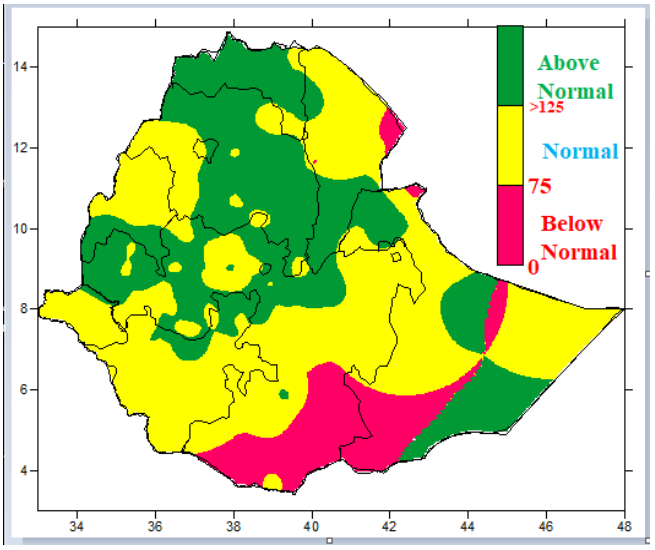


Fig.3.2.1. Monthly Total Rainfall in Mm During June 2024



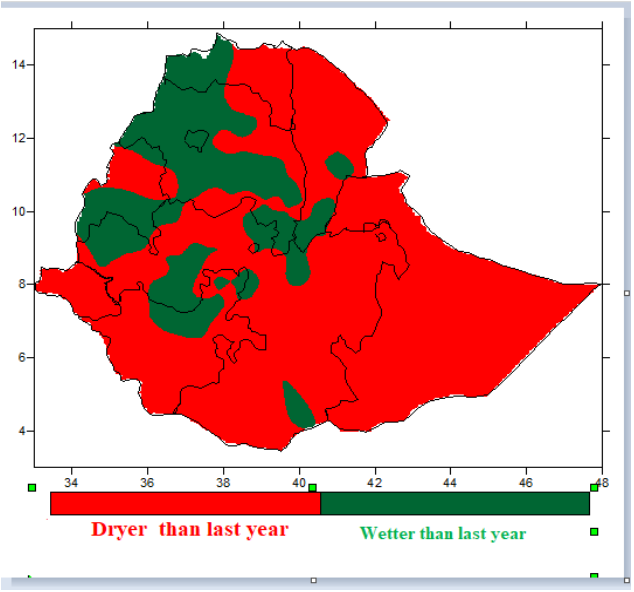


Fig. 3.2.3. Monthly Total Rainfall of June 2024 Minus Monthly Total Rainfall of June 2023