FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

ETHIOPIAN METEOROLOGICAL INSTITUTE

METEOROLOGICAL DATA AND CLIMATOLOGY LEAD EXECUTIVE

REMOTE SENSING AND CLIMATOLOGICAL DESK

SEASONAL CLIMATE BULLETIN FOR KIRTEMT 2025

HIGHLIGHTS

Kiremt is normally the main wet season for the rain-benefiting areas of western, central, northwestern, and southwestern Ethiopia. The climate during this season is characterized by cool temperatures and frequent rainfall. Seasonal rainfall totals often exceed 1250 mm across much of the Kiremt rain-benefiting regions, with the highest amounts occurring in western, central, and northwestern Ethiopia. (fig 3.2.1).

During kiremt 2025, days remained hot over Southeast, northeastern, and western parts of Ethiopia (fig.3.2.2). In particular, extreme maximum temperature values exceeded 40.0 °C over Gewane, Metehara (NMSA), Awash Arba, Chifra, Aysha, Metema, Dire Dawa, Dalifagi, Elidar, Semera, Awash Arba, Aysha, Metehara (NMSA), Dalifagi, Elidar, Semera, (NMSA), Abaya, Semera, Elidar, Aysha, and Gewane. the extreme minimum temperature values were as low as 5, 4, 4.8, 3.5, 5, 5, 2.8, 3, 5, 5, 3.4, 4, and 4.2 in°C over Alemketema, Ambamaria, Bui, Alemketema, Ambamariam, Sholagebaya, Ambamariam, Alemketema, Bui, Sholagebaya, Ambamariam, Alemketema, and D/Tabor on Jun 21st , Jun 16th , Jun 4th , Jun 8th , Jun 24th , Jun 18th , Jun 22nd , Jun 11th , Jun 31st , Jun 30th , Jun 18th , Jun 8^{th,}, and Ju19th respectively (Table 3.1.2).

In general, the seasonal rainfall amount of Kiremt 2025 was below normal over southern and eastern Afar, southern Oromia, south eastern SNNP and most of Somalia regions. During Kermit normal rainfall condition was experienced over most of Tigre center land eastern Amhara, central and eastern Oromia most of Gamble and north and western Afar and central parts of SNNP. Finally, above-normal rainfall conditions prevailed over most of Benishangul-Gumuz, eastern Gambela, western and northwestern Amhara, western-central Oromia, and some pocket areas of SNNP.” (fig.3.2.5).

Some Applications of Climate Information

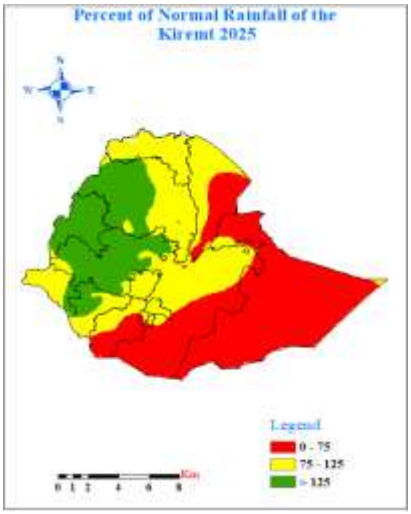
Disaster Management

Water Resources Management

Environment & Health

Transport

Recreation & Tourism



Percent of Normal Rainfall of the Kiremt 2025

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Foreword

This climate bulletin is prepared and disseminated by the Ethiopian 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 the 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 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 some 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 s uccess.

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1. Introduction

1.1. General

This climate bulletin contains a summary of climatic conditions that prevailed over the country during Kiremt 2025. **Kiremt** is the main rainy season that covers the period from **June** to **September**. The Kiremt rainfall covers most parts of the country except for some parts of the south and southeast of Ethiopia. Cold and moist conditions mostly characterize the climate of the season. Generally, the rainfall of this season is very important for the growth of Meher crops.

2. Synoptic Situation

2.1 Surface

The Mascarene High, with a mean central pressure above 1020 hPa, was centered at approximately 25°S, 20°. The next mean central pressure above 1020 hPa was centered around 35°S, 60°E.The following month august High, with a mean central pressure above 1020hPa, was centered around 30°S, 75°E.Finally, in the last month of Kermit, the Mascarene high, with a mean central pressure value of above 1020hPa, was centered at about 33°S, 76°E.During Jun 2025 The St. Helena high, with a mean central pressure value above 1018 hPa, was centered at approximately 26°S, 10°E. In the next month of the season, July The St. Helena high, with a mean central pressure value of above 1020hPa, was centered at about 32°S, 5°W.°, and the next month's The St. Helena high, with a mean central pressure value of above 1020hPa, was centered at about 28°S, 8°. °and finally, the last month of the Kiremit 2025 season The St. Helena high, with a mean central pressure value above 1020hPa, was centered at about 30°S, 10°W.the Azores' high During Jun 2025, with The Azores High, with a mean central pressure of 1018 hPa, was centered at approximately 37°N, 18°W, and in the next month of the season, July 2025 The Azores high, with a mean central pressure value of 1020hPa, was centered at about 38°N, 30°W. and in the following month Azores high, with a mean central pressure value of 1020hPa, was centered at about 39°N, 15°W. and finally, during the last month of kiremt 2025 season The Azores high, with a mean central pressure value of 1018hPa, was centered at about 37°N, 8°W .

2.2 Lower Troposphere (850 hPa Vector Wind)

During the beginning months Jun during kiremt 2025 Easterly flow with below 4 – 16 m/s mean vector wind flow originating from the Arabian Sea and the Indian Ocean., and next month Easterly flow with below 0 – 12 m/s mean vector wind flow was originated from the Mediterranean Sea and the Indian Ocean. Then the month of August Easterly flow with below 0 – 12 m/s mean vector wind flow was originated from the Mediterranean Sea and the Indian Ocean. Last month strong cross-equatorial and northeasterly flow of below 0-12 m/s was observed over the northern and western Indian Ocean, and southeasterly, northeasterly, and easterly flow was dominant over the Arabian Peninsula

2.2 Middle Troposphere (500 hPa Geopotential Height).

When analyzing the Geopotential height from the Climate Diagnostics Bulletin in Jun 2025, Cross-equatorial and southeastern flow of above3 to 9 m/s was observed over the northern and western Indian Ocean, Arabian Sea, and the adjoining areas of the, Horn of Africa. In the month of July Cross-equatorial and southeastern flow of above 3 to 9 m/s was observed over the northern and western Indian Ocean, Arabian Sea, and the adjoining areas of the Horn of Africa., the following month. Subsequently, in August 2024, a Cross-equatorial and southeastern flow of above 3 to 9 m/s was observed over the northern and western Indian Ocean, Arabian Sea, and the adjoining areas of the Horn of Africa. in September the Geopotentioal height from the Climate Diagnostics Bulletin in September 2024, the fluctuation of 500-hPa Geo- -potential height values over central and eastern Africa was 3 to 12 pm .

2.4 Upper Troposphere (200 hPawind vector).

Upper Troposphere (200 hPa Vector Wind) Ethiopia, the kiremt season from Jun 2025 to September 2024 when we examine the speed and location in the northern hemisphere from Climate Diagnostics Bulletin the 200 hpa vector wind during the season the starting month of Jun2025 The westerly wind, associated with the Subtropical westerly jet, had 0- 30 m/s and strengthened further, while the upper-level easterly flow, associated with the tropical easterly jet, weakened further. In the month of August, the westerly wind, associated with the Subtropical westerly jet, had 0- 30 m/s and strengthened further, while the upper-level easterly flow, associated with the tropical easterly jet, weakened further, finally in the month of September Equatorially stronger easterly-westerly winds 0- 30 m/s were dominating in most of the Horn of Africa. The subtropical easterly jet had weakened further, while the upper-level westerly flow, associated with the tropical westerly jet, weakened further

Reference: -Climate Diagnostics Bulletins published during the year 2025.

3. Tropical Highlights – June-September 2025

During June 2025, sea surface temperatures (SSTs) were near-average across much of the equatorial Pacific. The latest monthly Niño indices were +0.6°C for the Niño 1+2 region and 0.0 °C for the Niño 3.4 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.

In July 2025, sea surface temperatures (SSTs) were near normal across much of the equatorial Pacific. The latest monthly Niño indices were +0.5°C for the Niño 1+2 region and -0.1°C for the Niño 3.4 region. The oceanic thermocline depth, measured by the

During August 2025, sea surface temperatures (SSTs) were to below average across much of the equatorial Pacific . The latest monthly Niño indices were +0.2°C for the Niño 1+2 region and -0.3°C for the Niño 3.4 region. The depth of the oceanic thermocline (measured by the depth of the 20°C isotherm) was below average across the central and eastern equatorial Pacific. The corresponding sub-surface temperatures were 1-3°C below average in the eastern equatorial Pacific.

During September 2025, sea surface temperatures (SSTs) were below average across the central and eastern equatorial Pacific. The latest monthly Niño indices were -0.2°C for the Niño 1+2 region and - 0.4°C for the Niño 3.4 region The depth of the oceanic thermocline (measured by the depth of the 20°C isotherm) was below-average across the central and eastern equatorial Pacific. Corresponding sub-surface temperatures were 1- 3°C below average in the eastern equatorial Pacific.

Weather

4.1 Temperature

During kiremt 2025, days remained hot over Southeast, northeastern, and western parts of Ethiopia (fig.4.2.2). In particular, extreme maximum temperature values exceeded 40.0 °C over Gewane, Metehara (NMSA), Awash Arba, Chifra, Aysha, Metema, Dire Dawa, Dalifagi, Elidar, Semera, Awash Arba, Aysha, Metehara (NMSA), Dalifagi, Elidar, Semera, (NMSA), Abaya, Semera, Elidar, Aysha, and Gewane.

the extreme maximum temperature values had about 45, 42.8, 42.5, 42.5, 4241.8, 40.2, 40, 45.8, 45, 42.5, 41.5, 40.4, 40, 45.8, 42.4, 43.4, 41.6, 40, and 40 in °C on the Jun 11th , Jun 1st,, Jun 21st , Jun 22nd , Jun 9th , Jun 7th , Jun 11th , Jun 5th , Jun 6th , July 1st , July 1st , Jul 1st , July 1st , July 1st , July 10th , Aug.3rd , Sep 15th , Sep 15th , Sep 17th , and Sep 16th , respectively (table 4.1.1). Hence, the extreme minimum temperature values were as low as 5, 4, 4.8, 3.5, 5, 5, 2.8, 3, 5, 5, 3.4, 4, and 4.2 in°C over Alemketema, Ambamaria, Bui, Alemketema, Ambamariam, Sholagebaya, Ambamariam, Alemketema, Bui, Sholagebaya, Ambamariam, Alemketema, and D/Tabor on Jun 21st , Jun 16th , Jun 4th , Jun 8th , Jun 24th , Jun 18th , Jun 22nd , Jun 11th , Jun 31st , Jun 30th , Jun 18th , Jun 8^{th,}, and Ju19th respectively (Table 4.1.2). The temperature anomaly showed a negative departure over most parts of the Somali Region and some pocket areas of other regions across

the country. In contrast, positive departures were observed over most parts of all regions, except the Somali Region, where positive departures occurred only in some localized areas during Kiremt (Table 4.1.1).

Table 4.1.1 Stations with extreme maximum Temperature values of greater than 40^{O}C during Kiremt 2025.

Name	Value	Date	Month
Gewane	45	11	Jun
Metehara (NMSA)	42.8	1	Jun
Awash Arba	42.5	21	Jun
Chifra	42.5	22	Jun
Aysha	42	9	Jun
Metema	41.8	7	Jun
Dire Dawa	40.2	1	Jun
Dalifagi	40	5	Jun
Elidar	45.8	6	Jun
Semera	45	1	July
Awash Arba	42.5	1	July
Aysha	41.5	1	July
Metehara (NMSA)	40.4	1	July
Dalifagi	40	1	July
Elidar	45.8	10	July
Semera	42.4	3	Aug.
Semera	43.4	15	Sep
Elidar	41.6	15	Sep
Aysha	40	17	Sep
Gewane	40	16	Sep

Table 4.1.2 Stations with Extreme Minimum Temperature values less than 5°C during Kiremt 2025.

Name	Value	Date	Month
Alemketema	5	21	Jun
Ambamaria	4	16	Jun
Bui	4.8	4	Jun
Alemketema	3.5	8	July
Ambamariam	5	24	July
Sholagebaya	5	18	July
Ambamariam	2.8	22	Aug
Alemketema	3	11	Aug
Bui	5	31	Aug
Sholagebaya	5	30	Aug
Ambamariam	3.4	18	Sep
Alemketema	4	8	Sep
D/Tabor	4.2	19	Sep

4.2. Rainfall

Kiremt is normally the main wet season for the rain-benefiting areas of western, central, northwestern, and southwestern Ethiopia. The climate during this season is characterized by cool temperatures and frequent rainfall. Seasonal rainfall totals often exceed 1250 mm across much of the Kiremt rain-benefiting regions, with the highest amounts occurring in western, central, and northwestern Ethiopia. The seasonal total rainfall during Kiremt 2025 exceeded 1250 mm over Amhara, most parts of the Oromia Region, and some parts of SNNPR. (fig 4.2.1).

During kiremit 2025 heavy falls in 24 hours are greater than or equal to 80 mm, during Kiremt 2025 about 127, 101, 84.9, 78, 167.6, 105.2, 92, 85.7, 81, 80.6, 79.4, and 86 in mm over, Gambella, Limugenet, Nazreth, Awash Arba, Nekemte, Kachise, Dilla, Ejaji, Motta, Debark, Nura-Era, Gundomeskel were reported on July 24th ,July 7th , July, 31st ,July 31st ,Aug 6th ,Aug 3rd ,Aug 7th Aug 27th ,Aug 12th ,Aug 11th,Aug 18th, Aug 29th during Kiremit 2025 (table 4.2.1).

In general, the seasonal rainfall amount of Kiremt 2025 was below normal over southern and eastern Afar, southern Oromia, south eastern SNNP and most of Somalia regions. During Kermit normal rainfall condition was experienced over most of Tigre center land eastern Amhara, central and eastern Oromia most of Gamble and north and western Afar and central parts of SNNP. Finally, above-normal rainfall conditions prevailed over most of Benishangul-Gumuz, eastern Gambela, western and northwestern Amhara, western-central Oromia, and some pocket areas of SNNP." (fig.4.2.5).

During Kiremt 2025, rainfall was wetter than the previous Kiremt season over central Tigray, most of Gambela and Benishangul Gumuz, eastern Somali Region, eastern and southeastern Afar, central and western Oromia, and most parts of SNNP. On the other hand, drier-than-last Kiremt conditions were observed over western Tigray, northern and western Afar, western Somali Region, eastern Oromia, central and southern Amhara, and

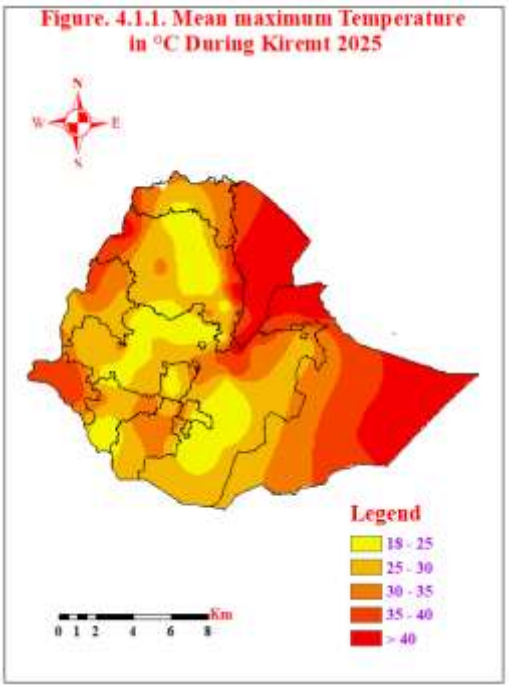
some pocket areas of SNNP and Benishangul Gumuz.

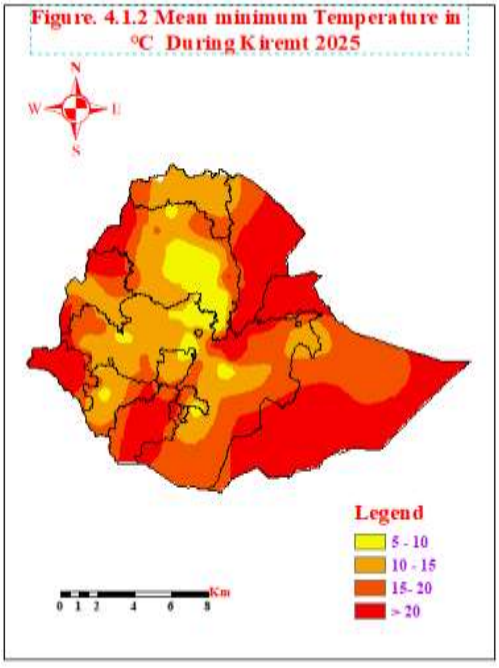
Table 4.2.1. Station(s) with more than or equal to 80mm of rainfall in 24 hours during Kiremt 2025.

Name	Value	Date	Month
Gambella	127	24	July
Limugenet	101	7	July
Nazreth	84.9	31	July
Awash Arba	78	31	July
Nekemte	167.6	6	Aug
Kachise	105.2	3	Aug
Dilla	92	7	Aug
Ejaji	85.7	27	Aug
Motta	81	12	Aug
Debark	80.6	11	Aug
Nura-Era	79.4	18	Aug
Gundomeskel	86	29	Sep

Table 3.2.2. Kiremt 2025 Total rainfall Amount Exceeding 1250 mm.

Name	Value
Kachise	1260.3
Aira	1360.5
Aman	1372.1
D/Tabor	1374.6
Bahir Dar Met	1381.1
Gidaayana	1398.4
Chewka	1468.1
Bullen	1486
Gimbi	1493.4
Gatira	1543.43
Arejo	1694.6
Nekemte	1815.5





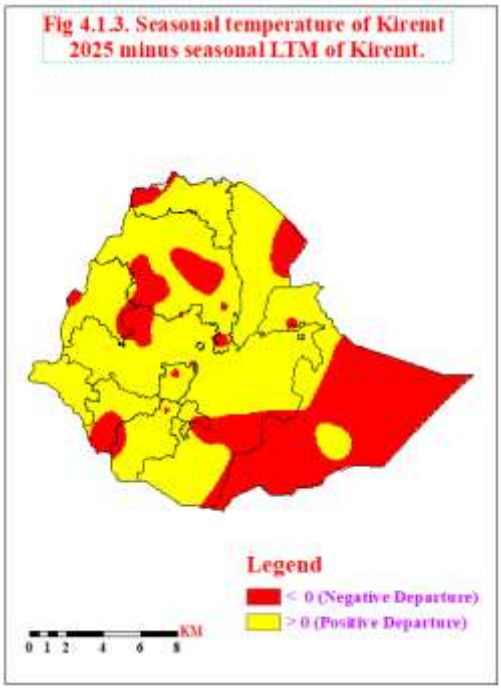


Fig 4.1.3. Seasonal temperature of Kiremt 2025 minus seasonal LTM of Kiremt.
Legend
< 0 (Negative Departure)
> 0 (Positive Departure)
KM
0 1 2 4 6 8


Fig:4.2.2,Percent of Normal Rainfall of the Kiremt 2025
N
W
E
S
Legend
0 - 75
75 - 125
> 125
Km
0 1 2 4 6 8

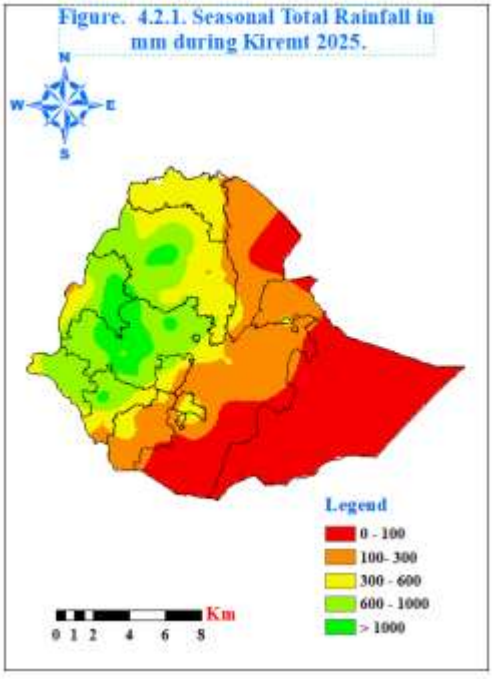


Figure. 4.2.1. Seasonal Total Rainfall in mm during Kiremt 2025.
N
W
E
S
Legend
0 - 100
100- 300
300 - 600
600 - 1000
> 1000
Km
0 1 2 4 6 8

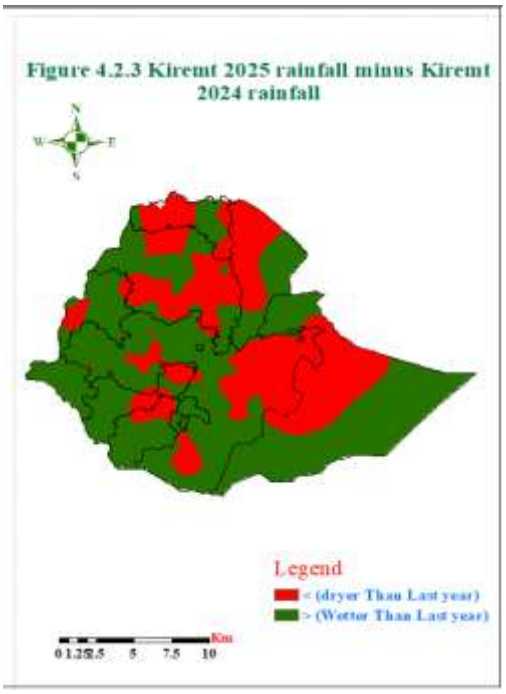


Figure 4.2.3 Kiremt 2025 rainfall minus Kiremt 2024 rainfall
N
W
E
S
Legend
< (dryer Than Last year)
> (Wetter Than Last year)
Km
0 1.252.5 5 7.5 10