

FEDERAL DEMOCRATIC REPUBLIC OF ETHIOPIA

MINISTRY OF WATER AND ENERGY

NATIONAL METEOROLOGICAL AGENCY

Meteorological Data and Climatology Directorate

SEASONAL CLIMATE BULLETIN

Kiremt 2020

Some Applications of Climate Information

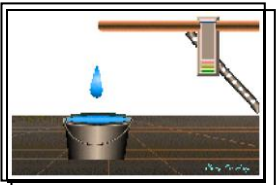
Disaster Management



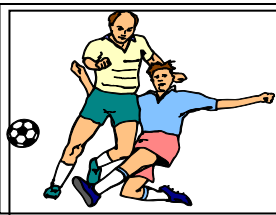
Construction



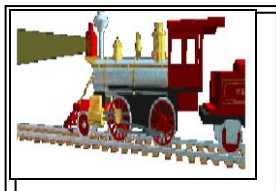
Environment & Health



Water Resources Management



Recreation & Tourism

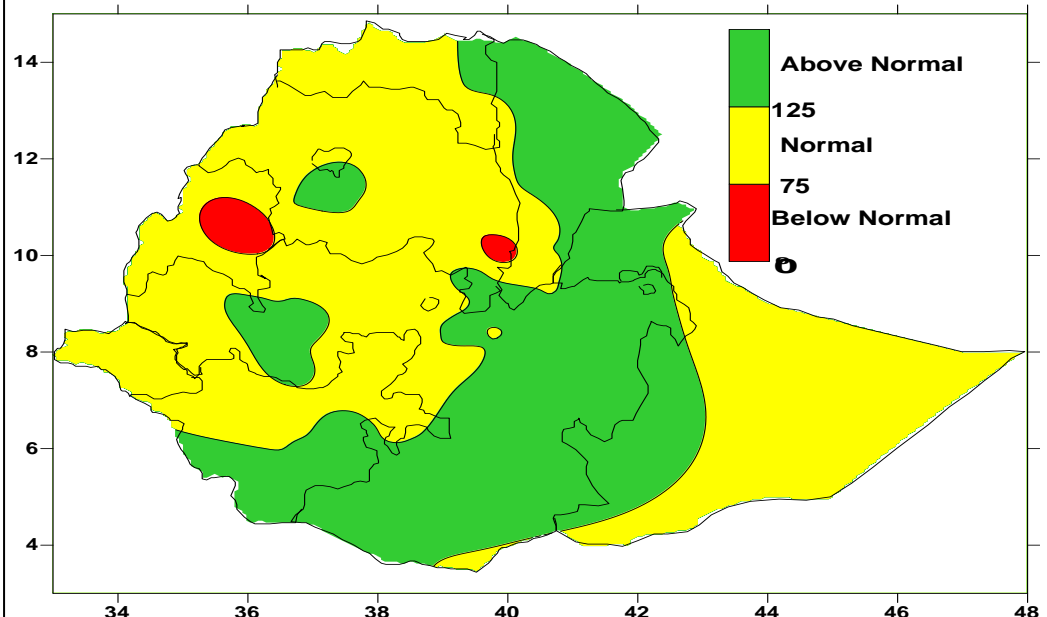


Transport

HIGHLIGHTS

The seasonal total rainfall amount of Kiremt 2020 was more than 600 mm over Benishangule, southern and western Amhara, Northern and western Tigray, western and northern SNNPR as well as parts of western and central Oromia. In particular, the seasonal total rainfall exceeded 1400 mm over Bahir Dar Met, Chageni, Darian, Gimbi, Gunjomariam, Ifabia, Intoto, Mytsebri and Nekemte with amount 1729, 1512, 1496, 1716, 1467, 1451, 1435, 1402 and 1628 mm respectively. During this season, days remained hot over the lowlands northeastern, eastern and pocket areas of northwest Tigray and Amhara. Extreme maximum temperature was recorded over Metehara (NMSA) and Semera 40 and 45°C respectively. Hence, the extreme minimum temperature values were as low as 1.4, 0.0, 1.0, 0.0 and 1.3°C Chole, Chench, Mesela, Gojeb and Hagera Selam respectively.

In general, the seasonal rainfall amount of Kiremt 2020 was below normal over tip of southeast Amhara, east of Benishangul. In the northeast Tigray, most places of Afar, southern parts of SNNPR, north Somali, south and eastern Oromia were above normal rainfall observed. Most parts of the country were recorded Normal rainfall. Kiremt 2020 were drier than Kiremt 2019 over most parts of the country, except central and eastern Amhara, Northern Gambella, Central and eastern Oromia, northwestern SNNPR. The temperature anomaly were positively departed most parts of Tigray and Amhara, northern Afar, central, western and southern Oromia, north and south tip of SNNPR. The rest of the country had negative temperature anomaly (fig.4.2.5).



Percent of Normal Rainfall of Kiremt 2020

Foreword

This climate bulletin is prepared and disseminated by the National Meteorological Agency (NMA). 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 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 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 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 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 a success.

Teshome,

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Addis Ababa

1. Introduction

1.1. General

This climate bulletin contains summary of climatic conditions that prevailed over the country during Kiremt 2020.

Kiremt is the main rainy season that covers the period from **June** to **September**. The Kiremt rainfall covers most parts of the country with the exception of some part of south and southeast of Ethiopia. The climate of the season is mostly characterized by Cold and moist conditions. Generally, the rainfall of this season is very important for growing of Meher crops.

1.2. Summary of Kiremt 2019

The seasonal total rainfall amount of Kiremt 2020 was more than 600 mm over Benishangule, southern and western Amhara, Northern and western Tigray, western and northern SNNPR as well as parts of western and central Oromia (fig.4.2.1) and table 4.2.2. In general, the seasonal total rainfall of Kiremt 2020 was wet over much of the Kiremt rain-benefiting areas. However most parts of the country were recorded Normal rainfall. Besides, Kiremt 2020 was drier than Kiremt 2019 over much of the country, except central and eastern Amhara, Northern Gambella, Central and eastern Oromia, northwestern SNPPR (fig.4.2.3).

2.0 Synoptic Situation

2.1 Surface

The Mascarene high with a mean central pressure value of 1020hPa .was centered at 30°S, 65°E. The central pressure value was below normal up to -1 hPa. The St. Helena high with a mean central Pressure value of 1020hPa was centered at 30°S, 20°W. The central pressure value was normal to above normal 0 to 1hPa.

The Azores high with a mean central pressure value of 1020hPa was centered at 40°N, 30°W. The central pressure value was normal to above normal 0hPa up to 2hPa.

2.2 Lower Troposphere (850hPa vector wind)

Westerly to southerly flow of wind from 4 -6 m/s was dominant over western and northern parts of the country whereas 6-12m/s wind south eastern parts of the country. The core wind TEJ exceeded 18m/s wester Indian Ocean.

2.3 Middle Troposphere (500-hPa Geopotential Height)

The variation of geopotential height values were 9 to 18gpm over Red Sea, Arabian Sea and Horn of Africa and adjoining areas.

2.4 Upper Troposphere (200 hPa vector wind)

The strong easterly flow associated with the Tropical easterly Jet had strengthened and speed of the core exceeded 20m/s along Arabian Sea

and 10 to 15m/s of wind was west to eastern parts of the country respectively.

3. Tropical Oceanic and Atmospheric Highlights

ENSO, La Nina Condition continued during June 2020, as negative sea surface temperature (SST) anomalies remained below average across the central and eastern equatorial Pacific Ocean. The latest monthly SST index was -1.0°C in the Niño-3.4 region.

La Nina conditions continued during July 2019, as negative sea surface temperature (SST) anomalies persisted the central and eastern equatorial Pacific Ocean. The monthly SST anomaly index was -1.2°C to -0.5°C in the Niño-3.4 region.

La Niña condition continued during August 2020, as negative sea surface temperature (SST) anomalies further persisted across the central and eastern equatorial Pacific Ocean. The monthly SST anomaly index was -1.0°C in the Niño-3.4 region.

During September 2020, La Niña conditions persisted across the equatorial Pacific Ocean. However, sea surface temperature (SST) anomalies in the central and eastern equatorial Pacific Ocean remained below average. The latest monthly SST index was -1.0°C in the Niño-3.4 region.

Reference: Climate Diagnostics Bulletin 2020.

NOAA/NCEP Composite analysis

: <http://www.esrl.noaa.gov/psd/>

4. Weather

4.1 Temperature

During kiremt 2020, days remained hot over South East and north eastern parts of Ethiopia (fig.4.2.2). In particular, extreme maximum temperature values exceeded 40.0°C over Extreme maximum temperature was recorded over Metehara (NMSA) and Semera 40 and 45°C on the 1st of June and 8th of June, respectively (table 4.1.1). Hence, the extreme minimum temperature values were as low as 1.4 , 0.0 , 1.0 , 0.0 and 1.3°C Chole, Chench, Mesela, Gojeb and Hagera Selam respectively. (Table 4.1.2 and fig 4.2.4.). The temperature anomaly were positively departed most parts of Tigray and Amhara, northern Afar, central, western and southern Oromia, north and south tip of SNNPR. The rest of the country had negative temperature anomaly (fig.4.2.5).

Table 4.1.1 Stations with extreme maximum temperature values of greater than or equal to 39.0°C during Kiremt 2020.

Name	Month	Date	Extreme maximum temperature
Melka Jilo	6	5	39
Metehara	6	1	40
Semera	6	8	45

Table 4.1.2 Stations with extreme Minimum temperature values less than 2°C during Kiremt 2020

Name	Month	Date	Extreme minimum temperature
Chole	6 and 7	14 and 4	1.4 and 1.4
Chencha	8	15	0.0
Mesela	7	13	1.0
Gojeb	7	31	0.0
Hagere Selam	6 and 7	8 and 24	1.3 and 0.0

4.2 Rainfall

Normally Kiremt is wet season for Kiremt-rain-benefiting areas of western, central, northwestern and southwestern Ethiopia.

The climate of this season is characterized by cold and wet days. The mean seasonal rainfall amount of this season exceeds 1000mm over much of the Kiremt-rain-benefiting areas with larger amount of rainfall occurring over south western, Central and north western Ethiopia.

The seasonal total rainfall amount of Kiremt 2020 was exceeded 600 mm over Benishangule, southern and western Amhara, Northern and western Tigray, western and northern SNNPR as well as parts of western and central Oromia. In particular, the seasonal total rainfall exceeded 1400 mm over Bahir Dar Met, Chageni, Darian, Gimbi, Gunjomariam, Ifabia, Intoto, Mytsebri and Nekemte with amount 1729, 1512, 1496, 1716, 1467, 1451, 1435, 1402 and 1628 mm

respectively. (Table 4.2.2). While heavy fall in 24 hours greater than 30mm, during Kiremt 2020 86.2 and 69.9mm over Meko and Mojo was reported on the 22th June and 20th August 2020 (table 4.2.1).

In general, the seasonal rainfall amount of Kiremt 2020 was below normal over tip of southeast Amhara, east of Benishangul. In the northeast Tigray, most places of Afar, southern parts of SNNPR, north Somali, south and eastern Oromia were above normal rainfall observed. Most parts of the country were recorded Normal rainfall. Kiremt 2020 were drier than Kiremt 2019 over most parts of the country, except central and eastern Amhara, Northern Gambella, Central and eastern Oromia, northwestern SNPPR (fig.4.2.3).

Table 4.2.2. Station(s) with more than 1400 mm of seasonal total Rainfall during Kiremt 2020.

<i>Name</i>	<i>Amount(mm)</i>
Bahir Dar	1729
CHAGINI	1512
Darian	1496
Gimbi	1716
Gunjomariam	1467
Ifabia	1451
Intoto	1435
MYTSEBRI	1402
Nekemte	1628

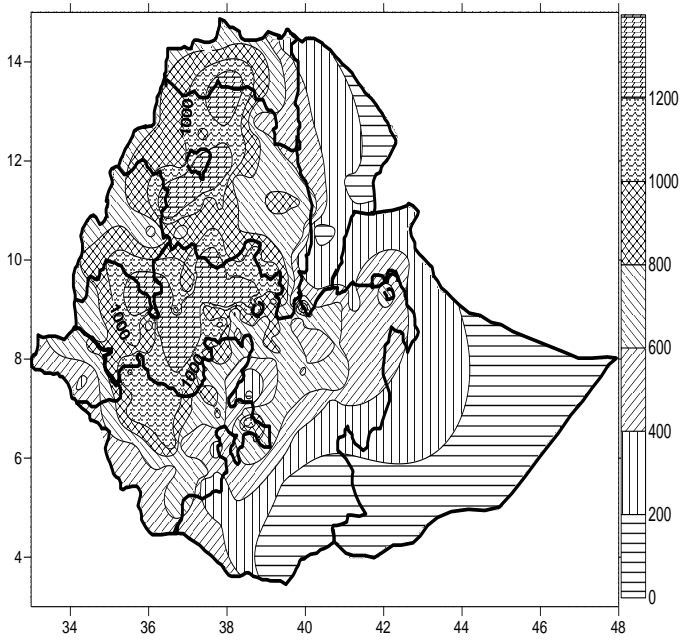


Fig .4.2.1 Seasonal total rainfall of Kiremt 2020

<i>Stations</i>	<i>Amount</i>	<i>Date</i>	<i>Month</i>
Gidole	42	06	6
Meko	86.2	22	6
Dimtu	48.5	18	7
Kulish	51.8	16	6
Addis Ababa Bole	47.7	16	8
Ejere	37.5	31	7
Mojo	69.9	20	8
Ifabia	44.3	09	7

Table 4.2.1. Station(s) with more than or equal to 30mm of rainfall in 24 hours during kiremt 2020.

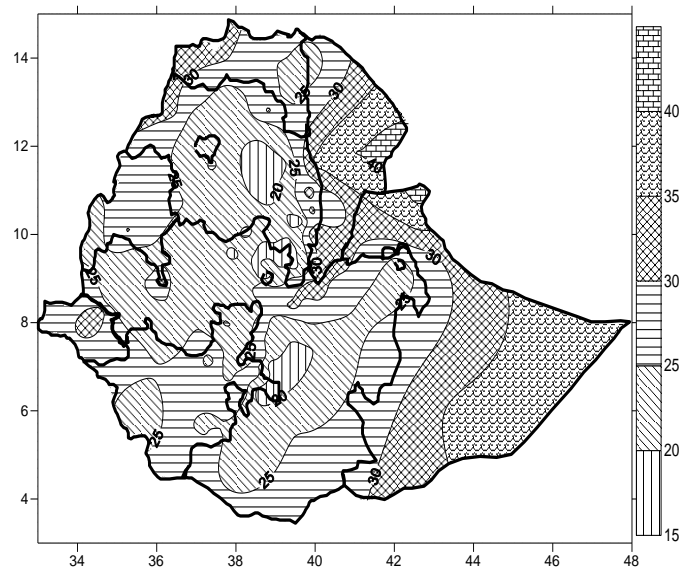


Fig. 4.2.2 Maximum Temperature in °C during kiremt 2020

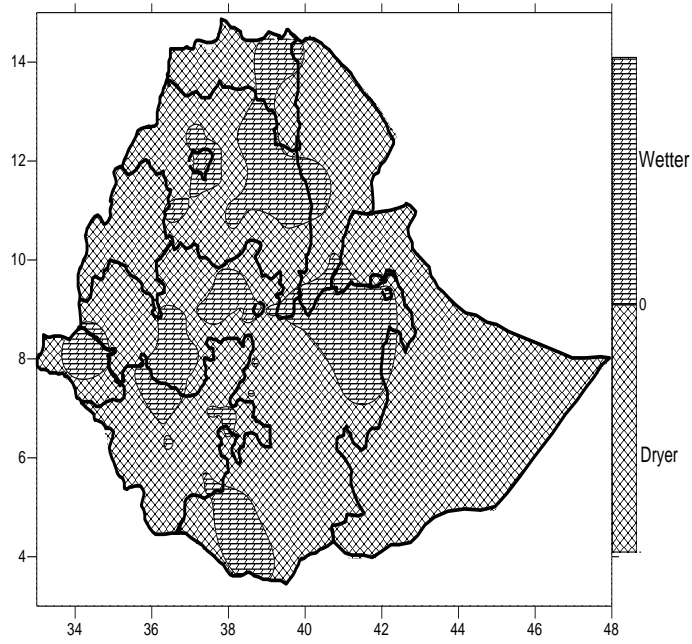


Fig .4.2.3 Seasonal total rainfall of Kiremt 2020 minus seasonal total rainfall Kiremt 2019.

Fig. 4.2.5. Mean Temperature Anomaly current 2020 JJAS to the long term mean.

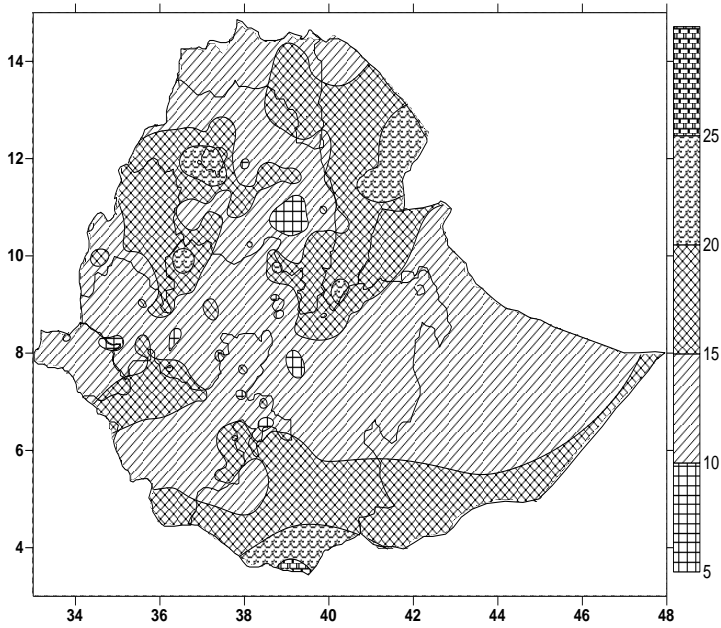
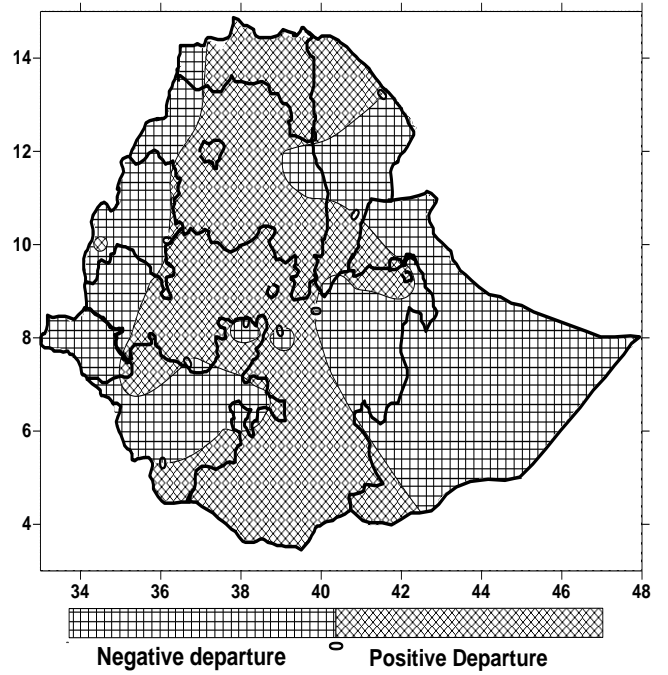
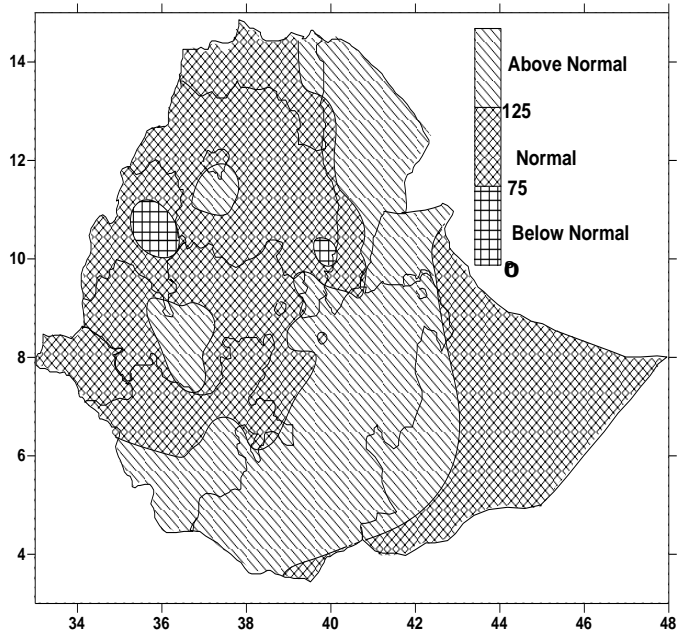


Fig. 4.2.4 Minimum Temperature in °C during Kiremt 2020

Fig. 4.2.6. Percent of Normal Rainfall of Kiremt 2020



Legend of Tercile probability

- ✓ *0-75 shows below normal*
- ✓ *75-125 shows normal*
- ✓ *>125 shows above normal*