IGAD CLIMATE PREDICTION AND APPLICATIONS CENTRE

ICPAC

Bulletin for Dekad 32 of 2018
Issue Number: ICPAC/02/968

10 DAYS CLIMATOLOGICAL SUMMARY AND IMPACTS FOR THE FIRST DEKAD (01-11) OF NOVEMBER 2018 TOGETHER WITH FORECAST FOR THE THIRD DEKAD (21-30) OF NOVEMBER 2018

1.0 Introduction

This bulletin reviews the climatic conditions observed during the first dekad (01-10) of November 2018, and highlights the climate forecast for the third dekad (21-30) of November 2018 and the associated climate impacts over the Greater Horn of Africa (GHA). The observed conditions are compared to the average of the climatological period of 1981-2010 for rainfall and temperature.

For referencing within this bulletin, the Greater Horn of Africa (GHA) is generally subdivided into three sub-sectors: The equatorial sector lying approximately between -5^{o} and 5^{o} latitude, with the northern and southern sectors occupying the rest of the northern and southern parts of the region respectively

2.0 Highlights

During the first dekad of November 2018 southwest and south-central part of the northern sector and parts of western equatorial sector of the GHA recorded rainfall. Several areas east of the equatorial sector and southeastern part of the northern sector of the GHA recorded below normal rainfall.

The northwest, and south-central part of the northern sector, much of the equatorial sector of the GHA recorded warmer than the average maximum and minimum temperature. Several parts of the southern sector recorded warmer than average maximum temperature and southwestern part of the southern sector of the GHA recorded warmer than the average minimum temperature. Much of the rest of the GHA recorded near average or cooler than average maximum and minimum temperature during first dekad of November 2018.

Rainfall forecast for the third dekad of November 2018 shows that rainfall is expected over eastern part northern sector, western, central and northeastern part of the equatorial sector, and in western and northern part of the southern sector of the GHA.

Regions covering, northern Sudan, western and central highlands of Ethiopia, central and western highlands of Kenya, southwestern Uganda, Rwanda, Burundi are forecasted to experience mean temperatures below 20^{o}C. Much of the rest of the GHA are likely to experience average temperatures exceeding 20^{o}C.

3.0 Observed rainfall during the first dekad (01-10) of November 2018

Figure 1a, 1b and 1c shows thedistribution of total rainfall, percent of the long-term average rainfall, and the standardized precipitation index (SPI), respectively.

Rainfall Distribution and Severity

Rainfall was concentrated in southwestern and central parts of the northern sector and western and central parts of equatorial sector of the GHA during the first dekad of November 2018.

South Sudan, Rwanda, Burundi and Uganda: several parts of Uganda, Rwanda and Burundi and western and southeastern part of South Sudan recorded rainfall of between 10mm and 100mm. Part of northern Uganda recorded rainfall exceeding 100mm. Northern and central parts of south Sudan and northeastern Uganda recorded less than 10mm. A few parts of north-central and southeast South Sudan recorded below normal rainfall, much of the rest of these areas recorded near normal rainfall.

Ethiopia, Kenya, and Somalia: North, western and central Ethiopia, west and central Kenya, and southern Somalia recorded between 5mm and 50mm of rainfall. A few places in western Ethiopia, and western and central Kenya recorded rainfall exceeding 50mm. Several parts of Kenya, Somalia and southern part of Ethiopia recorded below normal rainfall. Much of the rest of these areas recorded near normal except for central and northern Ethiopia which recorded above normal rainfall.

Eritrea and Djibouti: much of Djibouti and central and southern Eritrea recorded between 5mm and 25mm of rainfall. Much of these areas recorded above normal rainfall.

Much of the rest of the GHA received little or no rainfall and remained generally dry.

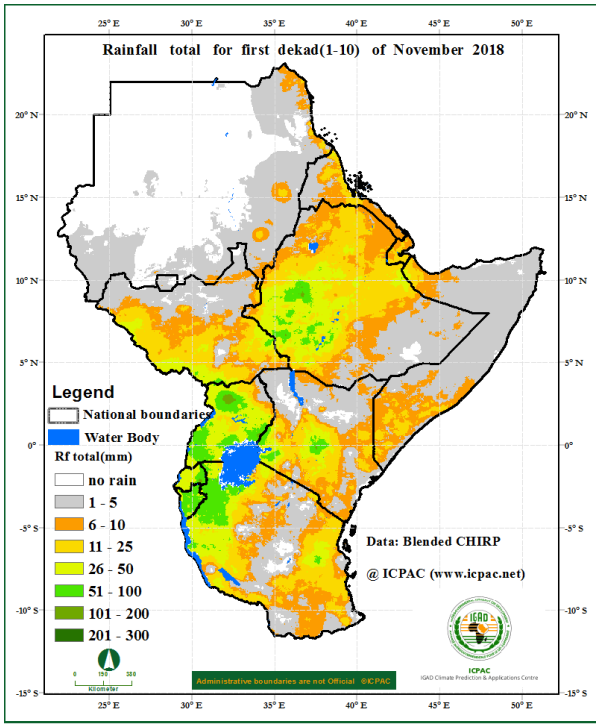

Figure 1a: Total rainfall distribution during the first dekad (01-10) of November 2018. *(Data: ICPAC Blended CHIRP)*

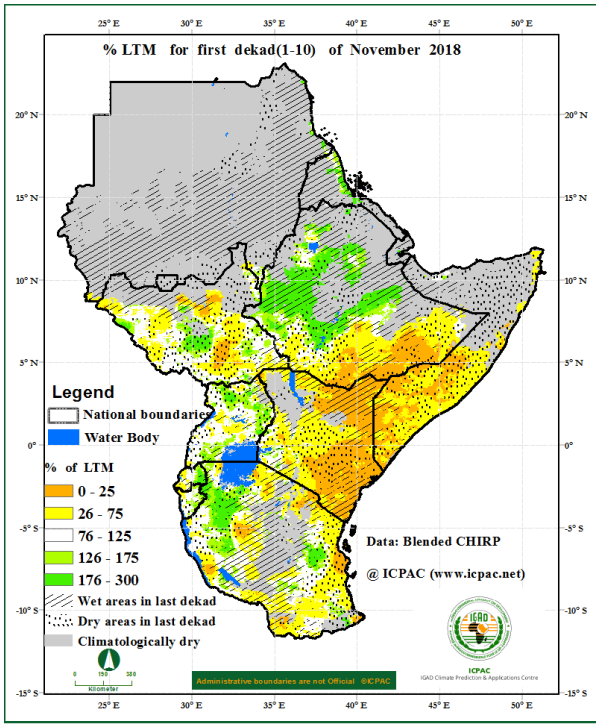

Figure 1b: Percent of long term average rainfall for the first dekad (01-10)of November 2018*(Data: ICPAC Blended CHIRP)*

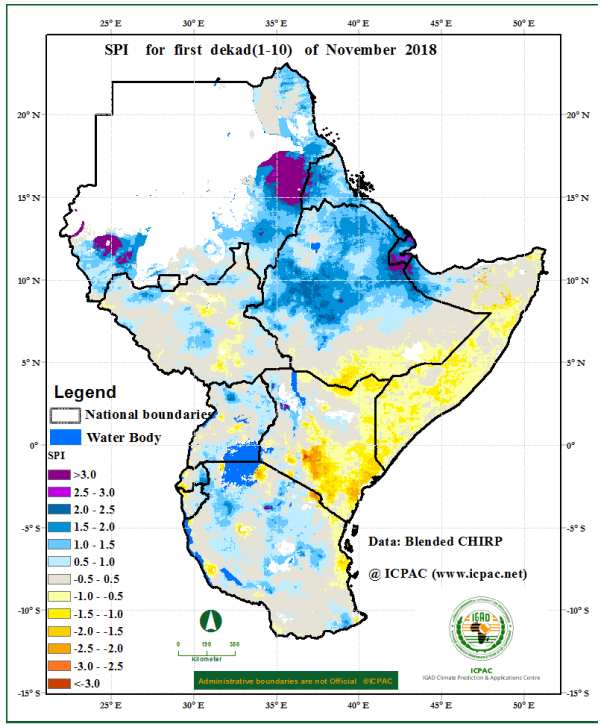

Figure 1c: Standardized Precipitation Index (SPI) for first dekad (01-10) of November 2018*(Data: ICPAC Blended CHIRP)*

Maximum and Minimum Temperature Anomaly

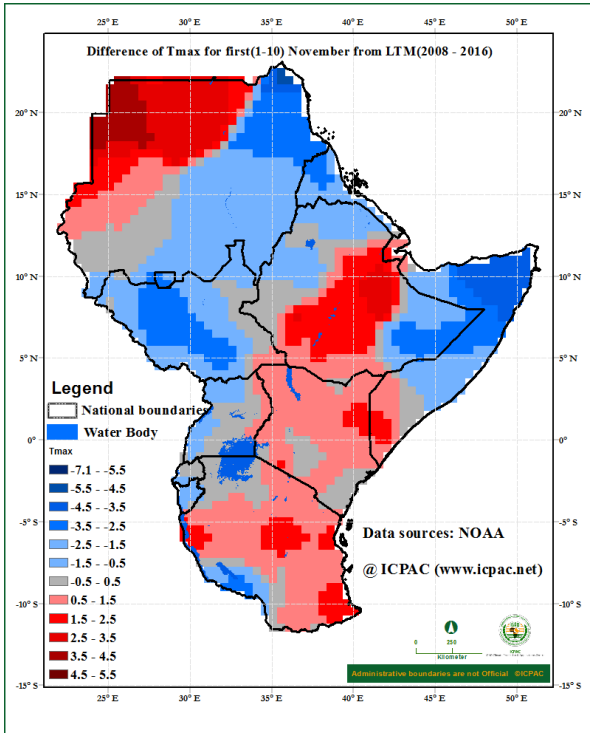

Figure 2: Maximum temperature difference from the average (2008-2017) for the first dekad (01-10) of November 2018(*Data Source: provided by the NOAA/OAR/ESRL PSD*)

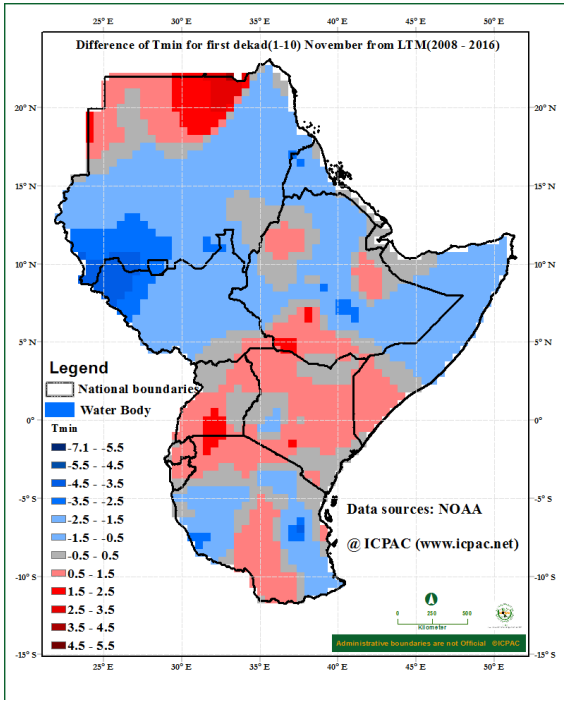

Figure 3:Minimum temperature difference from the average (2008-2017) for the first dekad (01-10) of November 2018 *(Data Source: Data Source: provided by the NOAA/OAR/ESRL PSD)*

The maximum and minimum temperature during the first dekad of November 2018 shows that northern Sudan, central and southern Ethiopia, much of Djibouti, Kenya, southern Somalia, and Tanzania recorded maximum temperature warmer than the long-term mean.

Minimum temperature warmer than the long-term mean was recorded in northern Sudan, southern and eastern Ethiopia, much of Uganda, Rwanda, Kenya, southern Somalia, northern Burundi, and northern and southwest Tanzania.

Much of the rest of the GHA recorded maximum and minimum temperatures that was cooler than the average or that was near the average.

4.0 Vegetation condition indicators

Normalized Difference Vegetation Index Anomaly

The Normalized Difference Vegetation Index (NDVI) anomaly for the period 8th and 15th November, 2018 (Figure 4) indicates that:

South Sudan, Kenya, and Somalia: Indications for deteriorated vegetative conditions was observed in some parts of South Sudan, eastern Kenya, and southeast part of Somalia. Some areas of eastern South Sudan, northeastern and coastal Kenya, and southwest Somalia showed improved vegetation condition as compared with the long term average.

Sudan, Ethiopia, and Tanzania: southeastern Sudan, several parts of Ethiopia, and western and northeastern Tanzania showed an improved vegetative condition as compared to the long term average.

Much of the rest of the GHA, especially northern Sudan, Eritrea, Djibouti, northern and central Somalia, western South Sudan, Uganda, northwestern Kenya, parts of Rwanda, and Burundi, showed little or no change in vegetation conditions as compared with the long term average.

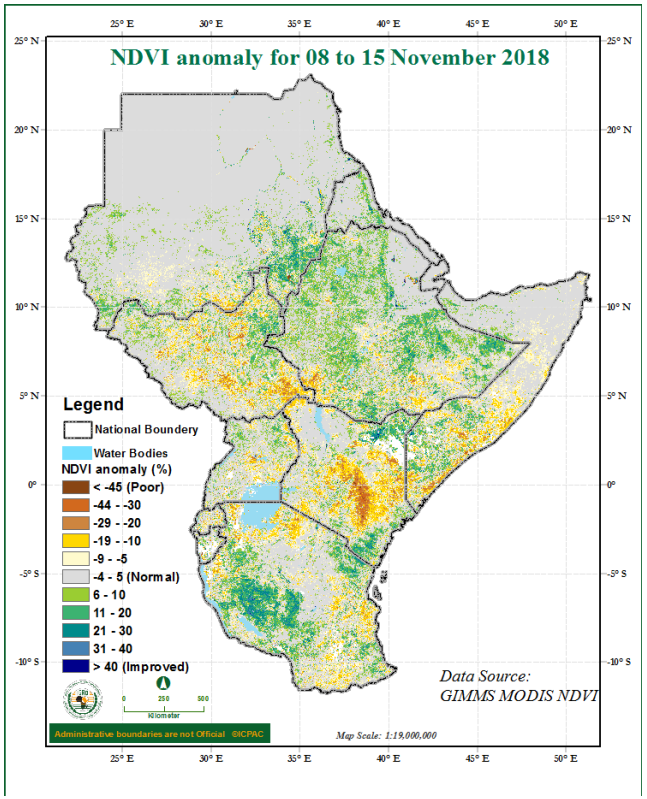

Figure 4: NDVI anomaly for the period between 8th and 15th November 2018 (Data Source: USGS NASA**)**

5.0 Climate Forecast

Rainfall Forecast

The rainfall forecast for the third dekad of November 2018 in Figure 5 indicates that rainfall exceeding 10mm is likely to be observed over western southern and eastern Ethiopia, eastern Djibouti, southeastern South Sudan, north and southern Somalia, western and southern Uganda, north, western and central Kenya, Rwanda, Burundi, and northwestern and northern parts of Tanzania. Parts of western Burundi, southwestern Rwanda and western Tanzania are likely to record high rainfall amounts exceeding 200mm.

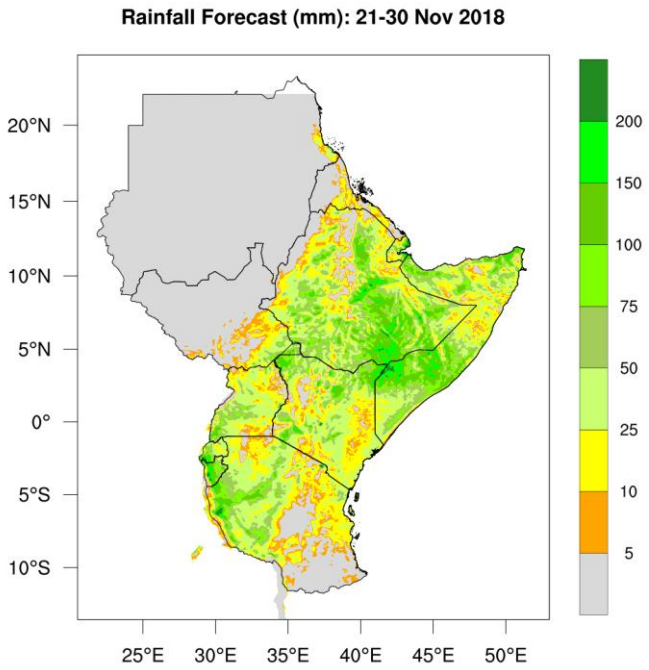

Figure 5: Precipitation forecast for the third dekad (21-30) of November 2018 (Source: WRFICPAC**)**

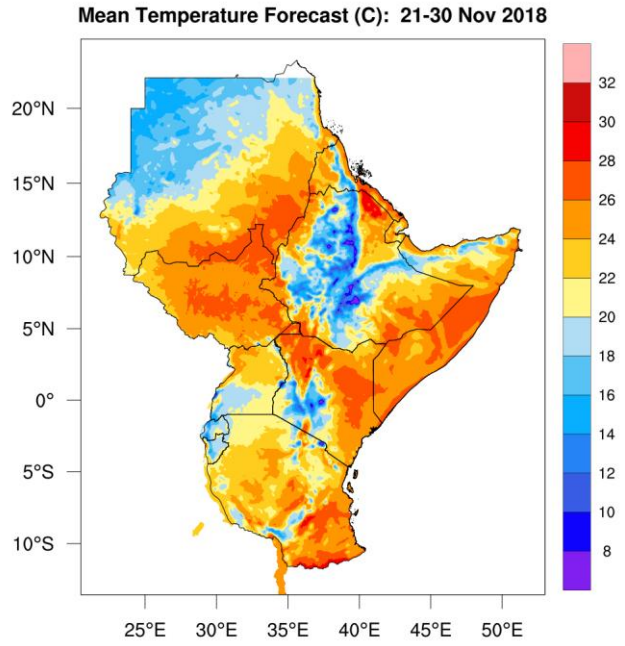

Figure 6: Forecast for average temperature for the third dekad (21-30) of November 2018 (Source: WRF-ICPAC)

Temperature Forecast

The forecast for the mean temperature for third dekad of November 2018 (Figure 6) indicates that cooler mean temperature, not exceeding 20^{o}C is expected in northern part of Sudan, central and western highlands of Ethiopia, southwestern Uganda, western and central Kenya, over much of Rwanda, and Burundi The rest of the GHA is expected to experience mean temperature greater than 20^{o}C.

6.0 Impacts on socio-economic sectors

The socio-economic impacts associated with the observed rainfall and temperature conditions are highlighted below:

6.0 Impacts of the climate conditions

The rainfall conditions in the southern part of the northern sector, and western and eastern part of the equatorial sector of the GHA resulted to improvement in water and pasture conditions, leading to good prospects of water, crop and livestock performance. Coastal parts of Kenya reported flooding that led to the disruption of livelihoods, and incidences of weather and water-related diseases during the first dekad of November 2018 . From the climate forecast for the third dekad of November 2018, some areas of southern Somalia, and central Kenya are likely to record high rainfall amounts which can lead to possible localised flooding and related impacts.

NB: *This ten days bulletin contributes towards the update of the November to November (JJAS) 2018climate outlook (*http://www.icpac.net/wp-content/uploads/GHACOF49_statement_english.pdf*).*

For more information contact
ICPAC P.O. Box 10304, 00100 Nairobi, KENYA;
Tel: +254-020-3514426
E-mail:director@icpac.net

Website: www.icpac.net