IGAD CLIMATE PREDICTION AND APPLICATIONS CENTRE

ICPAC

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10 DAYS CLIMATOLOGICAL SUMMARY AND IMPACTS FOR THE SECOND DEKAD (11-20) OF SEPTEMBER 2018 TOGETHER WITH FORECAST FOR THE FIRST DEKAD (01-10) OF OCTOBER 2018

1.0 Introduction

This bulletin reviews the climatic conditions observed during the second dekad (11-20) of September 2018, and highlights the climate forecast for the first dekad (01-10) of October 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.

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 second dekad of September 2018 western part of the equatorial sector and several places in the northern sector, except for the north and southeastern part of the northern sector of the GHA recorded rainfall. Below normal rainfall was experienced in a few areas western and central part of the northern sector and western part of the equatorial sector of the GHA. Much of the rest of the northern sector and equatorial sector experienced near normal or above normal rainfall.

Rainfall forecast for the first dekad of October 2018 shows that rainfall is expected mainly over western and southeastern parts of the northern sector as well as western and northeastern parts of the equatorial sector of the GHA.

Regions covering, western and central highlands of Ethiopia, central and western Kenya, much of Uganda, Rwanda, Burundi, and Tanzania 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 second dekad (11-20) of September 2018

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

Rainfall Distribution and Severity

Rainfall was concentrated in the western and central part of the northern sector, and western and central part of equatorial sector of the GHA.

Sudan, Somalia and South Sudan: southern part of Sudan, northwest of Somalia and much of South Sudan recorded rainfall of between 10mm and 100mm. South central Sudan and a few areas in eastern South Sudan and northern Somalia experienced above normal rainfall. Much of the rest of these areas experienced near average or above average rainfall conditions.

Eritrea, Ethiopia and Djibouti: Much of Eritrea and Djibouti recorded between 5mm and 50mm of rainfall, the north, western and central Ethiopia recorded between 5mm and 200mm, 100mm to 200mm of rainfall was recorded in some parts of western Ethiopia. Several parts of these areas experienced above normal rainfall.

Rwanda, Burundi, Kenya and Uganda: Much of Rwanda, Burundi and coastal Kenya recorded between 5mm and 25mm, north, western and southeastern Uganda and western Kenya recorded between 5mm and 50mm of rainfall. Several parts of these areas experienced below normal rainfall or remained generally dry.

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

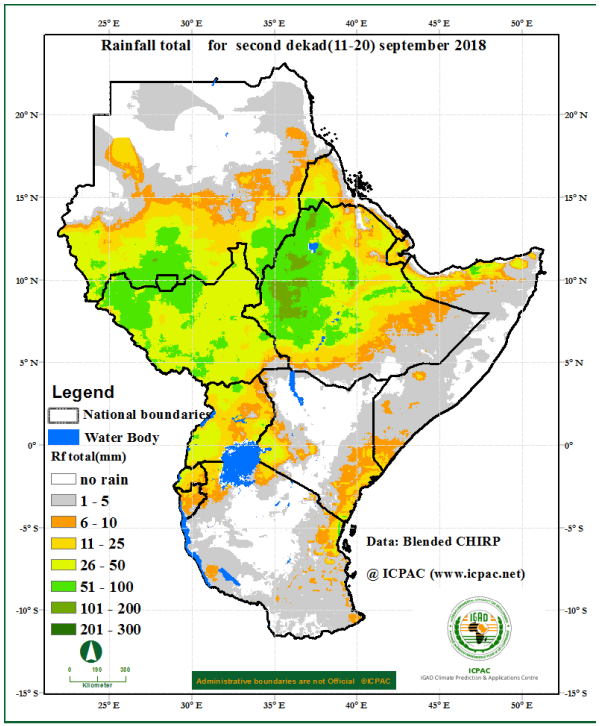

Figure 1a: Total rainfall distribution during the second dekad (11-20) of September 2018. *(Data: ICPAC Blended CHIRP)*

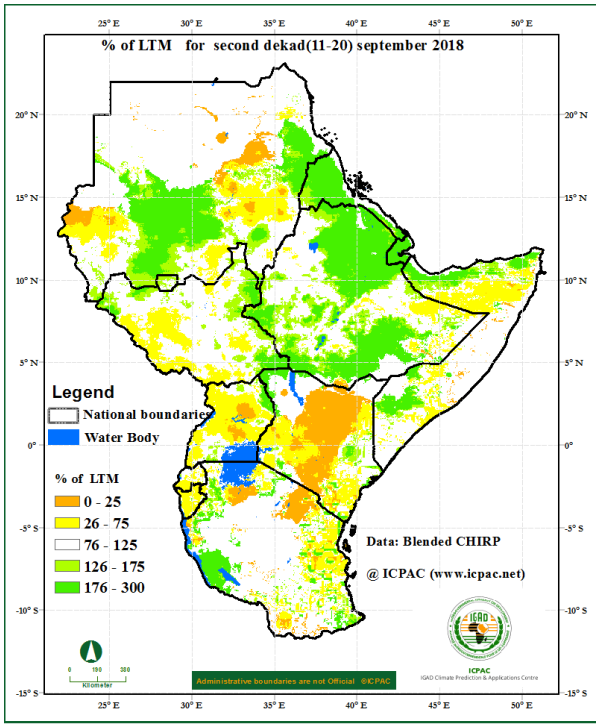

Figure 1b: Percent of long term average rainfall for the second dekad (11-20)of September 2018*(Data: ICPAC Blended CHIRP)*

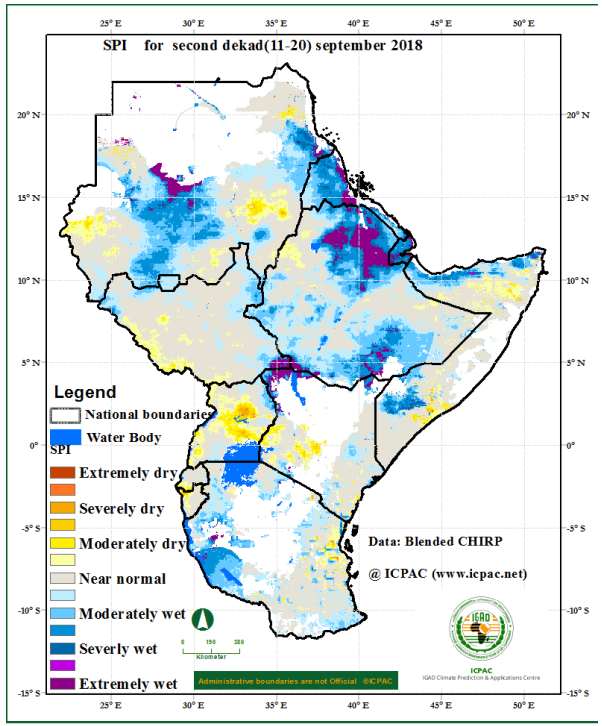

Figure 1c: Standardized Precipitation Index (SPI) for second dekad (11-20) of September 2018*(Data: ICPAC Blended CHIRP)*

4.0 Vegetation condition indicators

Normalized Difference Vegetation Index Anomaly

The Normalized Difference Vegetation Index (NDVI) anomaly for the period 21st and 28th September, 2018 (Figure 4) indicates that:

Sudan, and South Sudan: southern part of Sudan, and northeastern part of South Sudan showed improved vegetation condition as compared with the long term average. Indications for deteriorated vegetative conditions was observed in southwestern parts of Sudan and southern part of South Sudan.

Kenya and Tanzania: some parts of north, central and southern Kenya, and northwestern and eastern parts of Tanzania showed an improved vegetative condition as compared to the long term average.

Ethiopia, Somalia and Uganda: central parts of Ethiopia, and several parts of Uganda, showed deteriorative vegetative conditions as compared with the average. Improvement in vegetation conditions, was however seen in a few places in southern Somalia, southwest and eastern Uganda as well as north south and eastern parts of Ethiopia.

Much of the rest of the GHA, showed little or no change in vegetation conditions as compared with the long term average.

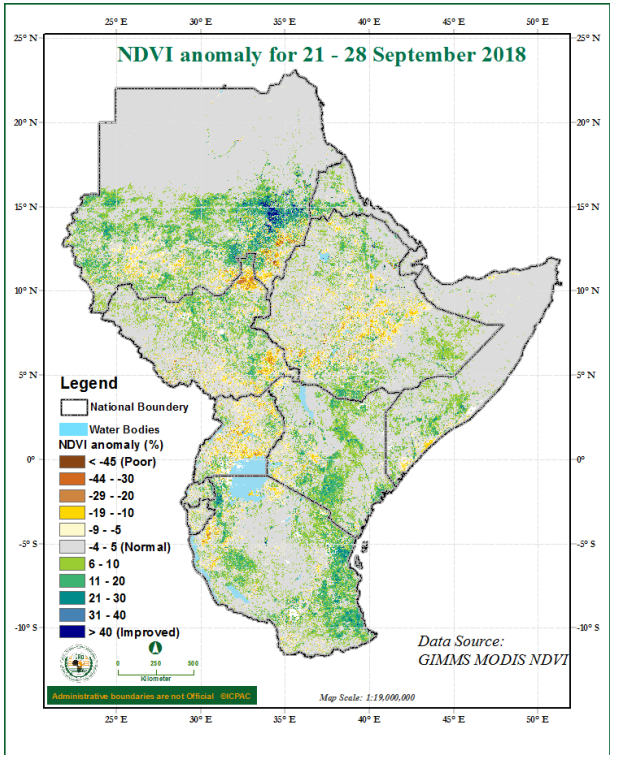

Figure 4: NDVI anomaly for the period between 21st and 28thSeptember 2018 (Data Source: USGS NASA**)**

5.0 Climate Forecast

Rainfall Forecast

The rainfall forecast for the first dekad of October 2018 in Figure 5 indicates that rainfall exceeding 10mm is likely to be observed over northern and western South Sudan, southern part of Sudan, southern Ethiopia, Rwanda, northern Uganda and coastal Kenya. Much of Somalia, south eastern Ethiopia and western Uganda are likely to experience rainfall exceeding 25mm. A few places in northeastern Somalia are likely to record high rainfall amounts exceeding 200mm.

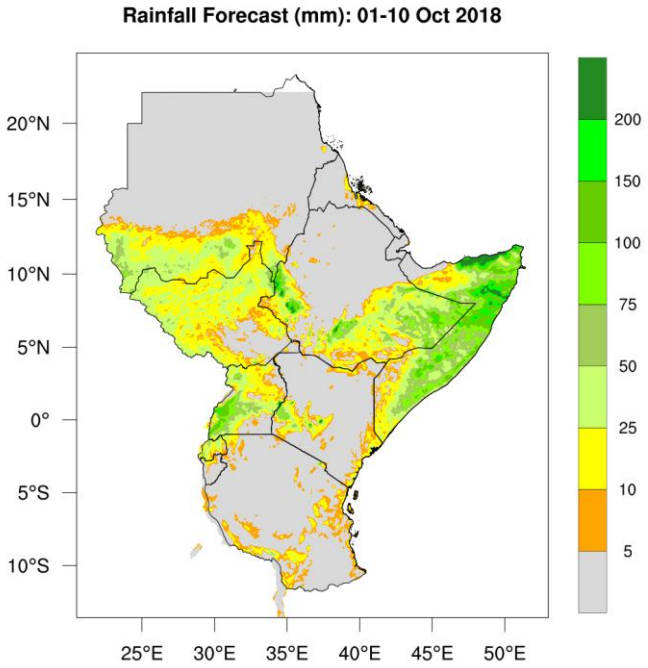

Figure 5: Precipitation forecast for the first dekad (01-10) of October 2018 (Source: WRFICPAC**)**

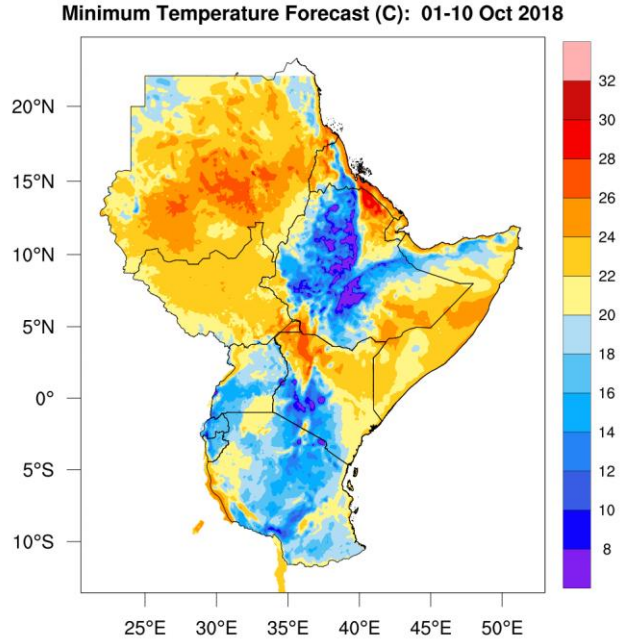

Figure 6: Forecast for average temperature for the first dekad (01-10) of October 2018 (Source: WRF-ICPAC)

Temperature Forecast

The forecast for the mean temperature for first dekad of October 2018 (Figure 6) indicates that cooler mean temperature, not exceeding 20^{o}C is expected in central and western highlands of Ethiopia, over much of Uganda, Rwanda, Burundi, western and central Kenya, and in several parts of Tanzania. The rest of the GHA is expected to experience mean temperature greater than 20^{o}C. The warmest regions are expected to be in southern part of Sudan, central Eritrea and northwestern Kenya.

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

From the climate forecast for the first dekad of October 2018, some areas in northwestern Somalia are likely to record high rainfall amounts which can lead to possible localised flooding and related impacts. The southern part of the northern sector and northeastern part of the southern sector is likely to experienced continued good conditions for water and vegetative growth.

NB: *This ten days bulletin contributes towards the update of the September to December (SOND) 2018 climate outlook (*http://www.icpac.net/wp-content/uploads/GHACOF50_Final_Statement.pdf*).*

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