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

1.0 Introduction

This bulletin reviews the climatic conditions observed during the second dekad (11-20) of April 2018, and highlights the climate forecast for the first dekad (01-10) of May 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 and 2008-2017 for rainfall and temperature, respectively.

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

2.0 Highlights

Rainfall activity was concentrated over the equatorial, southern sectors, as well as in southern parts of the northern sector of the Greater Horn of Africa (GHA). Several areas in the equatorial, southern, and southern part of the northern sectors recorded moderately wet to extremely wet rainfall, way above the long term average.

Cooler than the average maximum and minimum temperature was recorded in parts of Eritrea, Sudan, Ethiopia, Djibouti, Somalia, Uganda and Tanzania. Much of the rest of the GHA recorded near average minimum and maximum temperature, except for northern parts of Sudan as well as western South Sudan.

Rainfall forecast for the first dekad of April 2018 shows that rainfall is likely to persist in several parts of the equatorial sector and southern part of the northern sector of the GHA. Some areas in Uganda, Kenya, Rwanda, South Sudan, southern Ethiopia, and Somalia, are likely to record high rainfall amounts.

Much of GHA is likely to record temperature exceeding 20ºC during the second dekad of April 2018. However, regions over the Ethiopian highlands, central and western highlands of Kenya, southern Uganda, in Rwanda, Burundi, and North-central and southwestern parts of Tanzania are forecasted to experience mean temperatures below 20ºC.

3.0 Observed rainfall during the second dekad (11-20) of April 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 mostly concentrated in the equatorial sector, southern sector and southern parts of the northern sector of the GHA.

Uganda, Rwanda, Burundi, Kenya, Somalia and Tanzania:

Most of these areas recorded rainfall exceeding 50mm except for northern tip of Somalia, parts of coastal Kenya and central parts of Tanzania. The rainfall was near average to above average for most of these areas. Central and eastern Tanzania and southwestern Kenya showed improved rainfall performance as compared with the previous dekad.

South Sudan and Ethiopia:

Southern part of South Sudan and much of southern Ethiopia recorded rainfall amounts of between 50 mm and over 300 mm. Much of the rest of these areas received less than 50 mm of rainfall. Eastern and southern parts of South Sudan and eastern and southern parts of Ethiopia, experiencing moderately wet to severely wet conditions. Much of the rest of these areas recorded near average rainfall except for a few places in northwestern Ethiopia and western South Sudan.

Eritrea and Djibouti:

Central parts of Eritrea recorded between 5 mm and 25mm of rainfall, much of the rest of these areas recorded less than 5 mm. Much of Djibouti and central to eastern Eritrea experienced below average rainfall.

The rest of GHA, particularly in the northern sector recorded or no rainfall.

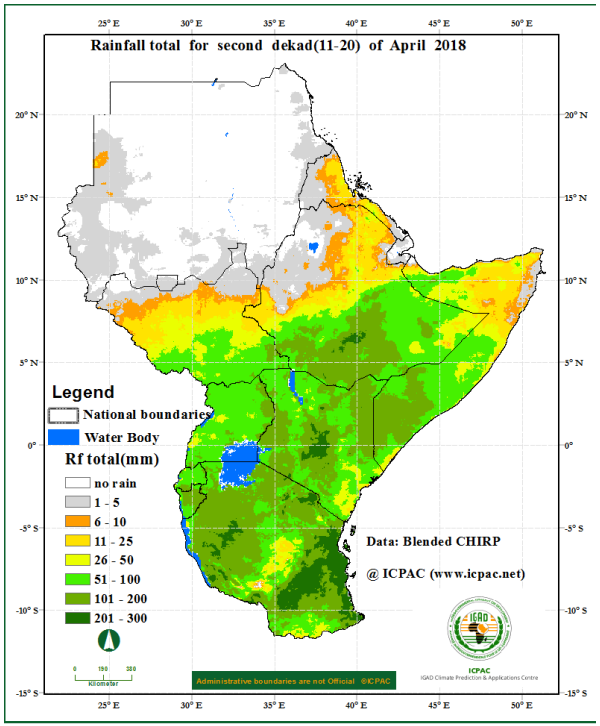

Figure 1a: Total rainfall distribution during the second dekad (11-20) of April 2018. *(Data: ICPAC Blended CHIRP)*

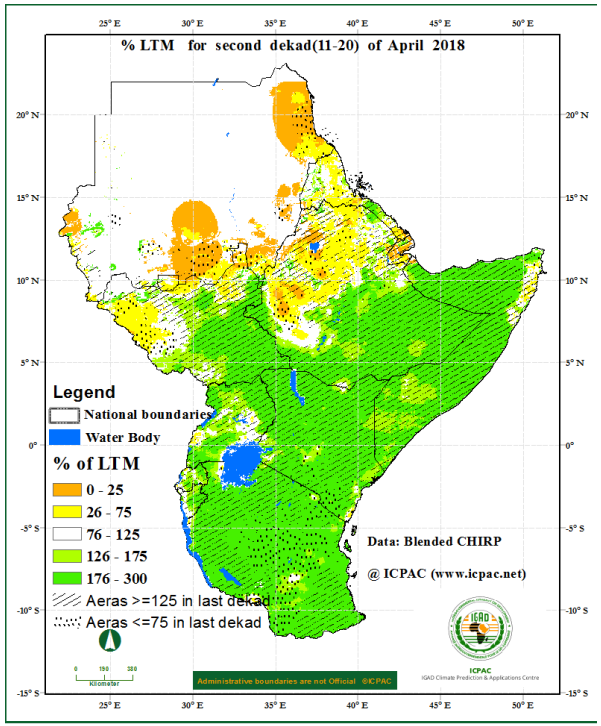

Figure 1b: Percent of long term average rainfall for the second dekad (11-20) of April 2018 *(Data: ICPAC Blended CHIRP)*

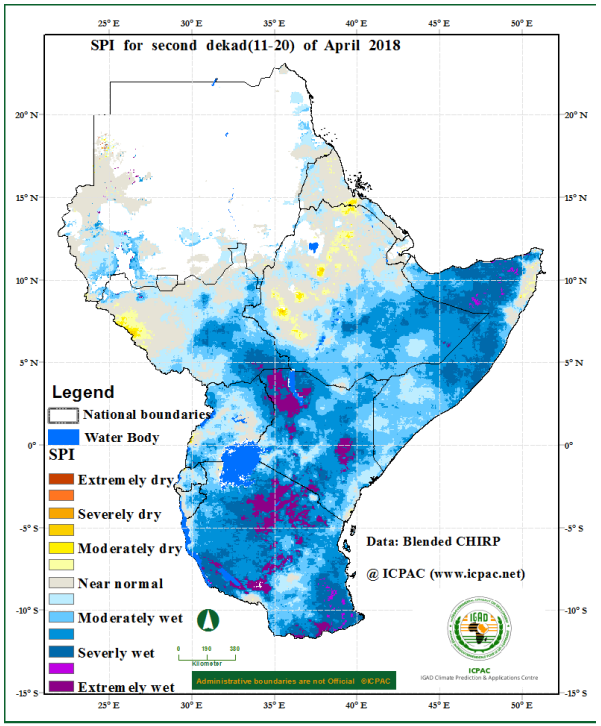

Figure 1c: Standardized Precipitation Index (SPI) for second dekad (11-20) of April 2018 *(Data: ICPAC Blended CHIRP)*

Maximum and Minimum Temperature Anomaly

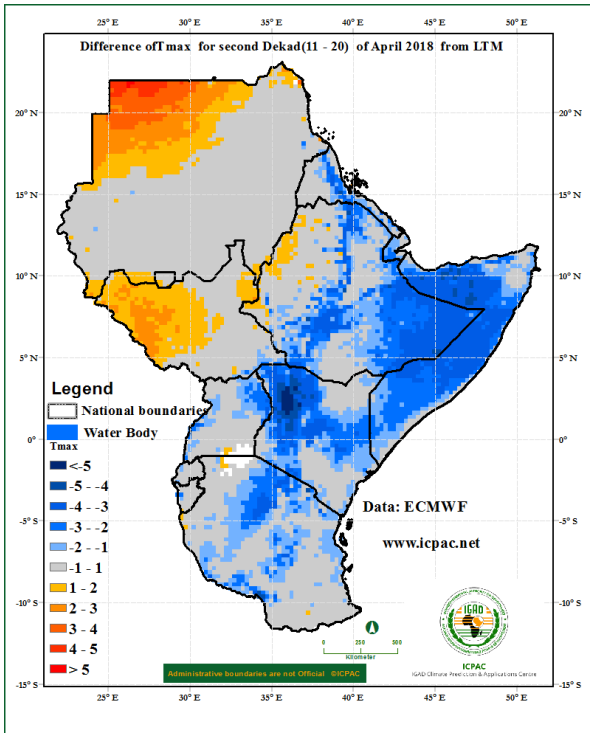

Figure 2: Maximum temperature difference from the average (2008-2017) for the second dekad (11-20) of April 2018*(Data Source: ECMWF)*

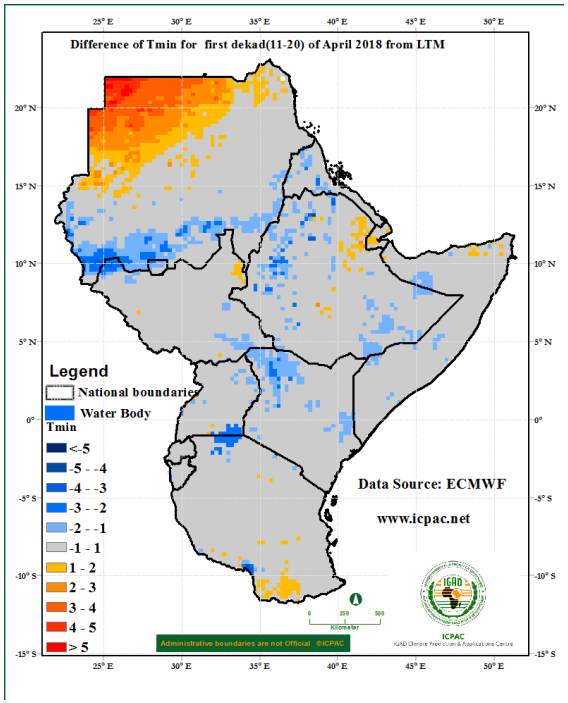

Figure 3:Minimum temperature difference from the average (2008-2017) for the second dekad (11-20) of April 2018*((Data Source: ECMWF)*

The maximum temperature during the second dekad of April 2018 shows that:

Sudan and South Sudan: maximum temperature warmer than the average was recorded in northern part of Sudan and northwestern and western South Sudan.

Eritrea, Djibouti, Ethiopia, Somalia, Kenya, Uganda and Tanzania: much of central Eritrea, Djibouti, Somalia, central and eastern Ethiopia, northeastern Uganda, western central to eastern Kenya, and parts of northeastern and central parts of Tanzania experienced cooler than the average condition

The minimum temperature during the second dekad of April 2018 shows that: northern part of Sudan, and a few places in northeastern Ethiopia, and southwestern Tanzania recorded warmer than the average condition. A Few places in southern part of Sudan, western Eritrea, western and eastern Ethiopia, northeastern Kenya experienced cooler than the average minimum temperature.

Much of the rest of the GHA experienced near average temperature for maximum and minimum temperature.

4.0 Vegetation condition indicators

Normalized Difference Vegetation Index Anomaly

The Normalized Difference Vegetation Index (NDVI) anomaly for the period 14th to 21st April 2018 (Figure 4) indicates that:

South Sudan, Ethiopia, Uganda, Kenya and Somalia and Tanzania: most of these regions had an improvement in vegetation conditions as compared to the long term average.

Much of the rest of the GHA, especially Sudan, Eritrea and northern Somalia showed little or no change in vegetation conditions.

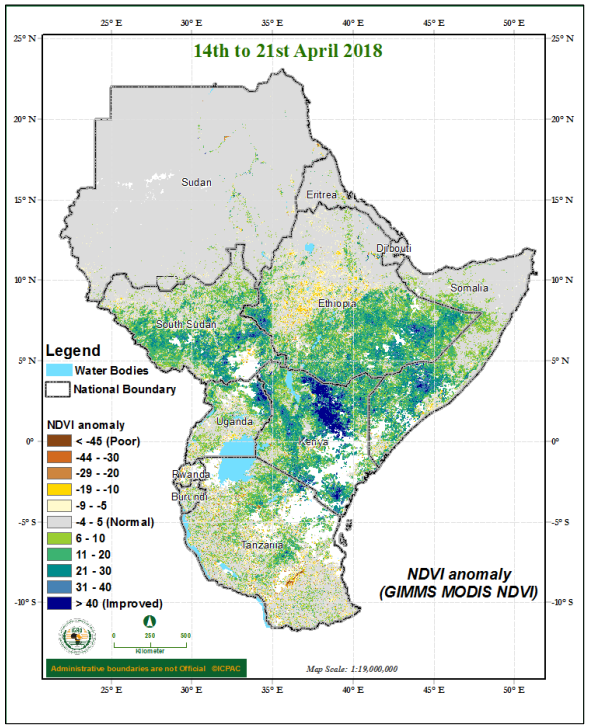

Figure 4: NDVI anomaly for the period between 14th and 21th April 2018 (Data Source: USGS NASA)

5.0 Climate Forecast

Rainfall Forecast

The rainfall forecast for the first dekad of April 2018 in Figure 5 indicates that rainfall is likely to be concentrated over much of Uganda, Rwanda, western central and eastern Kenya, South Sudan, southern Ethiopia, central and southern Somalia, Djibouti, Burundi and in north and eastern Tanzania. Eastern Rwanda, over much of Uganda, western and central Kenya, southern and central Somalia and southern Ethiopia are likely to record high rainfall amounts. The rest of the GHA region including much of northern part of Sudan, several parts of Eritrea, northern Ethiopia, some parts of north and eastern

Kenya, as well as western and central parts of Tanzania are likely to record little amount of rainfall (less than 10 mm) or remain generally dry during the first dekad of May 2018.

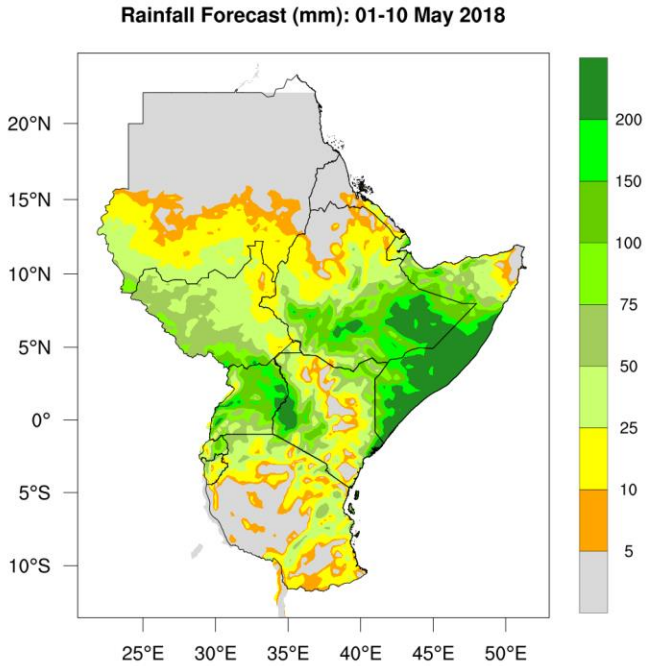

Figure 5: Precipitation forecast for the first dekad (01-10) of May 2018 (Source: WRF ICPAC**)**

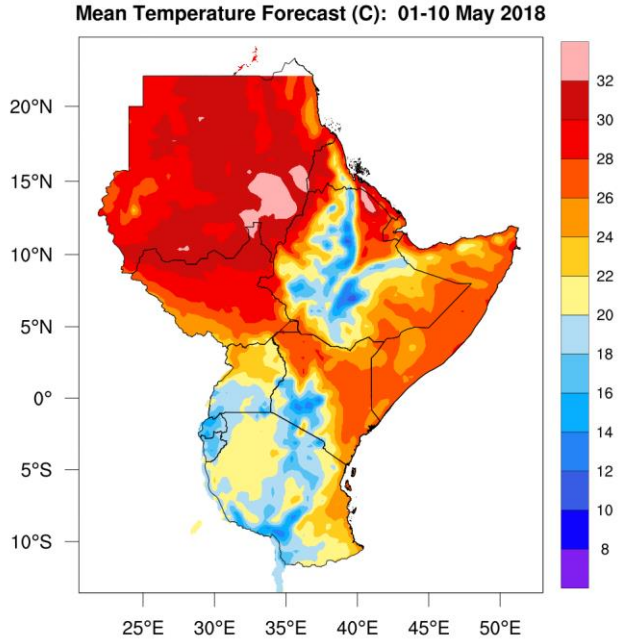

Figure 6: Forecast for average temperature for the first dekad (01-10) of May 2018 (Source: WRF-ICPAC)

Temperature Forecast

The forecast for the average temperature for first dekad of May 2018 (Figure 6) indicates much of Sudan, Eritrea, Djibouti, South Sudan, Somalia, north and southeastern Ethiopia, northern Uganda, northern and eastern Kenya, as well as eastern Tanzania will record temperatures exceeding 20°C. Regions in the central highlands of Ethiopia, central and western highlands of Kenya, southern part of Uganda, over much of Rwanda, Burundi, and western northern and central part of Tanzania are likely to experience average temperature less than 20°C. The warmest regions is likely to be in southwestern part of Sudan and northern part of South Sudan.

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 much of the equatorial and southern sector of the GHA resulted to improvement in water and pasture conditions, leading to good prospects of water, crop and livestock conditions. Some areas in the equatorial, and southern sector of the GHA reported flooding that led to the disruption of livelihoods, and incidences of weather related and water borne diseases. From the climate forecast for the first dekad of April 2018, some areas in Uganda, southern Ethiopia, western Kenya, southern and central Somalia, and in eastern Rwanda are likely to record high rainfall amounts which may lead to possible localised flooding and related impacts.

NB: *This ten days bulletin contributes towards the update of the April to May 2018 climate outlook (*http://www.icpac.net/wp-content/uploads/GHACOF48_Statement.pdf *).*

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