



10 DAY CLIMATOLOGICAL SUMMARY AND IMPACTS FOR THE THIRD DEKAD (21-31) OF MARCH 2017 AND FORECAST FOR THE SECOND DEKAD (11-20) OF APRIL 2017

1.0 Introduction

In this bulletin, the climatic conditions observed during the third dekad (21-31) of March 2017 over the Greater Horn of Africa (GHA) are reviewed and the associated impacts highlighted. The climate forecast for the second dekad (11-20) of April 2017 is also highlighted.

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° and 5° latitude, with the northern and southern sectors occupying the rest of the northern and southern parts of the region respectively

2.0 Highlights

Much of the southern sector, western and southern parts of the equatorial sector, and southwest also south-central parts of the northern sector of the Greater Horn of Africa (GHA) experienced rainfall activities during the third dekad (21-31) of March 2017.

This rainfall translated into near normal to severely dry conditions over eastern and southern part of the equatorial sector, and northern part of the southern sector of the GHA during the third dekad of March 2017. Some parts of western equatorial sector, south-central and southeastern part of the northern sector, and isolated areas in the southern sector of the GHA, indicated wet to severely wet rainfall conditions during the same period.

Northern parts of the northern sector experienced cooler than average maximum temperature. While warmer than average maximum temperatures conditions was observed over much of the southern part of the northern sector, much of the equatorial sector, as well as

northeastern part of the southern sector of the GHA during the third dekad of March 2017.

Areas in the southwestern part of the northern sector recorded, as well as eastern parts of the equatorial sector recorded above the average minimum temperature. Much of the rest of GHA region recorded near the average minimum temperature during the third dekad of March 2017.

The forecast for the second dekad (11-20) of April 2017 shows that rainfall is likely to be concentrated over much of the southern sector, and over southern and western parts of the equatorial sector, as well as southwestern part of the northern sector of the GHA. Average temperature exceeding 22°C is likely to be experienced in several areas across the GHA except for the central parts of Ethiopia, south western part of the equatorial sector and over much of southern sector of the GHA during the second dekad (11-20) April 2017.

3.0 Observed rainfall situation during the third Dekad (21–31) of March 2017

Figure 1 shows the total rainfall distribution, Figure 2 shows the percent of the long-term average rainfall, and Figure 2b shows the standardized precipitation index (SPI) over the GHA region during the third dekad of March 2017.

Rainfall Distribution and Severity

During the third dekad (21-31) of March 2017, the total rainfall plot in Figure 1 shows that rainfall was mainly experienced in central and north eastern part of Ethiopia, southern part of Eritrea, over much of Djibouti, over southern part of South Sudan, over much of Uganda, in west and southern parts of Kenya, over much of Rwanda, much of Burundi, and much of Tanzania, where rainfall of more than 5mm was recorded. Rainfall amounts of between 50mm and 200mm was recorded in central parts of Ethiopia, over northern and southern part of Uganda, around western part of Kenya, in southern part of Rwanda, over much of Burundi, and in west and southern parts of Tanzania. The rest of the GHA region which include much of Sudan, western Eritrea, northern South Sudan, over much of Somalia, in northwest and east of Ethiopia, and northern and eastern Kenya recorded less than 6mm of rainfall.

Less than 75% of the long term average rainfall was observed in western part of South Sudan, southern and eastern Ethiopia, over south western Uganda, over much of central and eastern Kenya, Southern Somalia, and northern and north eastern Tanzania (Figure 2a). In the areas especially in south western Uganda, northwest of Rwanda, in central and eastern parts of Kenya, around southern part of Somalia, as well as north and north eastern Tanzania moderately dry or severely dry rainfall condition was experienced (Figure 2b). Areas occupying south western Eritrea, much of Djibouti, much of central and northern parts of Ethiopia, parts of eastern South Sudan, northern and south eastern Uganda, northwest parts of Kenya, in southern parts of Rwanda, north western Burundi, as well as in south western and southern parts of Tanzania indicated more than 125 % of the long term average rainfall (Figure 2a) resulting to moderately wet or severely wet rainfall (Figure 2b). The rest of the GHA region recorded between 75% and 125% of the long term average rainfall resulting to near normal rainfall condition during the third dekad of March 2017.

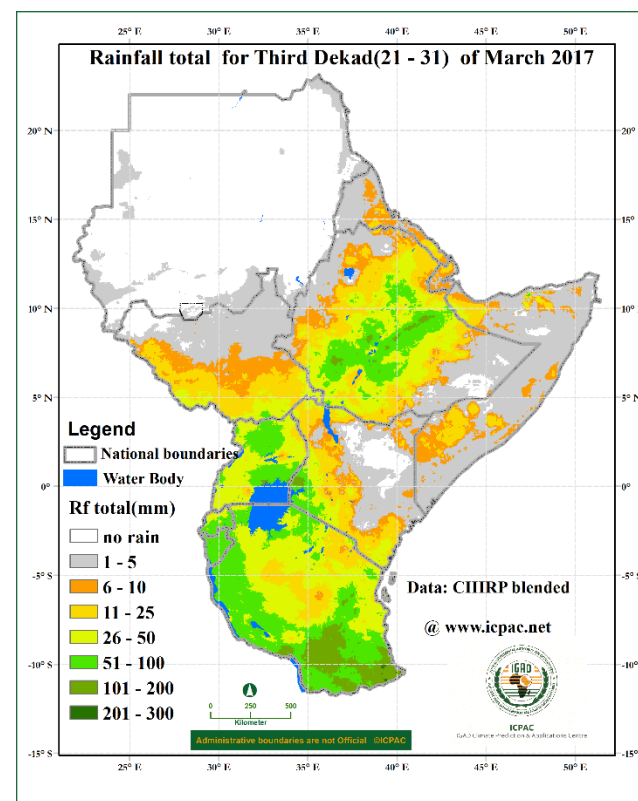


Figure 1: Rainfall distribution during the third dekad (21-31 March) of 2017. (Data: Blended CHIRP satellite estimate and observed stations)

Comparing the performance of rainfall extremes and Less than 75% of the long term average rainfall was observed in western part of South Sudan, southern and eastern Ethiopia, over south western Uganda, over much of central and eastern Kenya,

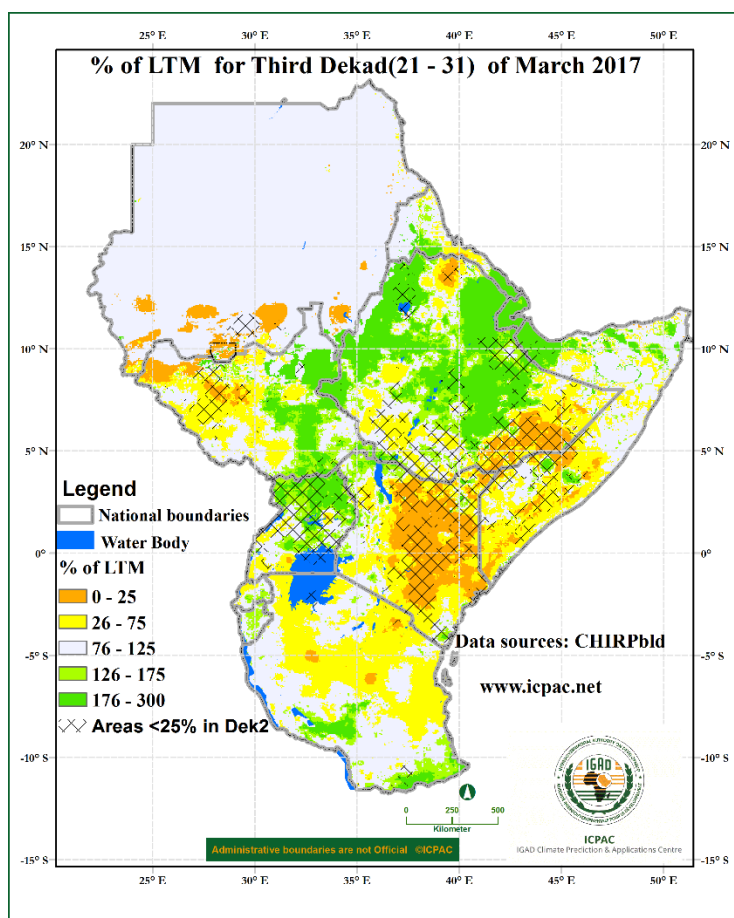


Figure 2a: Percent of long term average rainfall for the third dekad (21-31) of March 2017 (Data: Blended CHIRP satellite estimate and observed stations)

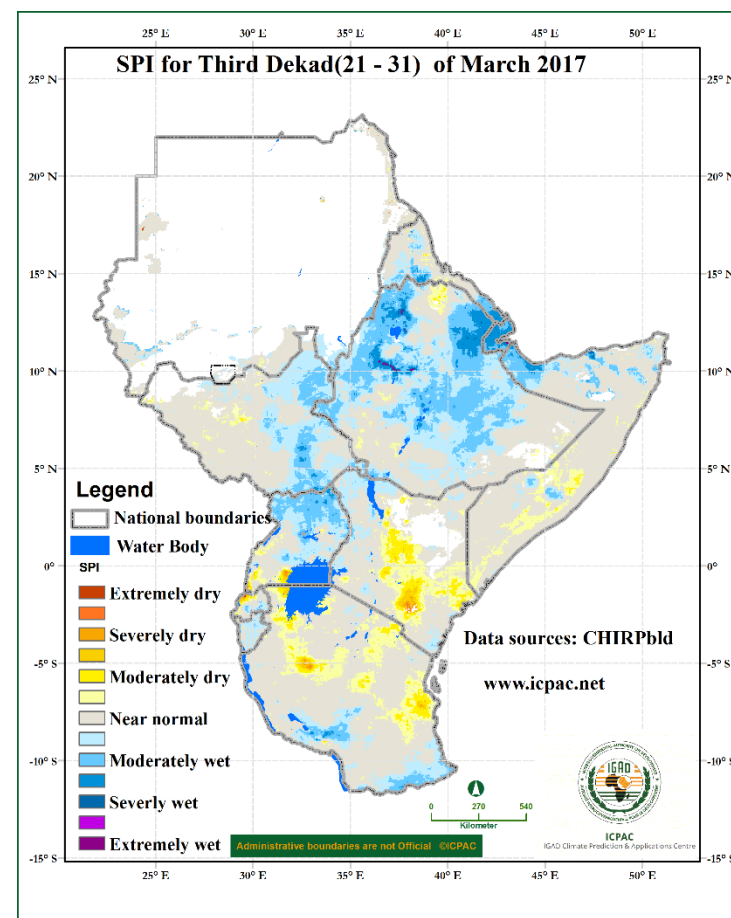


Figure 2b: Standardized Precipitation Index (SPI) for third dekad (21-31) of March 2017 (Data: Blended CHIRP satellite estimate and observed stations)

Maximum and Minimum Temperature Anomaly

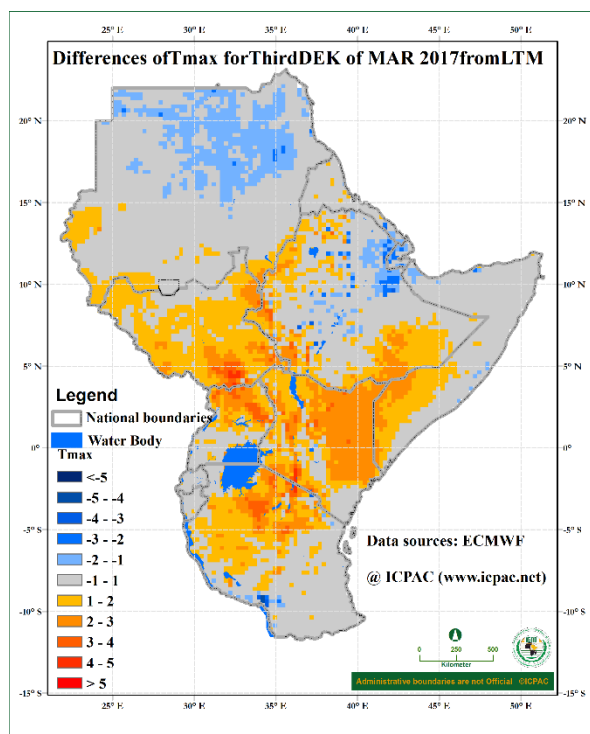


Figure 3a: Maximum temperature difference from the average (2008-2015) for the third dekad (21-31) of March 2017 (Data Source: ECMWF)

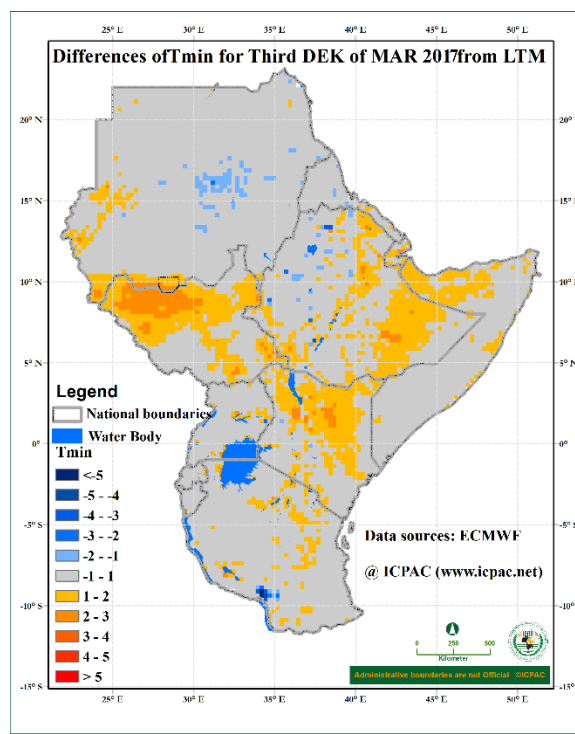


Figure 3b: Minimum temperature difference from the average (2008-2015) for the third dekad (21-31) of March 2017 (Data Source: ECMWF)

Warmer than average conditions for maximum temperature was observed in much of South Sudan; in western and southern Ethiopia; over much of Kenya; over much of northern Uganda; in south western part of Somalia; and in northern and northwestern Tanzania during the third dekad of March 2017. Cooler than average conditions for maximum temperature was recorded mainly in the northern parts of Sudan; southern Eritrea; over much of Djibouti; and in central and northeastern of Ethiopia, (Figure 3a).

Cooler than average conditions from minimum temperature was in a few areas east of Sudan and east of Ethiopia. Warmer than average minimum temperature was experienced over areas in southwestern part of Sudan, over part of northern South Sudan, in areas east and northeast of Ethiopia; over parts of Djibouti, in northern part of Somalia, in northern and eastern parts of Kenya, and over isolated areas west of Uganda, and in north and eastern Tanzania during the third dekad of March 2017 (Figure 3b).

4.0 Impacts on socio-economic sectors

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

4.1 Vegetation condition indicators

Normalized Difference Vegetation Index Anomaly

The Normalized Difference Vegetation Index (NDVI) anomaly for the period between 21st and 28th March 2017 (Figure 4) indicates that vegetative conditions in parts of north, west and southeast of South Sudan; in the southwest and northern parts of Ethiopia; in central and southwestern parts of Uganda; around western Kenya; in isolated parts of Rwanda, Burundi and Tanzania showed improvement as compared with the long term average vegetative conditions. Areas in south of Ethiopia; in parts of southwest and east of South Sudan; in parts of north and southwestern Uganda; in central, south and coastal areas of Kenya; and in parts of northeast Tanzania showed deterioration in vegetative conditions as compared with the average. The rest of the GHA showed little or no change in vegetation conditions compared to the long-term average of the same period.

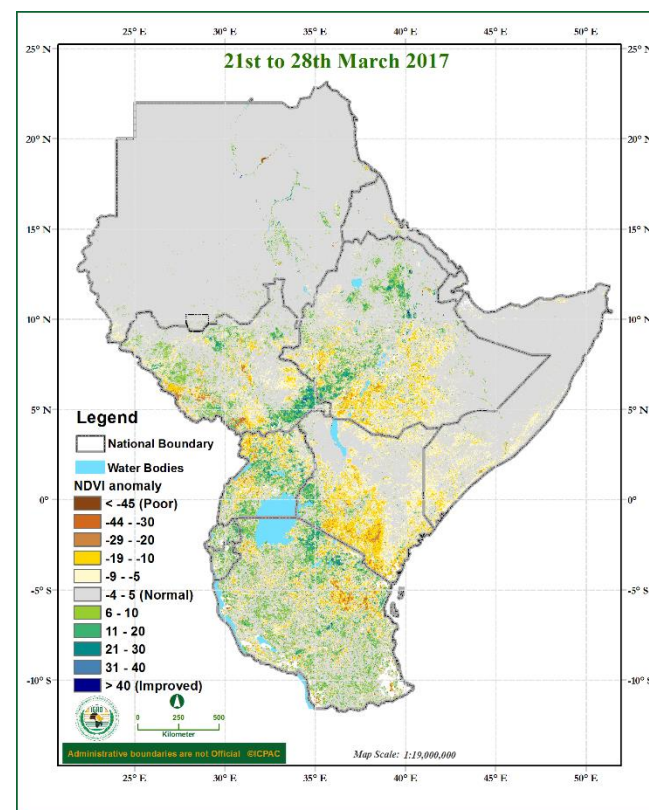


Figure 4: NDVI anomaly for the period between 21st and 28th March 2017 (Data Source: USGS NASA)

4.2 Impacts associated with observed climate conditions

During the third dekad (21-31) of March 2017 the rainfall activities in several areas in the southern and equatorial sector have been associated with improvement in water and vegetative conditions which have eased water stress and improved pasture availability, and has also defined the beginning of the cropping season. However dry conditions continued to be experienced in some areas especially in the eastern parts of the equatorial sector and southern and eastern parts of the northern sector of the GHA, and these have encouraged the continuity of drought related impacts such as persistence in deterioration in water, pasture and crop conditions, which has led to poor prospects of crop and livestock performance, increase in food prices and food insecurity, migration of pastoralist, and increase in climate related diseases. From the climate outlook some places in the southern sector as well as western and southern parts of the equatorial sector of the GHA are likely to have an improvement in water, and pasture resources. This is likely to create an improve prospects of crop and livestock production, and possible beginning of cropping season.

5.0 Climate Forecast

Rainfall Forecast	Temperature Forecast
The rainfall forecast for the second dekad (11-20) of April 2017 in Figure 5 indicates that rainfall is likely to be concentrated over much of Tanzania, Rwanda, Burundi, western and southern Uganda, southern and coastal Kenya, southern Somalia, over much of South Sudan, western part of Ethiopia, and southwestern part of Sudan. Much of Eritrea, Djibouti, northern part of Sudan, northern and central Somalia, much of Ethiopia, northern Kenya, and eastern Uganda is likely to	The average temperature forecast for second dekad (11-20) of March 2017 (Figure 6) indicates the likelihood of warm average temperature greater than 22°C over much of the GHA region except for areas around central parts of Ethiopia; southern Uganda and central parts of Kenya; over much of Rwanda and Burundi; and in western and central parts of which are likely to be below 20°C.

experience little rainfall or remain generally dry during the second dekad (11-20) of April 2017.

Rainfall Forecast (mm): 11-20 Apr 2017

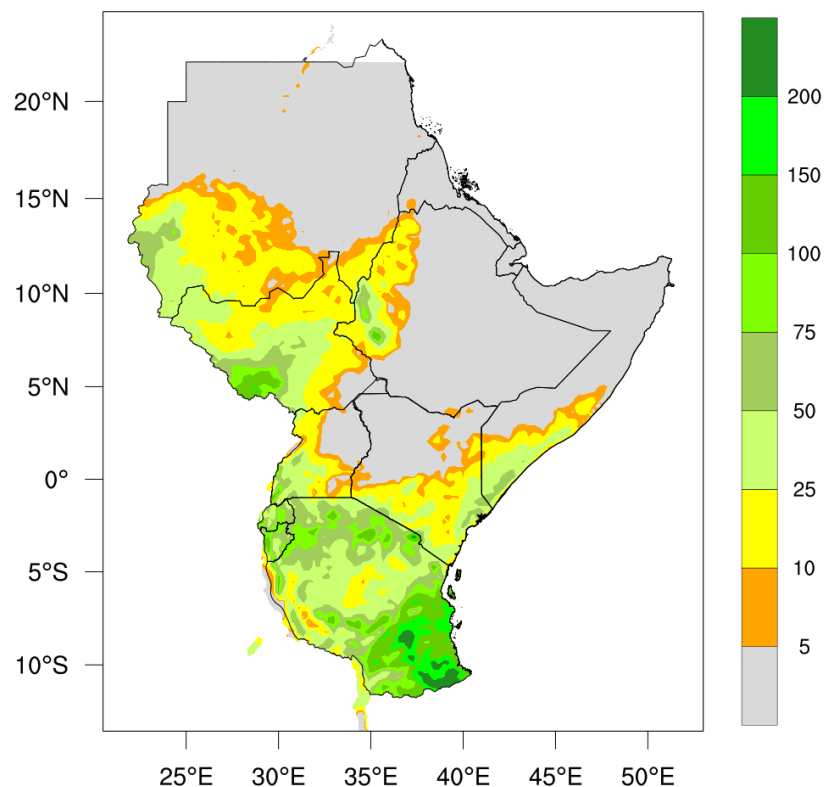


Figure 5: Precipitation forecast for the second dekad (11-20) of April 2017 (Source: WRF-ICPAC)

Mean Temperature Forecast (C): 11-20 Apr 2017

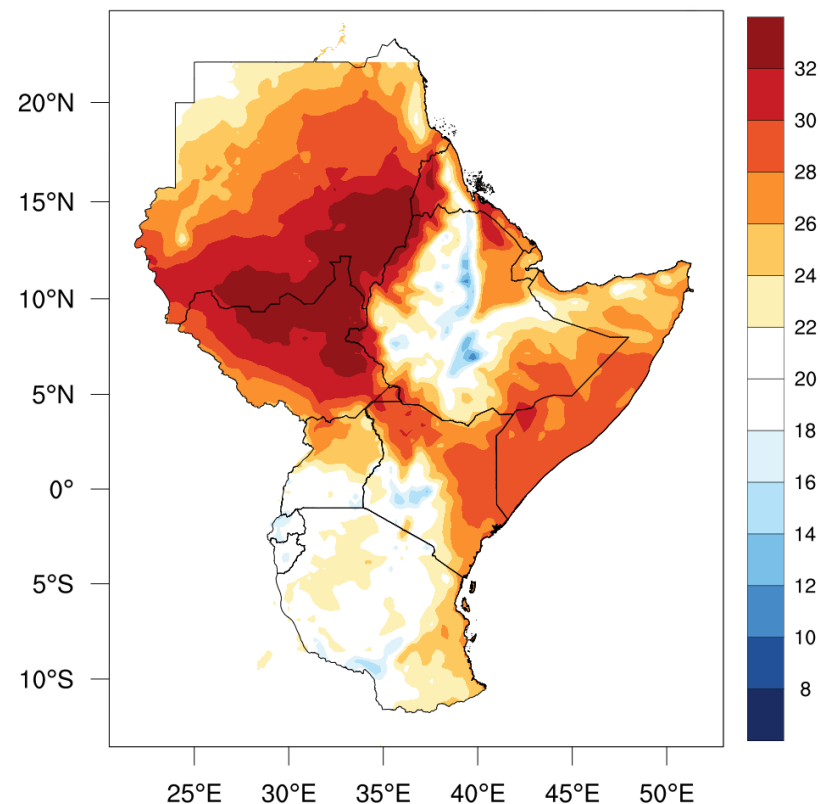


Figure 6: Forecast for average temperature for the second dekad (11-20) of April 2017 (Source: WRF-ICPAC)

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