



ICPAC

IGAD Climate Prediction & Applications Centre

Bulletin for Dekad 13 of 2017

Issue Number: ICPAC/01/918

10 DAY CLIMATOLOGICAL SUMMARY AND IMPACTS FOR THE THIRD DEKAD (21-30) OF APRIL 2017 AND FORECAST FOR THE SECOND DEKAD (11-20) OF MAY 2017

1.0 Introduction

In this bulletin, the climatic conditions observed during the third dekad (21-30) of April 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 May 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 equatorial sector, southern sector, southern and eastern part of the northern sector; over northwestern and southeastern part of the northern sector of the Greater Horn of northeastern part of the equatorial sector; as well as over Africa (GHA) experienced rainfall activities during the third dekad southwestern part of the southern sector of the GHA during the (21-30) of April 2017. third dekad (21-30) of April.

The rainfall experienced translated into below the average Maximum temperature warmer than the average maximum rainfall conditions corresponding to moderately dry to severely dry temperature conditions was experienced mainly in southern part rainfall condition over western and southeastern parts of the of the northern sector, over much of the equatorial sector, as well northern sector, over much of eastern and southwestern parts of as in northern parts of the southern sector of the GHA region the equatorial sector; and over much of northwest and eastern recorded maximum temperature during the third dekad (21-30) parts of the southern sector of GHA. Above the average rainfall of April 2017. Much of the rest of GHA region recorded near the condition that translated into moderately wet to severely wet average maximum temperature except for the northwest area of rainfall condition was mainly observed in southwestern, central Ethiopia which recorded maximum temperature cooler than

average. Much of the GHA recorded near average minimum. The forecast for the second dekad (11-20) of May 2017 shows that temperature conditions except for a few areas in west, central and rainfall is likely to be concentrated over much of the equatorial southeastern part of the northern sector as well as northern part sector, and over southern parts of the northern sector of the GHA. of the equatorial sector of the GHA region which recorded warmer. Average temperature exceeding 22°C is likely to be experienced in the average minimum temperature conditions during the third western and eastern parts of the northern sector as well as dekad of April 2017. eastern part of the equatorial sector of the GHA.

3.0 Observed rainfall situation during the third Dekad (21-30) of April 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 April 2017.

Rainfall Distribution and Severity

During the third dekad (21-30) of April 2017, the total rainfall plot in Figure 1a shows that rainfall amounts greater than 5mm was experienced over much of the equatorial sector, southern sector, and also southern and southeastern parts of the northern sector of the GHA. Rainfall amounts of between 50mm and 200mm was recorded in central Eritrea; around northwest, southwest and southern parts of Ethiopia, in southwestern part of South Sudan, over much of Uganda; in western, central and north-central parts of Kenya; over southern part of Somalia; in northwestern Rwanda; over northeastern part of Burundi, and around northeast, east and southwestern parts of Tanzania. The rest of the GHA region which include much of Sudan, western Eritrea, much of Djibouti, over northern Somalia, in northeast part of Ethiopia, in

eastern part of Kenya, and in central Tanzania, recorded less than 6mm of rainfall.

Less than 75% of the long term average rainfall was observed over southern part of Sudan extending to northern South Sudan; over southeastern South Sudan; over much of Djibouti, Rwanda, and Burundi; in eastern and southern parts of Ethiopia; over northwest, central and southern parts of Somalia; over much of central, eastern and southern parts of Kenya; and over much of north west, south and eastern parts of Tanzania. Parts of southeastern Sudan; much of Eritrea; over northwest and western Ethiopia; in north east and western part of South Sudan; in north eastern tip and southern parts of Somalia; over much of north and western Uganda; in parts of northwest and western Kenya; and in northeastern and

southwestern Tanzania, more than 125 % of the long term average rainfall was recorded (Figure 1b), during the third dekad of April 2017. Areas in southwest of Sudan, southwest of Kenya, and over much of Tanzania has showed reduction in rainfall performance as compared with the previous dekad, while some areas in eastern South Sudan; central Eritrea; northern, eastern and southwestern Ethiopia; and over central Somalia showed improvement in rainfall (Figure 1b).

During the third dekad of April 2017 moderately dry to severely dry rainfall condition was observed over southwestern part of Sudan; over eastern parts of Ethiopia; central and southern Somalia; in southeastern

and northwestern South Sudan; in southwestern Uganda; over northwest, northeast, east, central and south central Kenya; over southern Rwanda; in southern Burundi; and over northwestern and southeastern parts of Tanzania (Figure 1c). Moderately wet to severely wet rainfall conditions was observed in areas around eastern and southeastern Sudan; over much of Eritrea; in western and northern Ethiopia; in western and northeastern South Sudan; northern and western parts of Uganda; in western and north-central parts of Kenya; over north and south of Somalia; and in northeastern and southwestern part of Tanzania during the third dekad of April 2017 (Figure 1c).

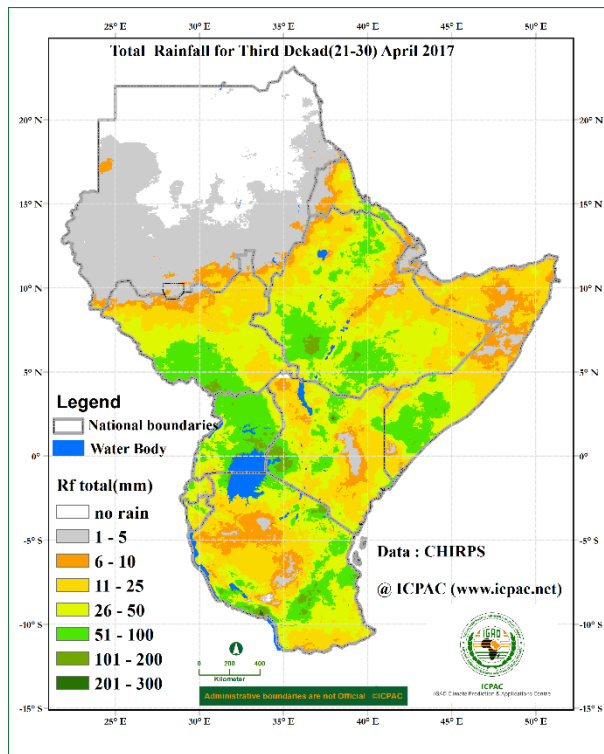


Figure 1a: Rainfall distribution during the third dekad (21-30 April) of 2017. (Data: Blended CHIRPsatellite estimate and observed stations)

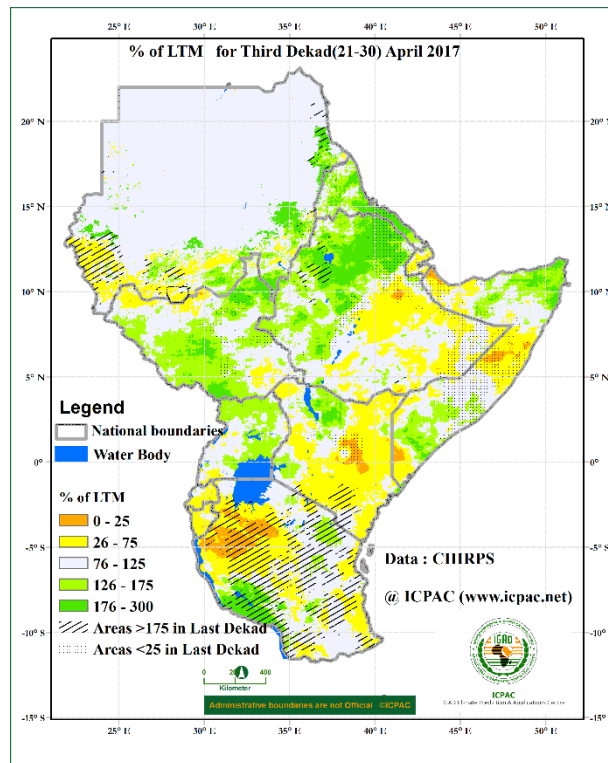


Figure 1b: Percent of long term average rainfall for the third dekad (21-30) of April 2017 (Data: Blended CHIRPsatellite estimate and observed stations)

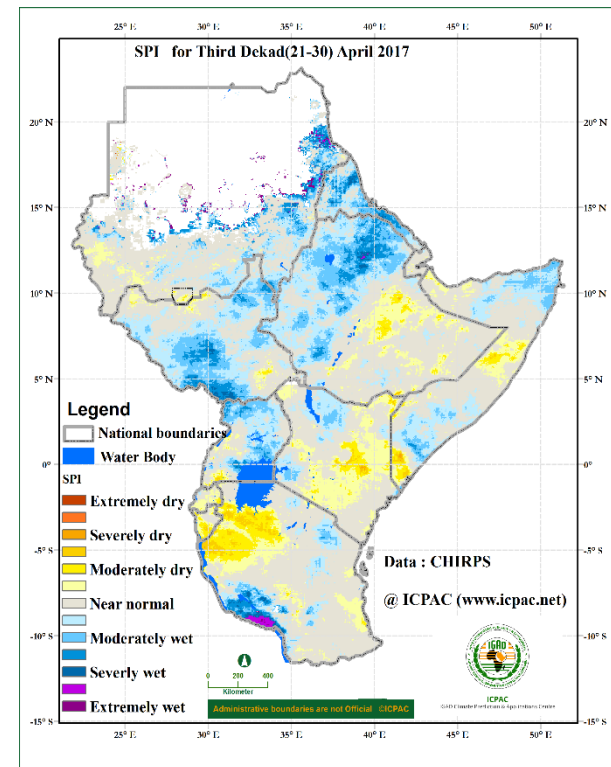


Figure 1c: Standardized Precipitation Index (SPI) for third dekad (21-30) of April 2017 (Data: Blended CHIRPsatellite estimate and observed stations)

Maximum and Minimum Temperature Anomaly

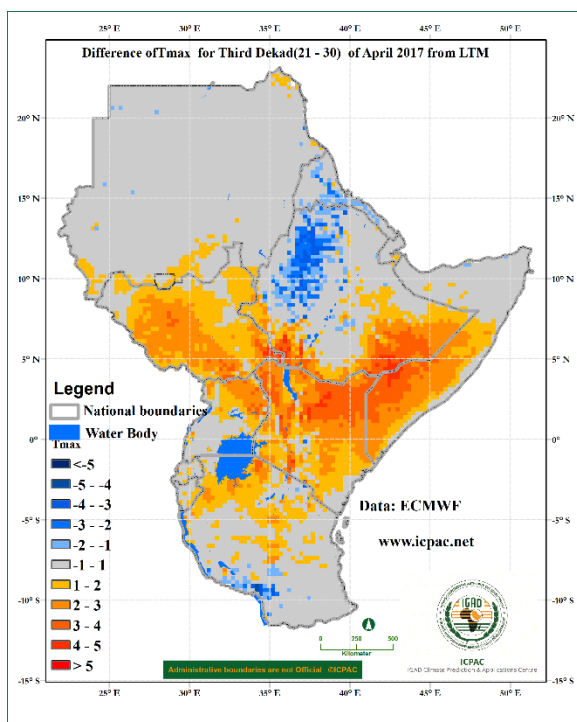


Figure 2: Maximum temperature difference from the average (2008-2015) for the third dekad (21-30) of April 2017 (Data Source: ECMWF)

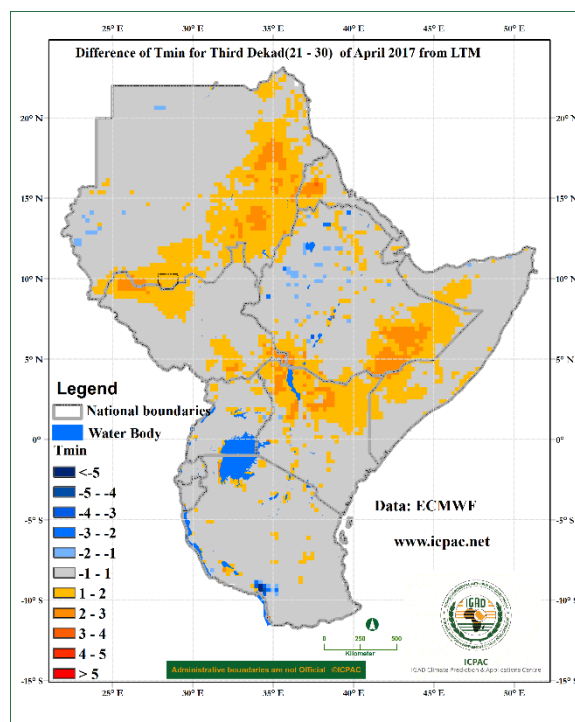


Figure 3: Minimum temperature difference from the average (2008-2015) for the third dekad (21-30) of April 2017 (Data Source: ECMWF)

Warmer than average conditions for maximum temperature was observed over much of South Sudan; in southern and southeastern Ethiopia; over much of Kenya; over northern and western Uganda; in south and central parts of Somalia; and in northern and central Tanzania during the third dekad of April 2017. Cooler than average conditions for maximum temperature was recorded mainly around central Eritrea, over west and northwestern of Ethiopia, and around south western Tanzania (Figure 2). While the rest of the GHA recorded maximum temperatures near the average.

During the third dekad of April 2017 much of the GHA recorded minimum temperature near the average conditions except for areas around western and south of Sudan, northwest and southeast of South Sudan, southwest of Eritrea, south and southwestern Ethiopia, southwestern Somalia, and over northern Kenya (Figure 3).

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 22nd and 29th April 2017 (Figure 4) indicates that vegetative conditions in parts of southern South Sudan; in the central, eastern and southern parts of Ethiopia; in northern and western Uganda; over much of Kenya; in southern parts of Somalia; and in northern part of Tanzania showed deterioration in vegetative conditions as compared with the long term average vegetative conditions. Improvement in vegetative conditions as compared with the long term average vegetative conditions was indicated mainly in areas northeast and west of South Sudan; western parts of Ethiopia; over eastern Rwanda and eastern Burundi; and in parts of west and south of Tanzania. The rest of the GHA showed little or no change in vegetation conditions compared to the long-term average of the same period.

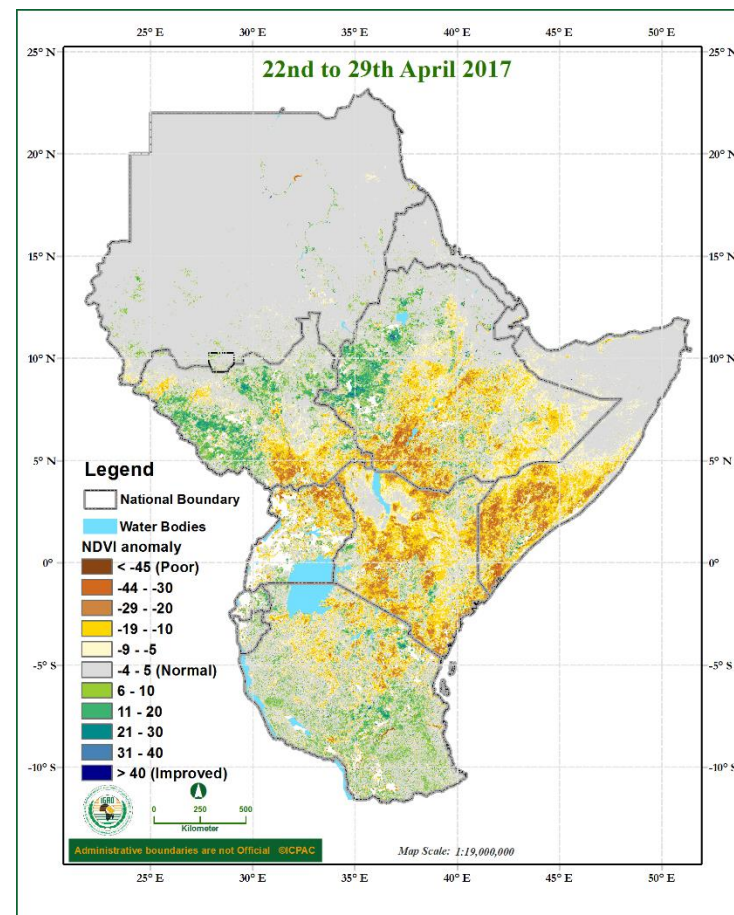


Figure 4: NDVI anomaly for the period between 22nd and 29th April 2017 (Data Source: USGS NASA)

4.2 Impacts associated with observed climate conditions

During the third dekad (21-31) of April 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, a few areas have also witnessed flooding conditions. However effects of the dry conditions continue to be felt in some areas in the eastern parts of the equatorial sector and southern and eastern parts of the northern sector of the GHA, and these have 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 for the second dekad of May much of the equatorial sector as well as southern part of the northern 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, some areas are also likely to experience flooding conditions, such as western and eastern part of the equatorial sector as well as the around the horn of Somalia .

5.0 Climate Forecast

Rainfall Forecast	Temperature Forecast
The rainfall forecast for the second dekad (11-20) of May 2017 in Figure 5 indicates that rainfall is likely to be concentrated over much of South Sudan; western and southern Ethiopia; over much of Somalia, Uganda, Rwanda, Burundi, and Kenya; and in northern and northeastern parts of Tanzania. Much of northern part of Sudan, Eritrea, northern part of Ethiopia, as well as southwestern and southern Tanzania is likely to experience little rainfall or remain generally dry during the second dekad (11-20) of May 2017.	The average temperature forecast for second dekad (11-20) of May 2017 (Figure 6) indicates the likelihood of warm average temperature greater than 22°C over much of Sudan, South Sudan, Eritrea, Djibouti, Somalia, around northern and eastern Ethiopia, over northern Uganda, in north and eastern Kenya, and in the coast of Tanzania. The rest of the Greater Horn of Africa region is likely to be below 20°C.

Rainfall Forecast (mm): 11-20 May 2017

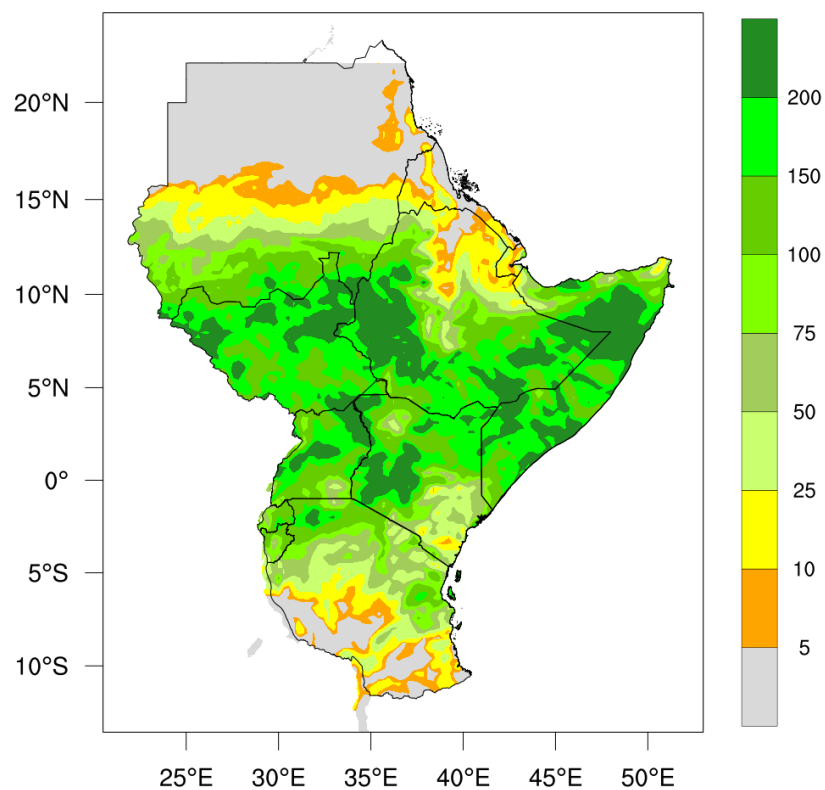


Figure 5: Precipitation forecast for the second dekad (11-20) of May2017(Source: WRF-ICPAC)

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

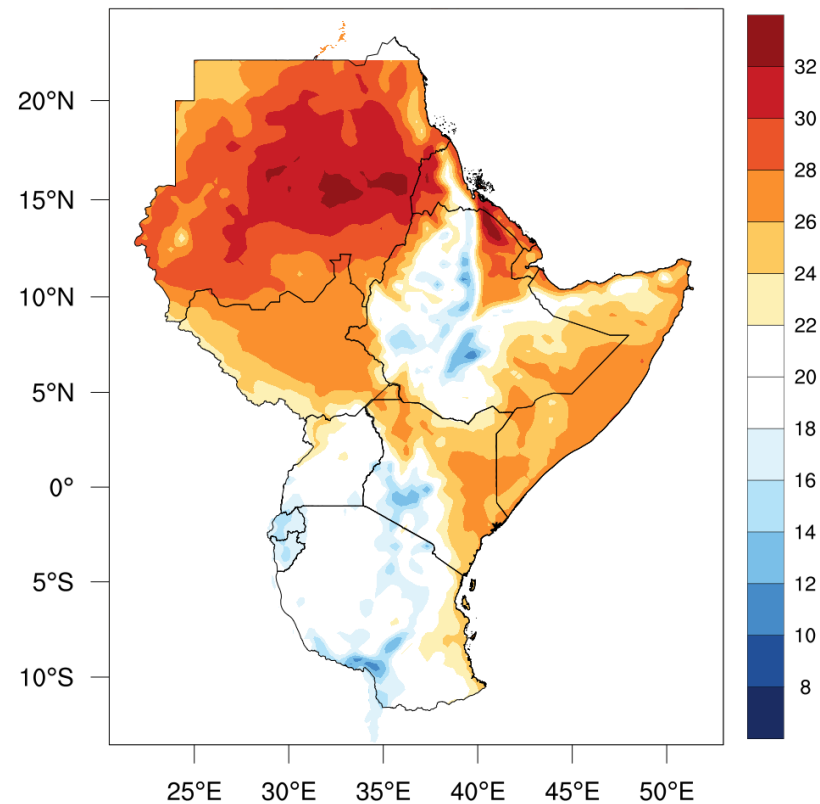


Figure 6: Forecast for average temperature for the second dekad (11-20) of May2017(Source: WRF-ICPAC)

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