10 DAY CLIMATOLOGICAL SUMMARY AND IMPACTS FOR THE SECOND DEKAD (11-20) OF MAY 2017 AND FORECAST FOR THE FIRST DEKAD (1-10) OF JUNE 2017

1.0 Introduction

In this bulletin, the climatic conditions observed during the second dekad (11-20) of May 2017 over the Greater Horn of Africa (GHA) are reviewed and the associated impacts highlighted. The climate forecast for the first dekad (01-10) of June 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 -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

Much of the equatorial sector, northern and eastern part of the southern sector, and over much of southern and parts of the northern sector of the Greater Horn of Africa (GHA) experienced rainfall activities during the second dekad (11-20) of May 2017.

The rainfall experienced translated into below average rainfall conditions corresponding to moderately dry to severely dry rainfall conditions over western and southeastern parts of the northern sector, over isolated parts of western and central, and southwestern part of equatorial sector; and over much of northwest and southern parts of the southern sector of GHA. Above the average rainfall condition that translated into moderately wet to severely wet rainfall condition was mainly observed in several places in eastern, and southeastern part of the northern sector; over central and eastern parts of the equatorial sector; as well as over eastern part of the southern sector of the GHA during the second dekad (11-20) of May 2017.

Maximum temperature warmer than the average maximum temperature conditions was experienced mainly in northwestern and southern parts of the northern sector, in northern, central and isolated parts of western equatorial sector, as well as in northwestern part of the southern sector of the GHA region during the same period. Much of the rest of GHA region recorded near the average maximum temperature except for the parts of central and eastern parts of the northern sector, and in eastern parts of the equatorial and southern sector which recorded maximum temperature cooler than the average.

Much of the GHA recorded near average minimum temperature conditions except for areas in the northwestern part and in a few areas in southern part of the northern sector, as well as in isolated central and western equatorial sector, as well as in southern part of the southern sector of the GHA region which recorded warmer the average minimum temperature conditions during the second dekad of May 2017.

The forecast for the First dekad (01-10) of June 2017 shows that rainfall is likely to be concentrated over much of the southwestern and central areas of the northern sector, in western and eastern parts of the equatorial sector, and over eastern parts of southern sector of the GHA.

3.0 Observed rainfall situation during the second Dekad (11-20) of May 2017

Figures 1a, 1b and 1c show the total rainfall distribution, the percent of the long-term average rainfall and the standardized precipitation index (SPI) respectively over the GHA region during the second dekad of May 2017.

Rainfall Distribution and Severity

During the second dekad (11-20) of May 2017, the total rainfall amount greater than 5mm was experienced over much of the GHA region except for the northern part of Sudan, southern Eritrea, in parts of Djibouti, in northern and northeastern Kenya, in southwestern and central parts of Somalia, and in western and southern parts of Tanzania. Rainfall amounts greater than 50mm but not more than 300mm was recorded around north-central, western and eastern South Sudan; over much of western and central Ethiopia; in central part of Eritrea; in northwestern and southwestern parts of Uganda; around western, central and coastal parts of Kenya; in northwestern and southeastern Somalia; and over northern and coastal parts of Tanzania. Among these parts of western and central Ethiopia, southeastern coast of Somalia, coast of Kenya and northern coast of Tanzania recorded rainfall amounts slightly greater than 200mm.

During the same period rainfall less than 75% of the long term average rainfall was observed over southwestern part of Sudan; around southern parts of South Sudan; in southern part of Ethiopia; over much of Uganda, Kenya, Rwanda, Burundi, and central and southern parts of Somalia; and over northern, western and southern Tanzania. In areas south and east of Sudan; over much of Eritrea; much of Djibouti; in northern and central Ethiopia; in northern and eastern South Sudan; in northern parts of Somalia; in parts southeastern and coastal Kenya; and in eastern and northern coast of Tanzania, more than 125 % of the long term average rainfall was recorded (Figure 1b), during the second dekad of May 2017. Areas in southeastern Ethiopia; southern part of Somalia; several areas in eastern Kenya; areas around southeastern Uganda; and in northern coast of Tanzania showed reduction in rainfall performance compared to the previous first dekad (1-10) of May 2017.. However a few areas in southern parts of Sudan, northeastern Somalia, and in northwestern Tanzania have shown improvement as compared to the previous dekad (Figure 1b).

During this second dekad of May 2017, moderately dry to extremely dry rainfall condition was observed over southern part of South Sudan; southern parts of Ethiopia; in parts of central and south of Somalia; in of central Uganda; around northwestern, central and southern parts of Kenya; in southwestern Rwanda; over much of western Burundi; in a few areas south of Tanzania (Figure 1c). Moderately wet to extremely wet rainfall conditions was observed in areas around southern and eastern parts of Sudan; over much of Eritrea and Djibouti; in northern and central Ethiopia; in north and eastern part of South Sudan; in southeastern parts of Kenya; over north and southeastern part of Somalia; and in some isolated coastal parts of Tanzania during the second dekad of May 2017 (Figure 1c).

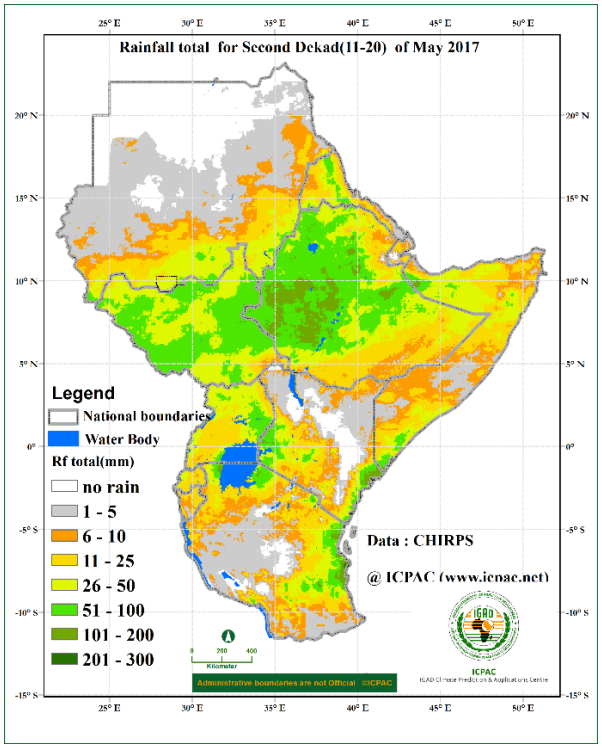

Figure 1a: Rainfall distribution during the second dekad (11-20 May) of 2017. *(Data: CHG - CHIRP)*

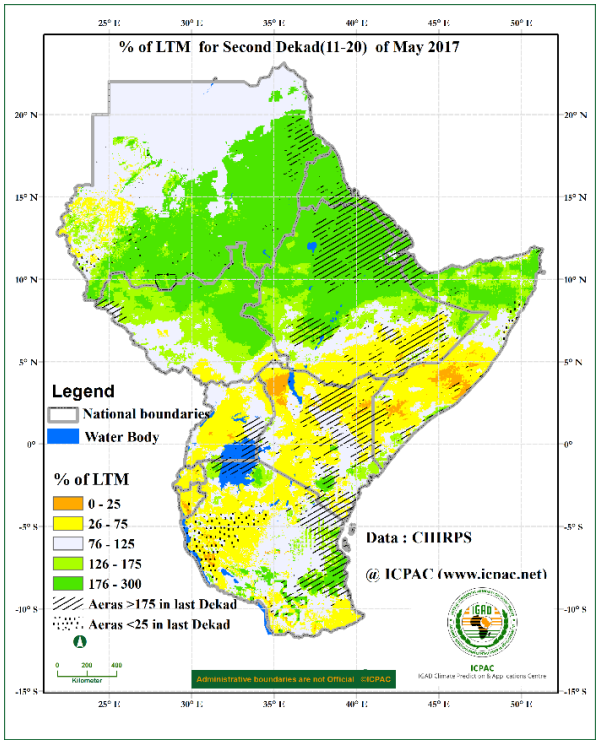

Figure 1b: Percent of long term average rainfall for the second dekad (11-20) of May 2017 *(Data: CHG - CHIRP)*

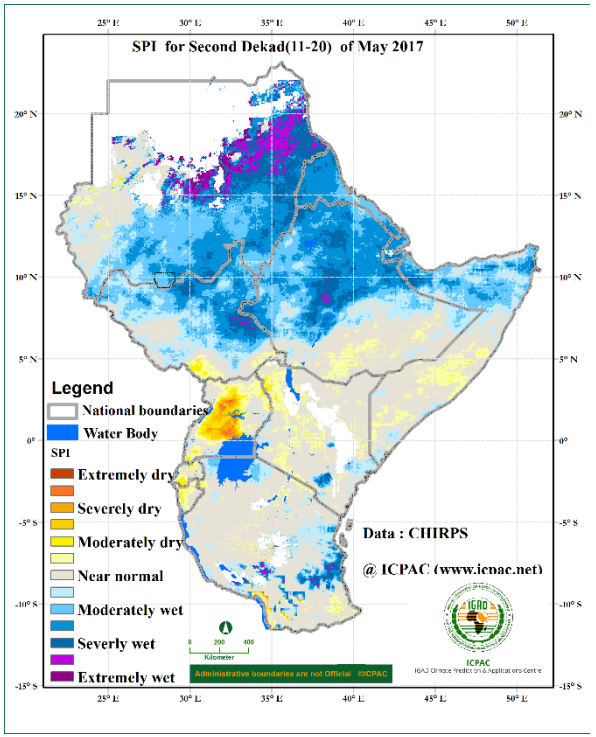

Figure 1c: Standardized Precipitation Index (SPI) for second dekad (11-20) of May 2017 *(Data: CHG - CHIRP)*

Maximum and Minimum Temperature Anomaly

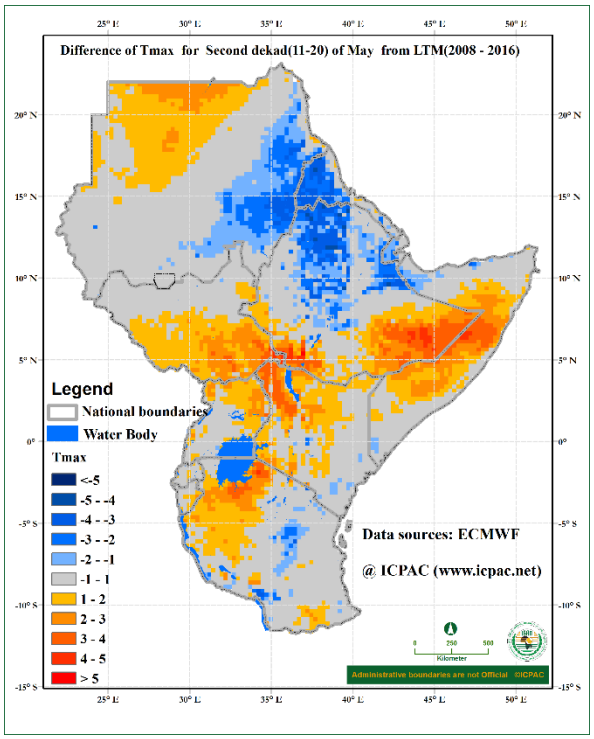

Figure 2: Maximum temperature difference from the average (2008-2015) for the second dekad (11-20) of May 2017 *(Data Source: ECMWF)*

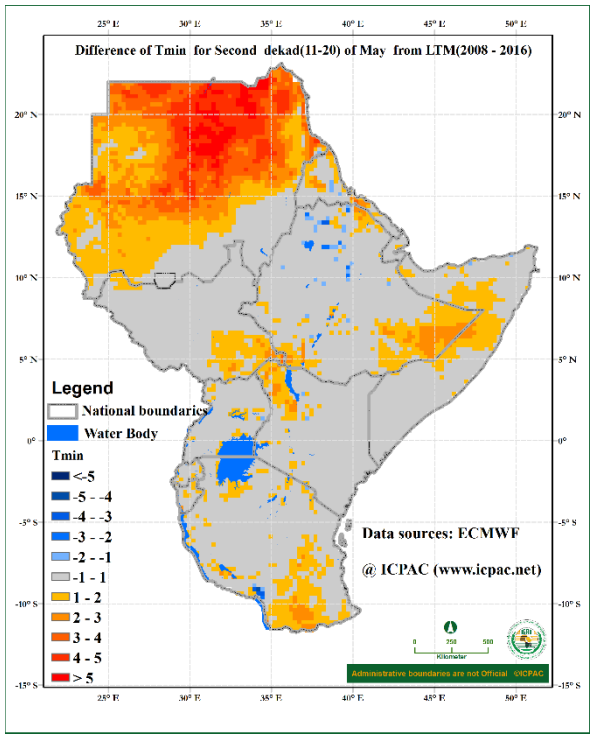

Figure 3: Minimum temperature difference from the average (2008-2015) for the second dekad (11-20) of May 2017 *((Data Source: ECMWF)*

Warmer than average conditions for maximum temperature was mainly observed over northern part of Sudan; in much of southern part of South Sudan; in the southwest and southeastern part of Ethiopia; in northern and eastern parts of Uganda; in isolated parts of western and northeastern, and central parts of Kenya; in central parts of Somalia; and in northern and northwestern Tanzania during the second dekad of May 2017.

Cooler than average conditions for maximum temperature was recorded mainly around eastern part of Sudan; western Eritrea, in northern and central Ethiopia; over parts of Djibouti; in northwestern Somalia; and in isolated areas of eastern Kenya and central Tanzania (Figure 2).

During this dekad, much of the GHA recorded near the average conditions in minimum temperature except for areas covering much of Sudan; southeastern part of South Sudan; in central and western parts of Eritrea; in southeastern Ethiopia extending to central Somalia; in northwestern Kenya; in southern Tanzania and in a few isolated areas in western and southeastern Uganda, central and western Kenya, southern Rwanda, parts of Burundi, and northern Tanzania which recorded minimum temperatures warmer the average (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 16th and 23th May 2017 (Figure 4) indicates that vegetative conditions in eastern, northeastern and western parts of South Sudan; in the western, northwestern parts of Ethiopia; isolated parts of Kenya; in southern parts of Somalia; and in northeastern and southern parts of Tanzania showed improvement in vegetative conditions as compared with the long term average vegetative conditions. Deterioration in vegetative conditions as compared with the long term average vegetative conditions was indicated mainly in areas northwest and southeastern of South Sudan; southern, southwestern parts of Ethiopia; central parts of Somalia; over northern and northeastern parts of Uganda; scattered parts in southwestern, central and northern parts of Kenya; and northern part 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.

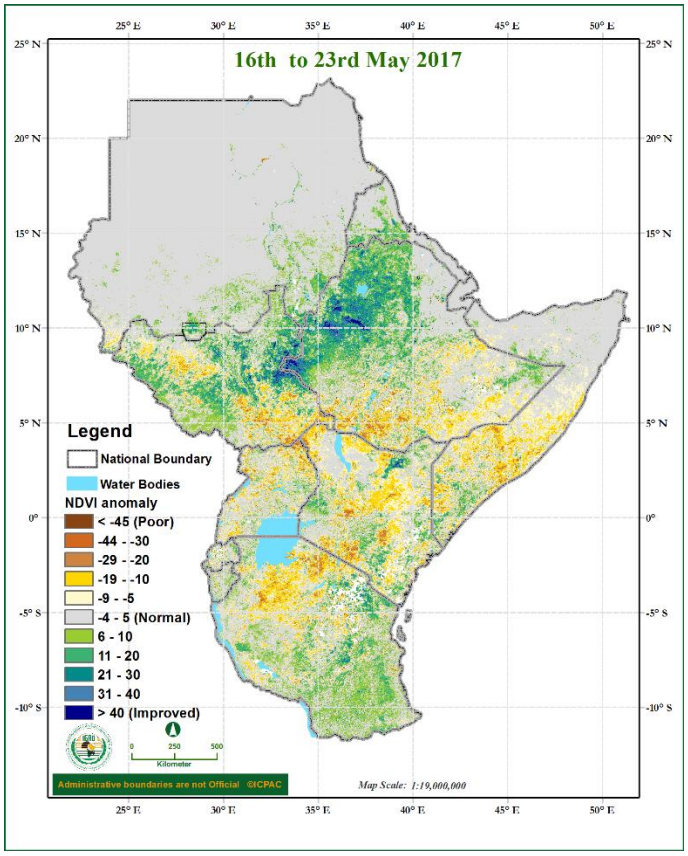

Figure 4: NDVI anomaly for the period between 16th and 23 th May 2017 (Data Source: USGS NASA)

4.2 Impacts associated with observed climate conditions

During the second dekad (01-10) of May 2017 the rainfall activities in several areas have been associated with improvement in water and vegetative conditions which have eased water stress, improved pasture availability, and improved prospects of good crop and livestock performance. A few areas have also reported instances of flooding which has led to the disruption of livelihoods and increase in climate related diseases especially in Djibouti, eastern and central Kenya and eastern Tanzania. However effects of the dry conditions continue to be felt in some areas in the southwestern, eastern and central parts of the equatorial sector, and southeastern parts of the northern sector of the GHA, and these have led to poor prospects of crop and livestock performance, continued high food prices and food insecurity, migration of pastoralist, and increase in climate related diseases.

From the climate outlook for the first dekad of May much of the northern parts of the equatorial sector as well as much of the southern and central parts of the northern sector of the GHA are likely to have sufficient rainfall performance, which will lead to improved water and pasture resources, some areas are also likely to experience flooding conditions, such as in the western, central and eastern part of the equatorial sector, southeastern part of the southern sector as well as southeastern part of the northern sector of the GHA region.

5.0 Climate Forecast

Rainfall Forecast	Temperature Forecast
The rainfall forecast for the first dekad (01-10) of June 2017 in Figure 5 indicates that rainfall is likely to be concentrated over much southern part of Sudan; over much of South Sudan; much of western and central Ethiopia; over parts of northern and central towards southeastern Somalia; over much of Uganda except for the southwestern part; in the northeastern part of	The average temperature forecast for first dekad (01-10) of June 2017 (Figure 6) indicates the likelihood of warm average temperature greater than 22°C over much of Sudan, South Sudan, Eritrea, Djibouti, Somalia, around north, west and eastern Ethiopia, over northern Uganda, in north and eastern Kenya, and in the coast of Tanzania. The rest of the Greater

Rwanda; over western, central and northern coast of Kenya; and eastern parts Tanzania. The rest of the GHA region likely to experience little rainfall or remain generally dry during the first dekad (01-10) of June 2017.

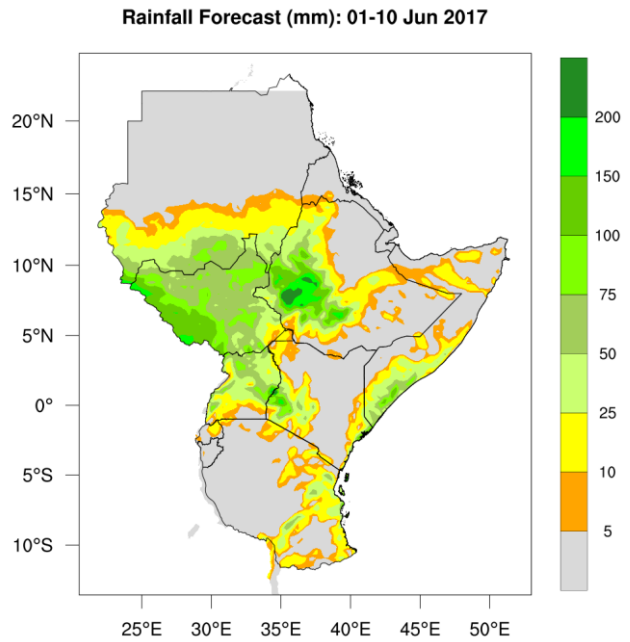

Figure 5: Precipitation forecast for the first dekad (01-10) of June 2017 (Source: WRF-ICPAC)

Horn of Africa region are likely to be below 20°C.

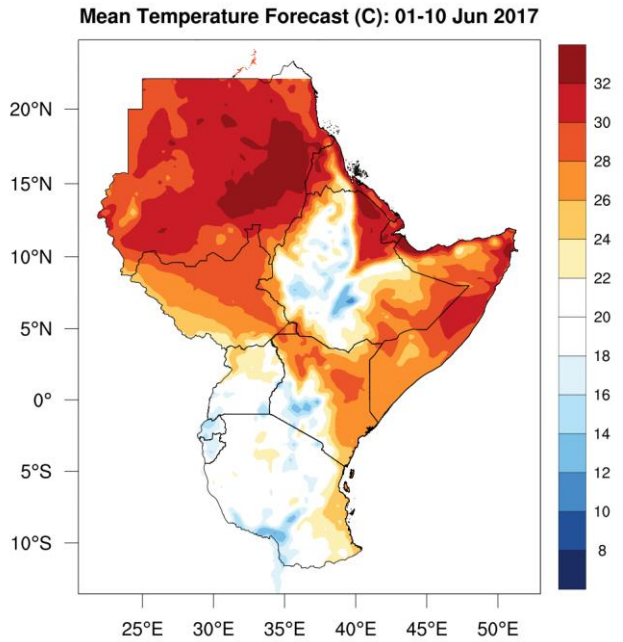

Figure 6: Forecast for average temperature for the first dekad (01-10) of June 2017 (Source: WRF-ICPAC)

For more information contact
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