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10 DAY CLIMATOLOGICAL SUMMARY AND IMPACTS FOR THE FOURTH DEKAD (1-10 FERUARY) OF 2017 AND CLIMATE OUTLOOK FOR THE SIXTH DEKAD (21–28 FEBRUARY) OF 2017

1.0 Introduction

In this bulletin, the climatic conditions observed during the fourth dekad (1-10 February) of 2017 over the Greater Horn of Africa (GHA) are reviewed and the associated impacts highlighted. The climate outlook for the sixth dekad (21-28 February) of 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

Most of the Greater Horn of Africa (GHA) region has experienced near normal rainfall conditions, with a few areas around western and central equatorial sector experiencing below normal rainfall, while west and south west part of the southern sector experiencing near normal to above normal rainfall conditions during the fourth dekad (1-10 February) of 2017. Rainfall was mainly observed in the west and south west part of the southern sector of GHA region during the fourth dekad of 2017.

During the same period, south west part of the northern sector, western and central part of the equatorial sector, as well as northern part of the southern sector of the GHA experienced warmer than average maximum temperature. Warmer than average minimum temperatures was observed over much western part of the northern sector as well as in parts of central equatorial and central southern sector of the GHA.

The outlook for the sixth dekad (21-28 February) of 2017 shows that rainfall is likely to be concentrated over much of the southern sector, over southern part of the equatorial sector, and over a few areas in central parts of the northern sector of the Greater Horn of Africa. Average temperature exceeding 24°C is likely to be experienced in the areas around south western part of the northern sector extending into the northwest, north and eastern part of the equatorial sector and to the eastern part of the southern sector of the GHA during the sixth dekad of 2017.

3.0 Observed rainfall situation during the fourth Dekad (1-10 February) of 2017

Figure 1 shows the total rainfall distribution, Figure 2a shows the percent of the average rainfall, and Figure 2b shows the standardized precipitation index (SPI) over the GHA region during the fourth dekad of 2017.

Rainfall Distribution and Severity

During the fourth dekad of 2017, much of the Greater Horn of Africa region recorded less than 10mm of rainfall, except for areas round south of Uganda, much of Rwanda, western, central and southern part of Tanzania and over few areas in western and central Kenya as well as south west of Ethiopia. These areas recorded between 10mm and 200mm of rainfall, with only the south west part of Tanzania recording between 100mm and 200mm or rainfall (Figure 1).

Much of the GHA recorded between 75% and 125% of the long term average rainfall amounts which translated into near normal rainfall conditions during the fourth dekad of 2017 (Figure 2a). Less than 75% of the long term average rainfall was recorded in southwest and southern part of South Sudan; around central and south western Ethiopia; over much of Uganda except for the south western part; over western Rwanda; over much of north eater, western and southern parts of Kenya; and over north and north eastern Tanzania (Figure 2a) during the fourth dekad of 2017. These areas experienced near normal to moderately dry rainfall conditions (Figure 2b). Few areas in the northwest and southeast of Ethiopia; over few isolated areas in Djibouti and west of Eritrea; and in the west and southwest parts of Tanzania recorded more than 125% of long term average rainfall which translated to near normal to severely wet rainfall conditions (Figure 2b)

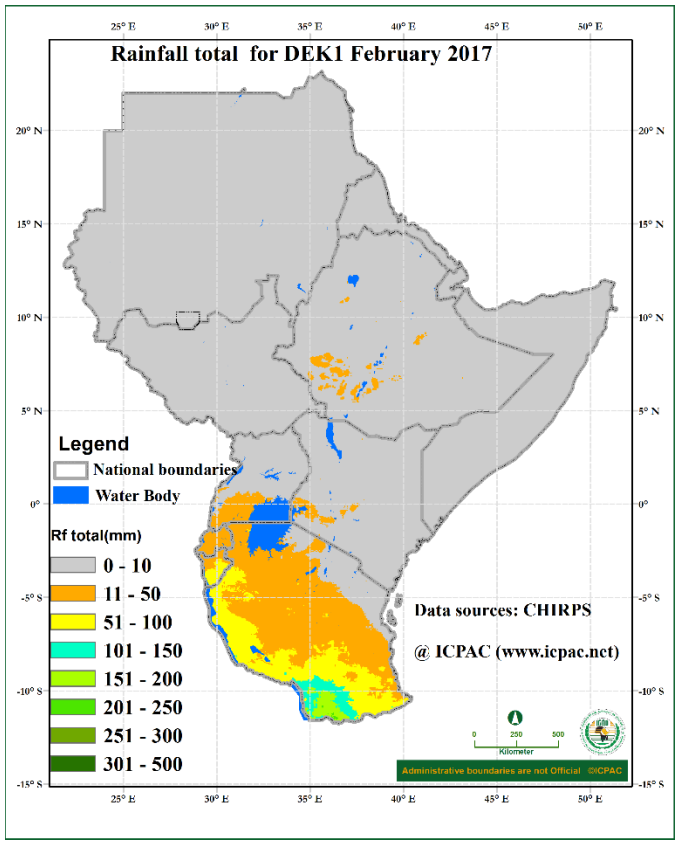

Figure 1: Rainfall distribution during the fourth dekad (1–10 February) of 2017. *(Data Source: USGS CHIRPS)*

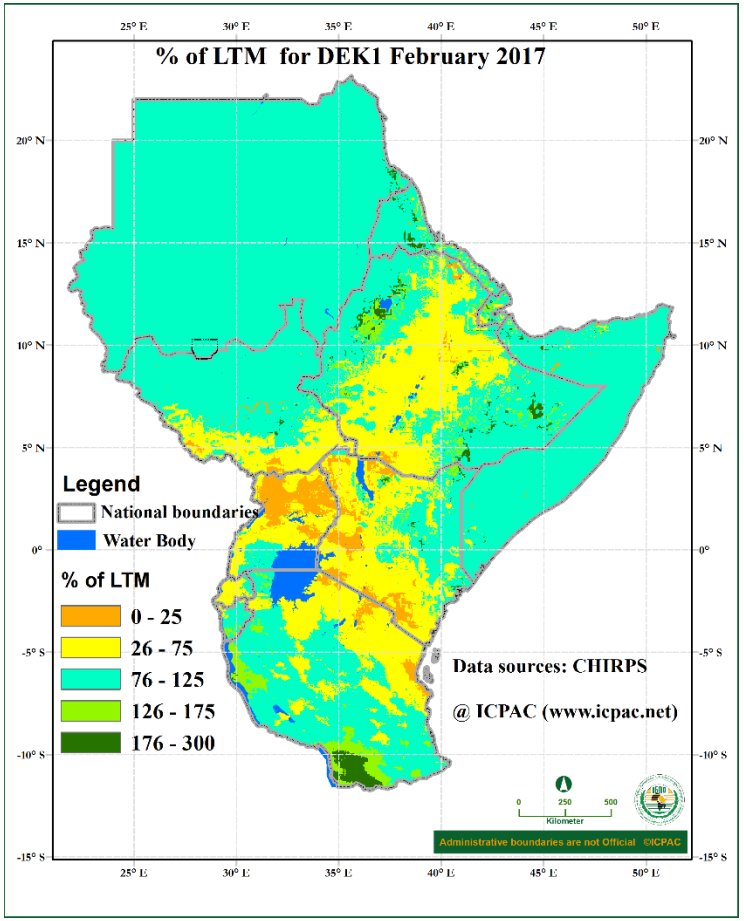

Figure 2a: Percent of long term average rainfall for the fourth dekad (1-10 February) of 2017 *(Data Source: USGS CHIRPS)*

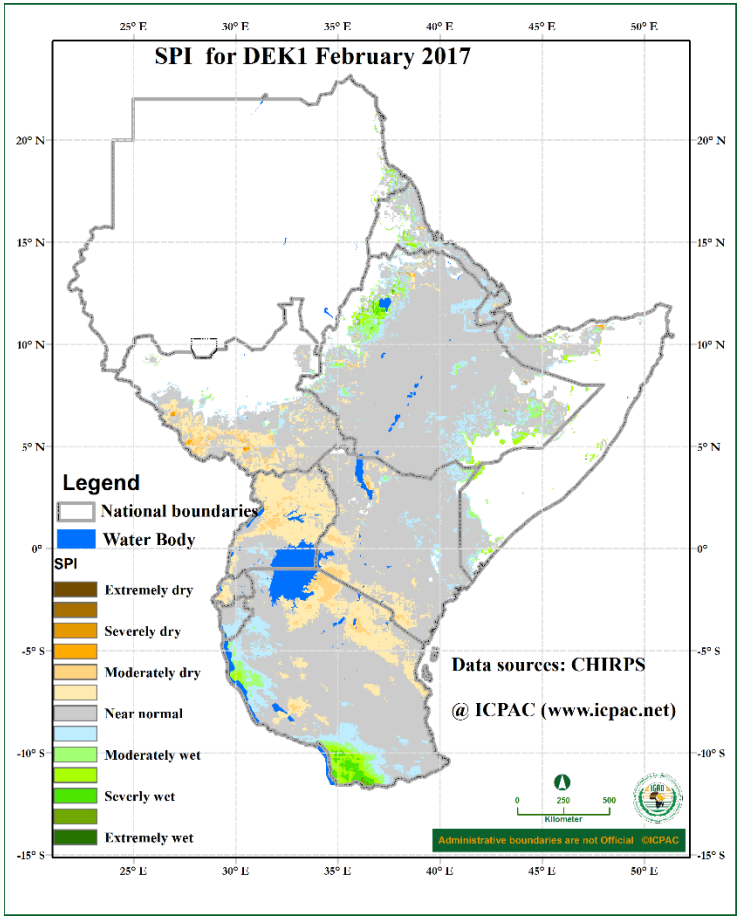

Figure 2b: Standardized Precipitation Index (SPI) for fourth dekad (1-10 February) of 2017 *(Data Source: USGS CHIRPPS)*

Maximum and Minimum Temperature Anomaly

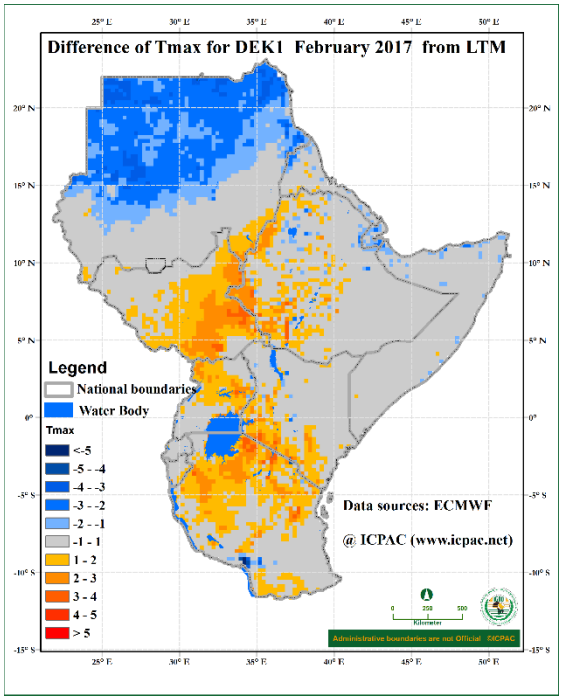

Figure 3a: Maximum temperature difference from the average (2008-2015) for the fourth dekad (1-10 February) of 2017 *(Data Source: ECMWF)*

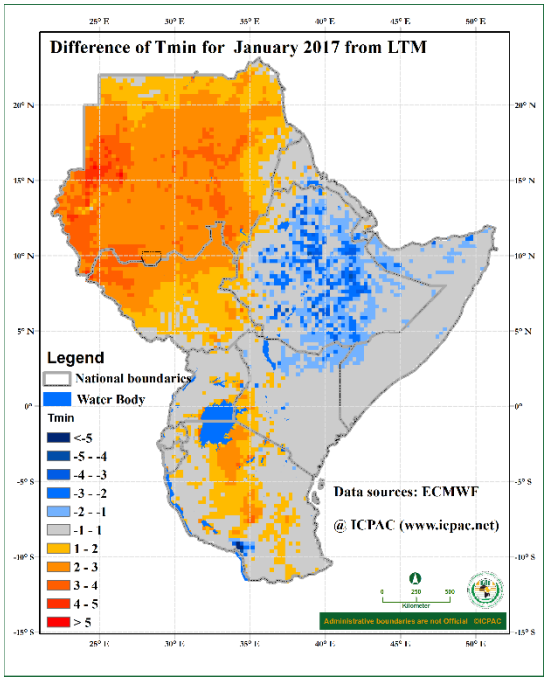

Figure 3b: Minimum temperature difference from the average (2008-2015) for the fourth dekad (1-10 February) of 2017 *((Data Source: ECMWF)*

Warmer than average maximum temperatures was experienced in areas around south western Sudan; over western and southern parts of South Sudan; in isolated areas around central and western Ethiopia; over northwest, central and south east of Uganda, extending to western and southern Kenya; and over northern part of Tanzania during the fourth dekad of 2017. Cooler than average maximum temperature was experienced in northern part of Sudan and over a few areas in north west Eritrea, parts of Djibouti and northern Somalia. The rest of the GHA region experienced near average maximum temperatures (Figure 3a) during the same period.

Warmer than average minimum temperature was experienced over much of Sudan; South Sudan; west of Kenya; over parts of south and southwest Uganda; and around north and central Tanzania. Cooler than average minimum temperature was observed over much of Ethiopia, north eastern part of Kenya, and over northern part of Somalia during the fourth dekad of 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 1st and 8th February 2017 (Figure 4) indicates deterioration in vegetation conditions in south western Ethiopia; over southwest part of South Sudan; over much of Uganda and west, central, south and coastal part of Kenya; around parts of west and southern Rwanda and west and eastern Burundi; and over much of northern north eastern and southern Tanzania. Improvement in vegetative conditions is indicated in a few areas in east of Sudan, northeast and western part South Sudan, northern Rwanda, central Burundi, and over some areas in western Tanzania. The rest of the GHA showed little or no change in vegetation conditions compared to the long-term average of the same period.

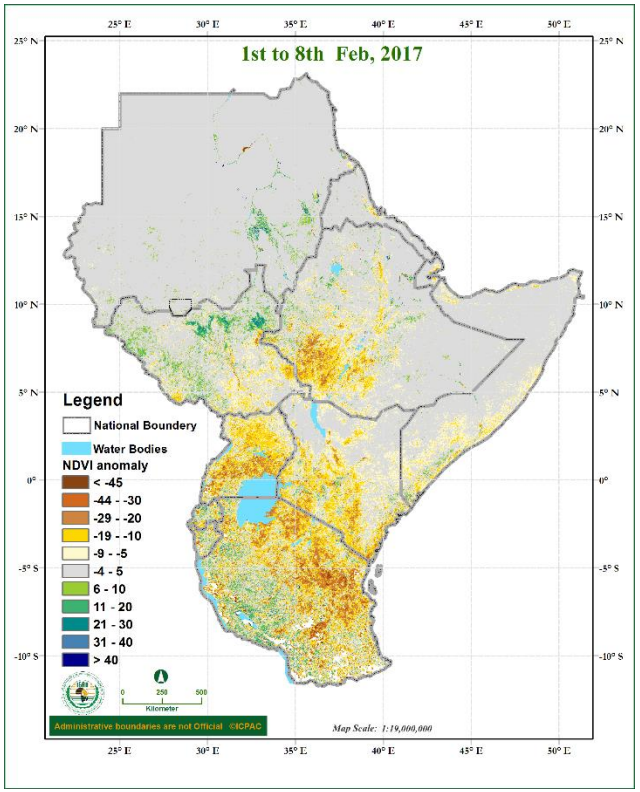

Figure 4: NDVI anomaly for the period between 1st and 8th February 2017 (Data Source:USGS NASA)

4.2 Impacts associated with observed climate conditions

During the fourth dekad (1-10 February) of 2017 dry conditions continued to be experienced and these have resulted into drought related impacts such as persistence in deterioration in water and pasture conditions, and poor prospects of crop and livestock performance, loss of crop and livestock, water scarcity, increase in food insecurity, migration of pastoralist, and human wildlife conflict. A few areas in the southern sector have shown improvement in water and vegetative conditions which have eased water stress and improved pasture availability.

5.0 Climate outlook

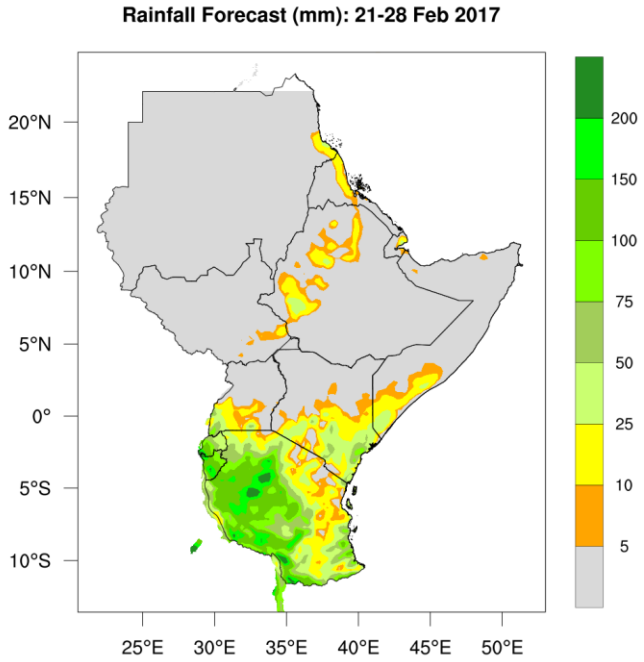

Figure 5: Precipitation outlook for the sixth dekad (21 –28 February) of 2017

Rainfall outlook

The rainfall outlook for the sixth dekad (21-28 February) of 2017 in Figure 5 indicates that rainfall is likely to be concentrated in south west part of Uganda; over much of Rwanda, Burundi, and west, central and south eastern Tanzania; over parts of west, central and south eastern Kenya extending to southern Somalia; and over isolated areas in the west of Ethiopia and northern coast of Eritrea. Much of the rest of the Greater Horn of Africa Region which include Sudan, much of Eritrea, Djibouti, Ethiopia, South Sudan, north and central Somalia, north and west of Uganda, northern and south central part of Kenya, as wel as north eastern Tanzania is likely to experience little rainfall or generally dry conditions during the sixth dekad of 2017.

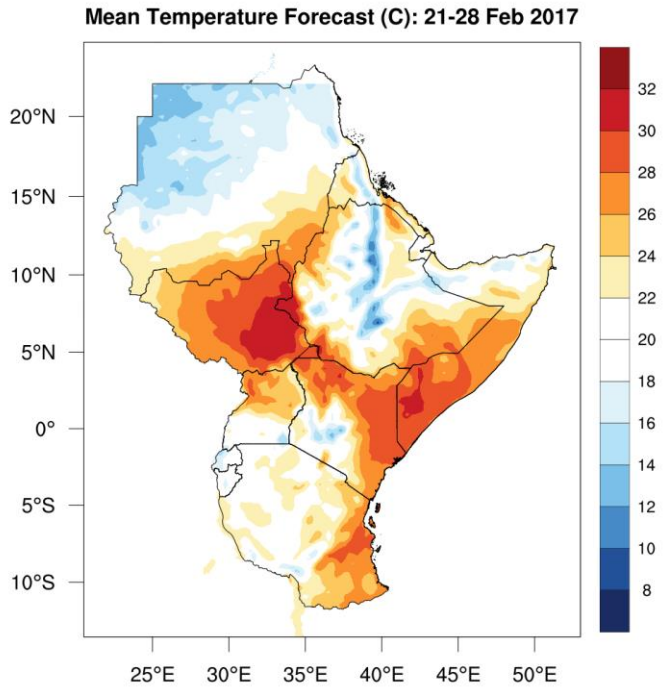

Figure 6: Average temperature outlook for the sixth dekad (21 –28 February) of 2017

Temperature outlook

The average temperature outlook for sixth dekad (21-28 February) of 2017 (Figure 6) indicates the likelihood of mean temperature below 18°C over northern part of Sudan; central parts of Ethiopia; western part of Rwanda; central part of Burundi; and central Kenya. Much of the rest of the GHA is likely to record average temperature of greater than 22°C during this period.

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