

## IGAD CLIMATE PREDICTION AND APPLICATIONS CENTRE (ICPAC)

### 10 DAY CLIMATOLOGICAL SUMMARY AND IMPACTS FOR THE FIRST DEKAD (01 – 10) JANUARY) 2016 AND CLIMATE OUTLOOK FOR THE THIRD DEKAD (21 – 31 JANUARY) 2016

#### 1.0 Highlights

- During the first dekad (1-10 January) of 2016, wet conditions were mainly observed over western and south-western parts of the southern sector of the Greater Horn of Africa (GHA);
- Wet conditions are likely to be experienced over parts of the southern sector of Greater Horn of Africa (GHA) during the third dekad (21-31 January) of 2016;
- The observed rainfall conditions during dekad 01 (1 –10 January) of 2016 resulted in improved pasture and foliage conditions, replenishment of water resources, and increase in water related diseases.

#### 2.0 Introduction

In this bulletin, the climatic conditions observed during the first dekad (1-10 January) of 2016 over GHA are reviewed and the associated impacts highlighted. The climate outlook for the third dekad (21-31 January) of 2016 is also provided.

#### 3.0 Observed rainfall situation during the first dekad (1–10 January) of 2016

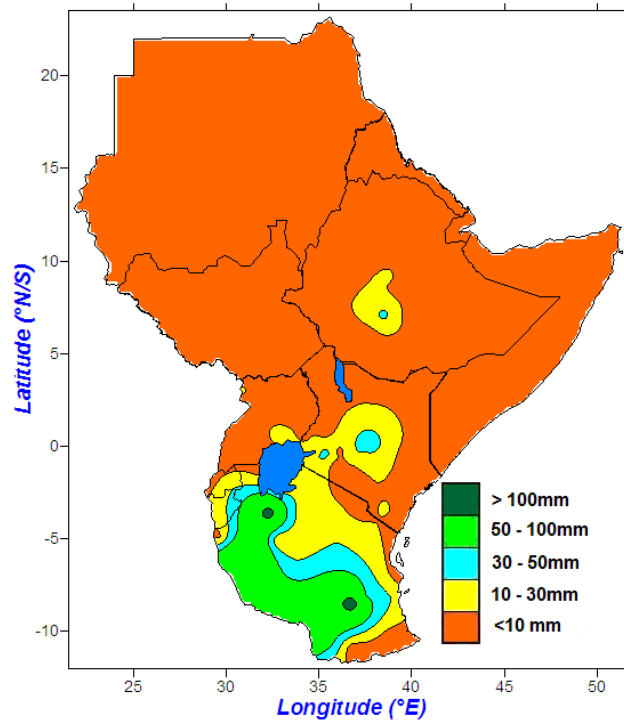
Figure 1 shows the spatial pattern of observed rainfall over the GHA during the first dekad (1 – 10 January) of 2016 while Figure 2 shows that of rainfall severity index for the same period.

#### 3.1 Northern and Equatorial sectors

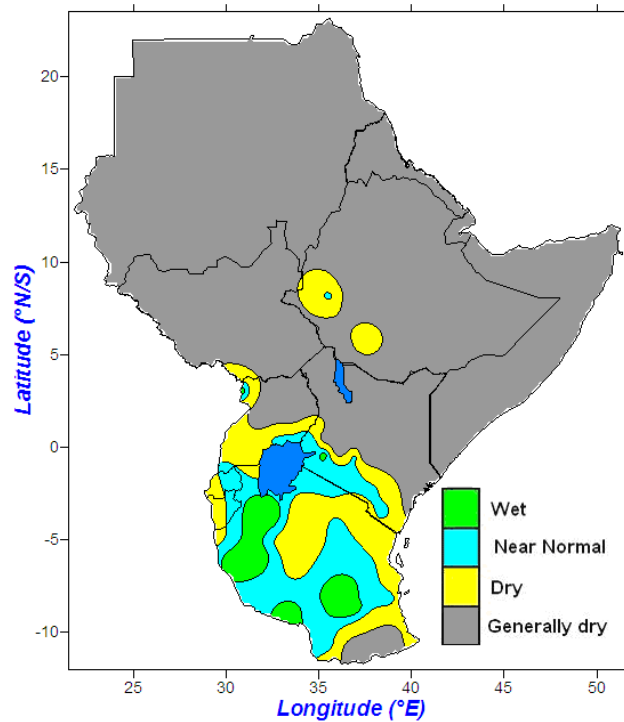
During the first dekad (1 –10 January) of 2016, most of the northern and the equatorial sectors received less than 10mm of rainfall (Figure 1) resulting into dry or generally dry conditions (Figure 2). However, parts of western and central Kenya; central Ethiopia; and most parts of Rwanda and Burundi received between 10mm to 50mm of rainfall (Figure 1). This resulted into near normal to dry rainfall conditions over most of these areas (Figure 2). Parts of northern Tanzania received between 50mm and 100mm resulting in wet conditions.

#### 3.2 Southern Sector

Western and south-western parts of Tanzania received between 30mm to 100mm of rainfall During the first dekad (1 –10 January) of 2016 (Figure 1) resulting in near normal to wet conditions (Figure 2). The northern, coastal strip and southern tip of the southern sector received less than 30mm of rainfall (Figure 1) resulting to dry or generally dry conditions (Figure 2).



**Figure 1: Spatial distribution of observed rainfall over the GHA during the first dekad (1–10 January) of 2016**



**Figure 2: Rainfall Stress Severity Index over the GHA for the first dekad (01–10 January) of 2016**

#### 4.0 Assessment of current rainfall performance

The cumulative dekadal rainfall was used to evaluate the rain water stress over GHA region. Figure 3 shows the cumulative dekadal rainfall performance since June 2015. Near normal and above normal rainfall conditions were observed over western parts of the equatorial sector and south western and central parts of the southern sector the GHA (Figure 3a, 3b and 3c)

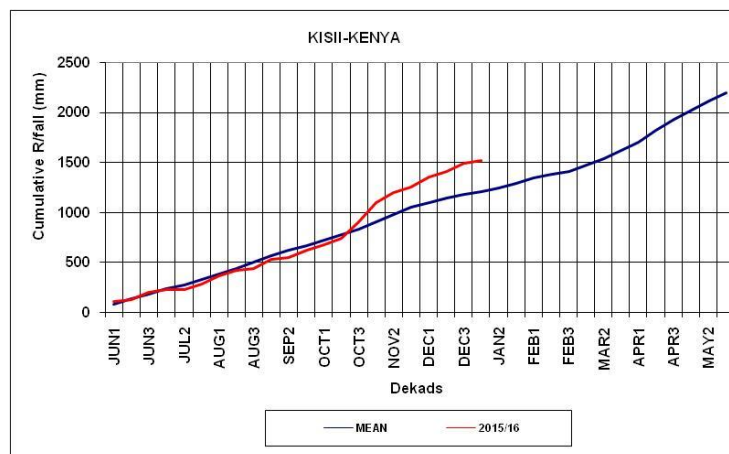


Figure 3a: Cumulative rainfall series for Kisii

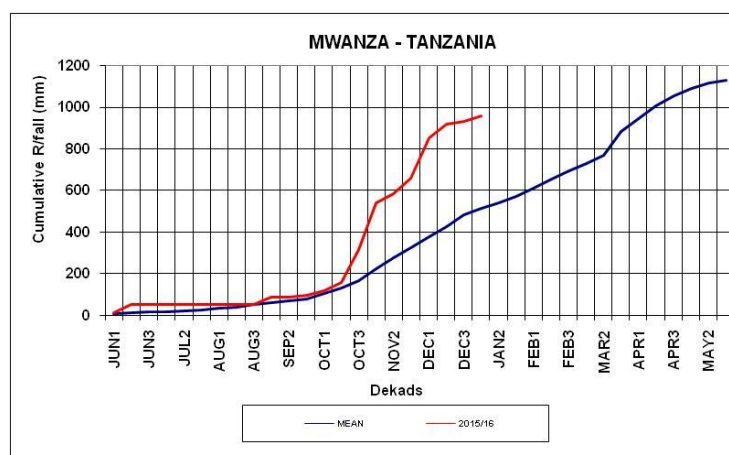


Figure 3b: Cumulative rainfall series Mwanza

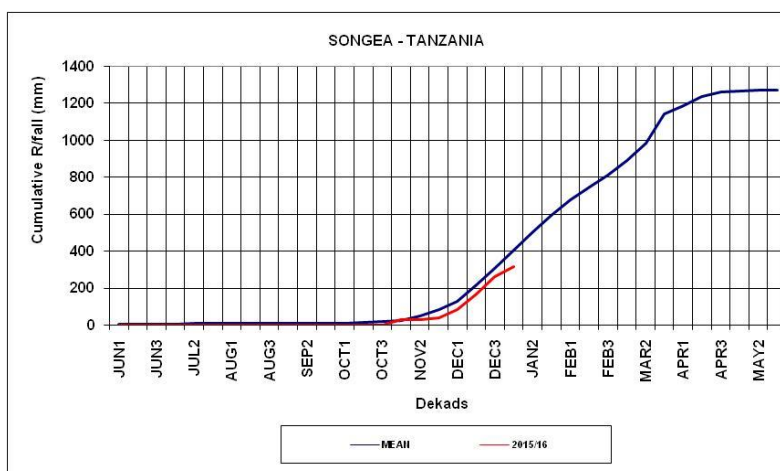


Figure 3c: Cumulative rainfall series for Songea

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## 5.0 Impacts on socio-economic sectors

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

### 5.1 Vegetation condition indicators

The comparison of the Normalized Difference Vegetation Index (NDVI) between dekad 1 (01-10 January 2016) and dekad 36 (21 –31 December 2015) indicates deteriorated vegetative condition over most parts of South Sudan; western and southern parts of Ethiopia; northern, northern and central parts of Uganda; most parts of Kenya; northern parts of Burundi; parts of western, northern, and eastern Tanzania; southern parts of Rwanda; and southern parts of Somalia. Improvement in vegetative conditions was mostly indicated over central, western and southern parts of Tanzania; south western parts of Burundi; and south western parts of Uganda (Figure 4). The rest of the GHA indicated little or no change in vegetative condition.

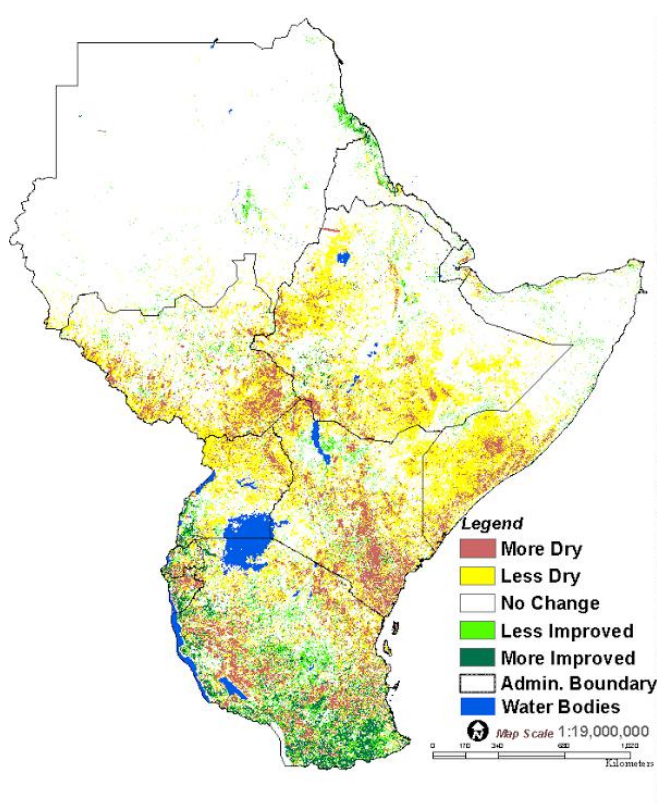


Figure 4: NDVI difference between dekad 32(11-20) and dekad 31 (1 –10 November)

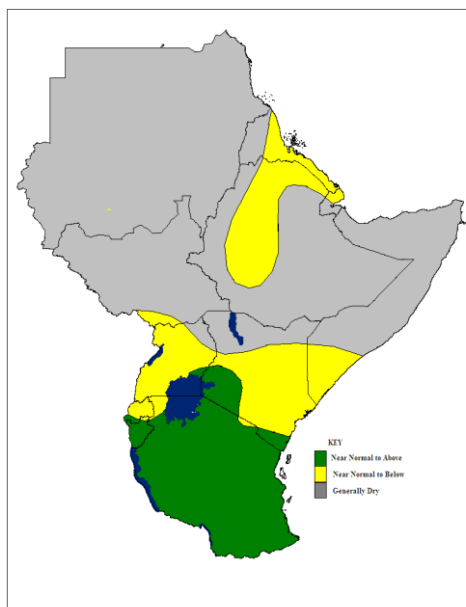
### 5.2 Impacts associated with observed climate conditions

The observed rainfall conditions over GHA during the first dekad (1-10 January of 2016) were associated with the following impacts:

- Improved pasture and foliage across parts of the southern sector of GHA leading to good prospects for livestock performance.
- Improved water availability leading to replenishment of reservoirs and water pans.
- Increase in water related diseases

## 6.0 Climate outlook

The rainfall outlook for the third dekad (21-31 January) 2016 indicates near normal to above normal rainfall conditions are likely to be experienced over most parts of Tanzania; parts of Rwanda; much of Burundi; and western parts of Kenya (Figure 4). Most parts of Rwanda and Uganda; most parts of Kenya; southern parts of Somalia; western and central parts of Ethiopia; parts of Eritrea; and parts of Djibouti are likely to receive near normal to below normal rainfall, while the rest of the GHA region are likely to remain generally dry (Figure 4).



**Figure 4: Climate outlook for dekad 02 (11 – 20 January) 2016**