



# REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT, NATURAL RESOURCES & REGIONAL  
DEVELOPMENT AUTHORITIES

KENYA METEOROLOGICAL DEPARTMENT

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## WEATHER REVIEW FOR AUGUST 2016 AND THE OUTLOOK FOR SEPTEMBER 2016

### 1. SUMMARY

*Most parts of the country remained generally dry in August 2016. Several stations in Western Kenya, however, recorded significant rainfall but the amounts were below average at most stations as compared to the August Long-Term Means (LTMs). Nyahururu and Eldoret (Kapsoya) were the only stations in the region that recorded near-average rainfall (between 75 and 125 percent of their August LTMs).*

*The Coastal areas recorded highly depressed rainfall with all meteorological stations recording monthly rainfall totals of less than 40 mm.*

*Fairly warm and sunny conditions occurred in the Central highlands including Nairobi for most of the month. Cool and cloudy weather conditions were, however, occasionally recorded especially between 5<sup>th</sup> and 15<sup>th</sup> August 2016. Both the daytime and nighttime temperatures were higher than average in most parts of the country including the central highlands.*

*The outlook for September 2016 indicates that most parts of the country will continue to be generally sunny and dry. The Western Highlands (Kericho, Kitale, Eldoret, Kakamega, Bungoma), Lake Victoria Basin (Kisumu, Kisii, Busia) and parts of Central Rift Valley (Nakuru, Nyahururu) are likely to experience near-average to below-average (generally depressed) rainfall. Occasional light morning showers are expected along the Coastal strip while the central highlands and Nairobi area are likely to experience occasional cool and cloudy conditions especially during the morning hours.*

### 2. REVIEW OF THE WEATHER DURING AUGUST 2016

#### 2.1 Rainfall Review

Rainfall analysis for August 2016 indicates that most parts of the country remained generally sunny and dry for most of the month. Most meteorological stations in Northwestern, Northeastern, Central, Southeastern and southern parts of central Rift Valley recorded monthly rainfall totals of less than 10mm. Some stations like Machakos, Makindu, Marsabit and Mandera recorded no rainfall at all.

Several stations in Western Kenya recorded significant amounts of rainfall. The amounts were, however, below average at most stations as compared to their August LTMs. Nyahururu and Eldoret (Kapsoya) stations, however, recorded near-normal rainfall (between 75 and 125 percent of their LTMs) during the month. The stations recorded 102 and 84 percent of their LTMs respectively.

Most stations along the Coastal strip recorded highly depressed rainfall. The highest percentage of 74 percent was recorded at Lamu station. Msabaha station recorded just 35 percent of its August LTM.

Up to 28<sup>th</sup> August, Nyahururu station recorded the highest monthly rainfall total of 155.7mm (102%) as compared to its August LTM of 152.8mm. Eldoret Airport, Eldoret (Kapsoya), Kericho, Kakamega, Kisii, Kitale and Nakuru stations recorded 137.5 (73%), 135.0 (84%), 127.5 (66%), 114.7 (52%), 110.9 (64%), 108.3 (71%) and 62.2mm (58%) respectively. The rest of the stations recorded less than 50mm as shown in **Figure 1**.

## ***2.2 Temperature Review***

The entire country including the Central highlands recorded higher than average temperatures during the month of August. Analysis of the air temperatures during the month indicated that both the minimum (night-time) and maximum (day-time) temperatures were warmer than average at most stations with sunny conditions dominating especially during the second half of the month.

The daytime temperatures in the Central highlands, however, occasionally fell below 20°C. This was more so between 5<sup>th</sup> and 15<sup>th</sup> August. The lowest daily maximum temperature of 15.2°C was recorded at Nyeri station on 6<sup>th</sup> August 2016.

Lamu station recorded the highest maximum temperature anomaly of positive 1.9°C while the lowest anomaly of positive 0.2°C was recorded at Eldoret and Nakuru stations. With regard to minimum temperatures, Narok station recorded the highest anomaly of positive 2.2°C.

## ***2.3 Prevailing Synoptic Conditions during August 2016***

During the month of August 2016, cooler than average Sea Surface Temperatures (SSTs) prevailed over western equatorial Indian Ocean (adjacent to the East African coast). This resulted into reduced moisture influx from the Indian Ocean into the country. Cooler than average SSTs were observed over the eastern and central equatorial Pacific Ocean. This was an indication that La Niña-like conditions were still present in the Pacific Ocean.

The St. Helena high-pressure system remained generally weak for most of the month. The Mascarene high-pressure system and the Eastern Africa high-pressure ridge were also weaker than average for most of the month. This led to the warmer than average temperatures over most parts of the country. The Meridional (North-south) arm of the Inter-Tropical Convergence Zone (ITCZ) was mainly over the central parts of Africa, Uganda but occasionally shifted to the western parts of Kenya. The zonal arm was mainly situated in Ethiopia.

## **3. WEATHER OUTLOOK FOR SEPTEMBER 2016**

On average, most parts of the country including western Kenya experience generally sunny and dry weather conditions during the month of September. The central regions experience occasional cool and cloudy conditions especially at the beginning of the month.

### ***3.1 Rainfall Outlook***

The rainfall forecast for September 2016 is based on the observed patterns of the Global Sea Surface Temperatures (SSTs) and more so in the Indian Ocean. The cooler than average SSTs in the western Equatorial Indian Ocean (adjacent to the East African Coast) and the warmer than average SSTs in the eastern Equatorial Indian Ocean (adjacent to Australia) were highly considered. This constitute what is commonly referred to as a negative Indian Ocean Dipole (-IOD) that is associated with depressed rainfall in East Africa including Kenya.

The forecast indicates that most parts of the country including the western and the Coastal strip will remain generally dry for most of the month. However, occasional afternoon showers and thunderstorms are expected to occur over the Western highlands, The Lake Victoria Basin and parts of Central Rift Valley (see **Figure 2**).

### ***3.2 Expected Temperatures***

Generally warm weather condition with occasional cool and cloudy conditions is expected to occur in the Central highlands including Nairobi. On average, warmer temperatures (both daytime and nighttime) are still expected during the month.

### 3.3 *The specific outlook for individual areas is as follows:*

- a) **The Highlands West of the Rift Valley (Kitale, Kericho, Nandi, Eldoret, Kakamega), Lake Victoria Basin (Kisumu, Kisii, Busia) and parts of Central Rift Valley (Nakuru, Nyahururu, Aberdares region)** are likely to experience generally dry conditions with occasional afternoon showers and thunderstorms;
- b) **The Highlands East of the Rift Valley (Nyeri, Muranga, Kiambu, Embu, Meru) and Nairobi area (Dagoretti, Kabete, Wilson, Eastleigh, Ngong)** will experience occasional cool and cloudy conditions during the morning hours especially at the beginning of the month. Sunny and dry weather conditions are, however, likely to prevail for most of the month. The daytime and nighttime temperatures are expected to remain warmer than average;
- c) **The Coastal strip (Lamu, Malindi, Msabaha, Mombasa, Mtwapa, Kilifi)** is expected to experience generally dry weather conditions with occasional light morning showers;
- d) **The Northwestern Regions (Lodwar, Lokichoggio, Lokitaung), Northeastern Kenya (Marsabit, Garbatulla, Wajir, Mandera, Moyale), Southeastern Kenya (Machakos, Makindu, Voi) and parts of central and south Rift Valley (Narok, Magadi, Kajiado)** are expected to remain generally sunny and dry throughout the month. Occasional afternoon showers and thunderstorms are, however, likely to occur over the northwestern areas bordering Uganda and Sudan.

## 4. EXPECTED IMPACTS

- The continuation of sunny and dry weather conditions in Northwestern, Northeastern and Southern lowlands and the Coastal area will lead to diminishing pastures for livestock in the regions. Close monitoring of the situation is therefore necessary to avert loss of animals.
- The expected poor rainfall performance over the western highlands will continue to impact negatively on the crop performance over the areas especially in the North Rift. This situation is likely to have a major impact on the food security in the country.
- Visibility may occasionally become poor in some parts of Central highlands, Nairobi and parts of central Rift Valley especially at the beginning of the month. Motorists are cautioned to exercise extra care when driving along roads such as Limuru-Nakuru-Eldoret to avoid accidents.

**NB: This forecast should be used in conjunction with regular 24-hour (daily) forecasts and updates issued by this Department.**

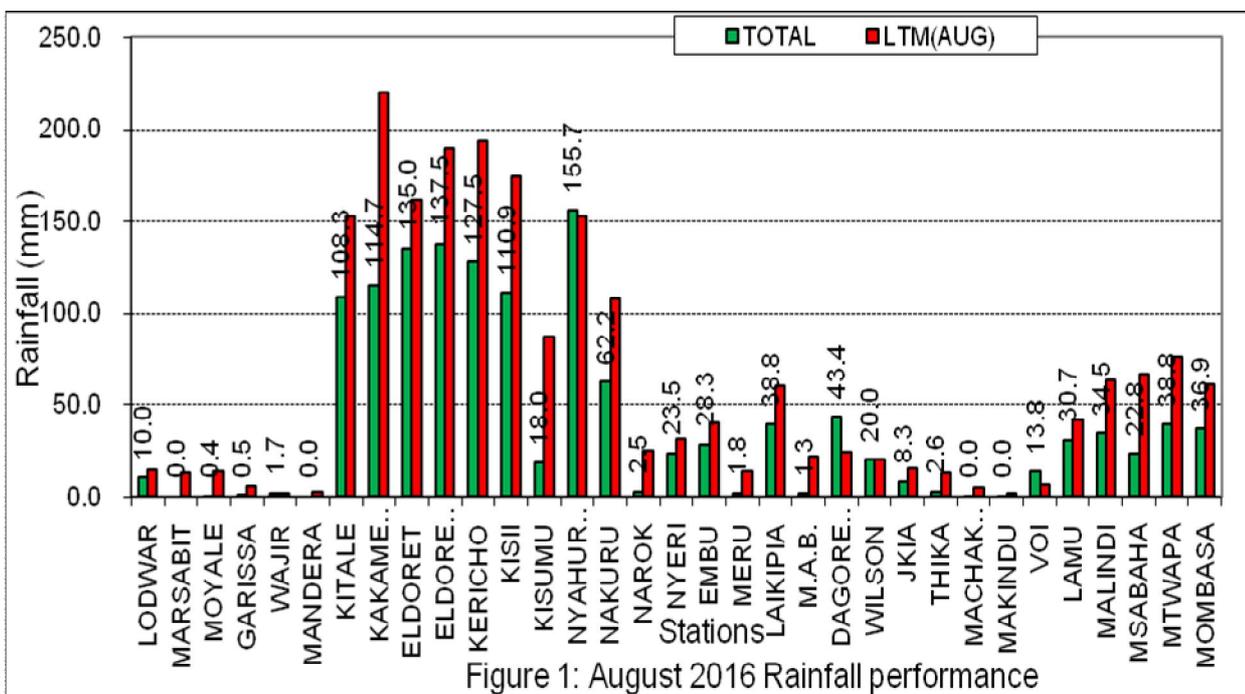
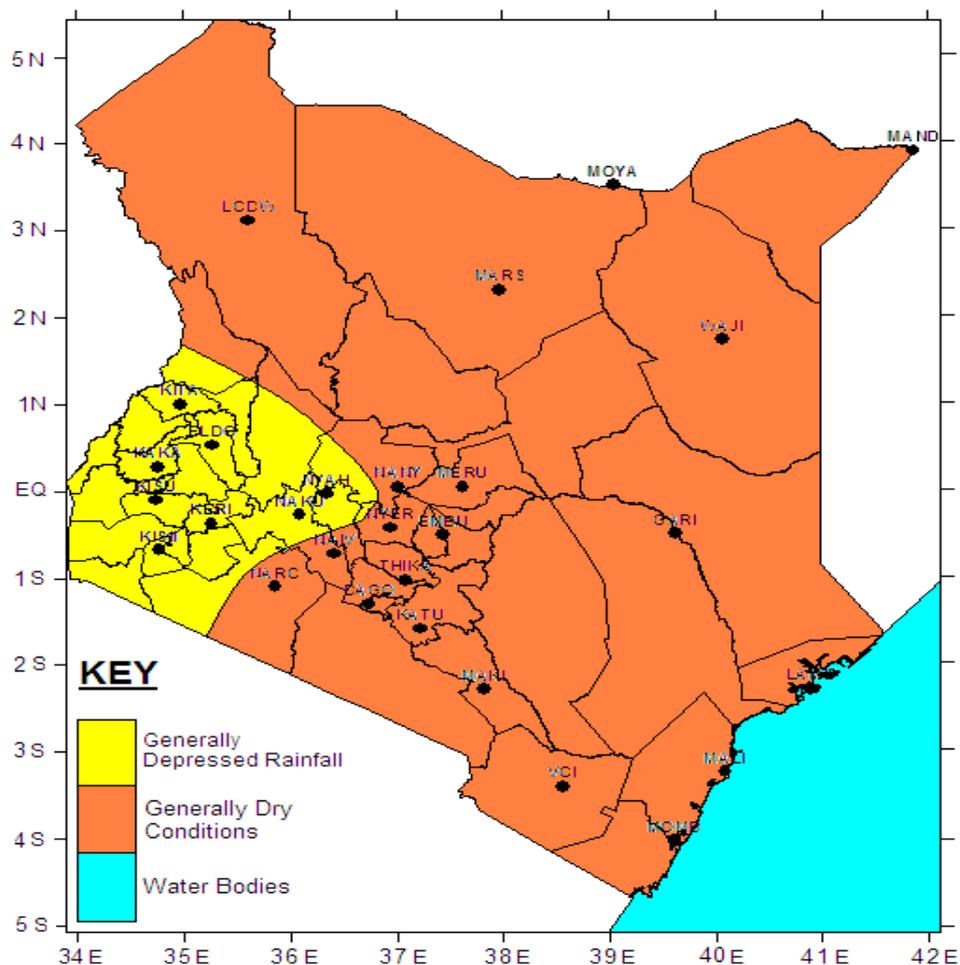


Figure 1: August 2016 Rainfall performance



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