



REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT, NATURAL RESOURCES & REGIONAL
DEVELOPMENT AUTHORITIES

KENYA METEOROLOGICAL DEPARTMENT

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WEATHER REVIEW FOR JULY 2016 AND THE OUTLOOK FOR AUGUST 2016

1. SUMMARY

Most parts of the country remained generally dry in July 2016. Several stations in Western Kenya, however, recorded significant amounts of rainfall that was near average as compared to the July Long-Term Means (LTMs). Kisii and Kericho were the only stations in the region that recorded below average rainfall (less than 75 percent of their July LTMs).

The Coastal areas recorded highly depressed rainfall with most meteorological stations recording monthly rainfall totals of less than 30 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 11th and 20th July 2016. Both the daytime and nighttime temperatures were higher than average in most parts of the country including the central highlands.

The outlook for August 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 cool and cloudy conditions are likely to dominate over the central highlands and Nairobi area especially during the morning hours.

2. REVIEW OF THE WEATHER DURING JULY 2016

2.1 Rainfall Review

Rainfall analysis for July 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 Lodwar, Marsabit, Mandera and all stations in Nairobi and southeastern lowlands recorded no rainfall at all.

Several stations in Western Kenya recorded significant amounts of rainfall that was mainly near average as compared to their July Long-Term Means (LTMs). Kericho and Kisii stations, however, recorded below normal rainfall (less than 75 percent of their LTMs) during the month. The stations recorded 49 and 27 percent of their LTMs respectively.

Most stations along the Coastal strip recorded highly depressed rainfall. The highest percentage of just 32 percent was recorded at Msabaha station while Malindi, Mtwapa, Lamu and Mombasa stations recorded just 23, 14, 12 and 11 percent of their July LTMs respectively.

Up to 27th July, Eldoret Airport station recorded the highest monthly rainfall total of 205.4mm (121%) as compared to its July LTM of 170.5mm. Eldoret (Kapsoya), Kitale, Nyahururu, Kakamega, Kericho, Nakuru and Kisumu stations recorded 181.8 (109%), 150.3 (113%), 140.9 (103%), 122.6 (80%), 88.4 (49%), 82.6 (92%) and 55.3mm (81%) respectively. Msabaha, Kisii, Malindi, Mtwapa, Laikipia and Lamu stations recorded between 10 and 40mm while the rest of the stations recorded less than 10mm as shown in **Figure 1**.

2.2 Temperature Review

The entire country including the Central highlands recorded higher than average temperatures during the month. Analysis of the air temperatures in July 2016 indicated that both the minimum (night-time) and maximum (day-time) temperatures for the month were warmer than average at most stations with sunny conditions dominating especially during the first and the third dekad of the month.

The daytime temperatures in the Central highlands and Nairobi area, however, occasionally fell below 20°C. This was more so between 11th and 20th July. The lowest daily maximum temperature of 16.0°C was recorded at Nyeri station on 13th July 2016

Narok and Lamu stations both recorded the highest maximum temperature anomaly of positive 1.7°C while the lowest anomaly of negative 0.5°C was recorded at Meru station. With regard to minimum temperatures, Narok station recorded the highest anomaly of positive 2.2°C.

2.3 Prevailing Synoptic Conditions during July 2016

During the month of July 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 present in the Pacific Ocean.

The St. Helena high-pressure system remained moderately strong. The Mascarene high-pressure system and the Eastern Africa high-pressure ridge were 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 and parts of western Kenya while the zonal arm was mainly situated in Ethiopia.

3. WEATHER OUTLOOK FOR AUGUST 2016

On average, most parts of the country experience generally sunny and dry weather conditions during the month of August. The western highlands, however, continue to experience significant rainfall amounts for most of the month while the central regions experience cool and cloudy conditions. The mean rainfall distribution for the month of August is as shown in **Figure 2**.

3.1 Rainfall Outlook

The rainfall forecast for August 2016 is based on regression of Sea Surface Temperature Anomalies (SSTAs) as well as SST gradients on Western Kenya rainfall. Climatology was applied elsewhere in the country including the Coastal region where dry weather conditions dominate in August.

The forecast indicates that most parts of the country including the Coastal strip will remain generally dry for most of the month. However, Near-average rainfall with a tendency to below-average (generally depressed rainfall) is expected over most parts of the Western highlands, The Lake Victoria Basin and parts of Central Rift Valley (see **Figure 3**).

3.2 Expected Temperatures

Generally warm weather with occasional cool and cloudy conditions are 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 receive near normal rainfall with a tendency to below normal (generally depressed rainfall);
- 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 especially during the morning hours. More of sunny weather is however, likely to prevail during the month. The daytime and nighttime temperatures are expected to be 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 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 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 Rift Valley especially during the first half of the month. Motorists are cautioned to exercise extra care when driving along roads such as Limuru-Nakuru-Eldoret to avoid accidents.
- Cases of respiratory diseases like asthma, pneumonia and common colds (flu) are expected to be on the increase in areas such as Nairobi, Central highlands, Central Rift Valley and parts of the highlands west of the Rift Valley due to the expected cool/cold conditions.

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

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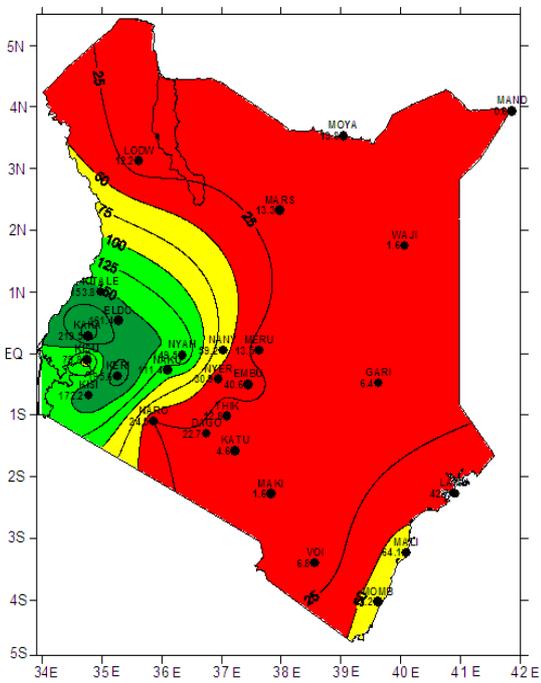
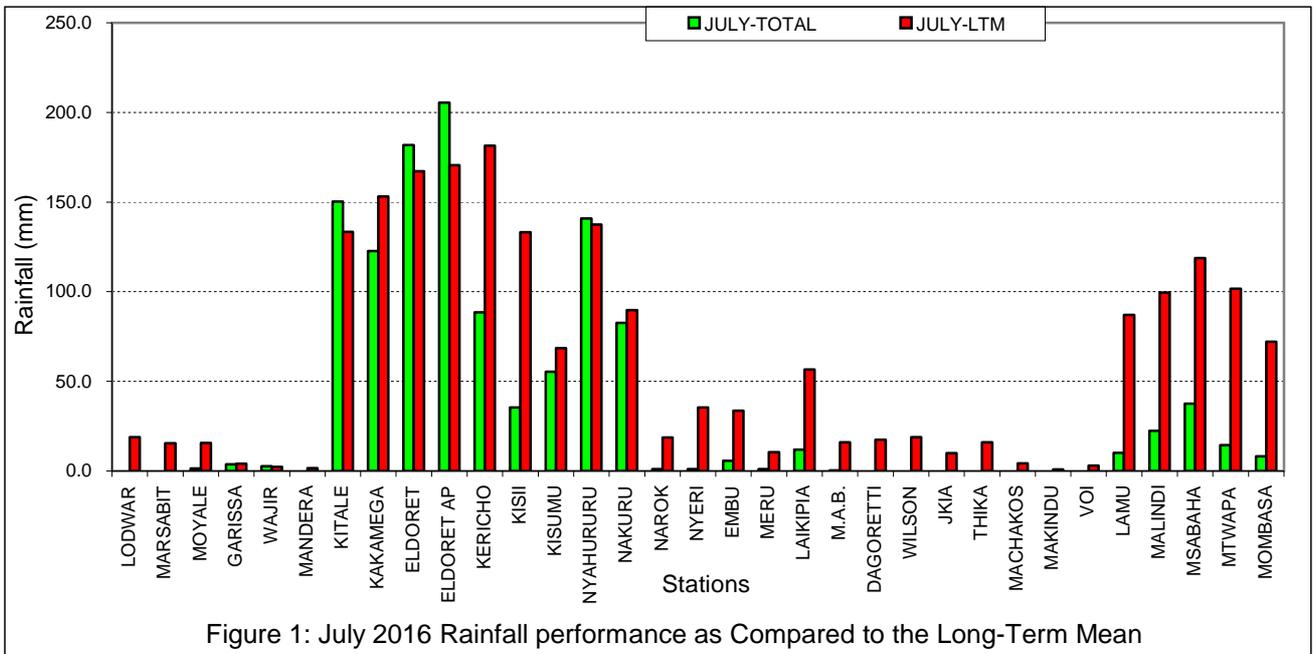


FIGURE 2: NORMAL (LTM) RAINFALL DISTRIBUTION DURING THE MONTH OF AUGUST

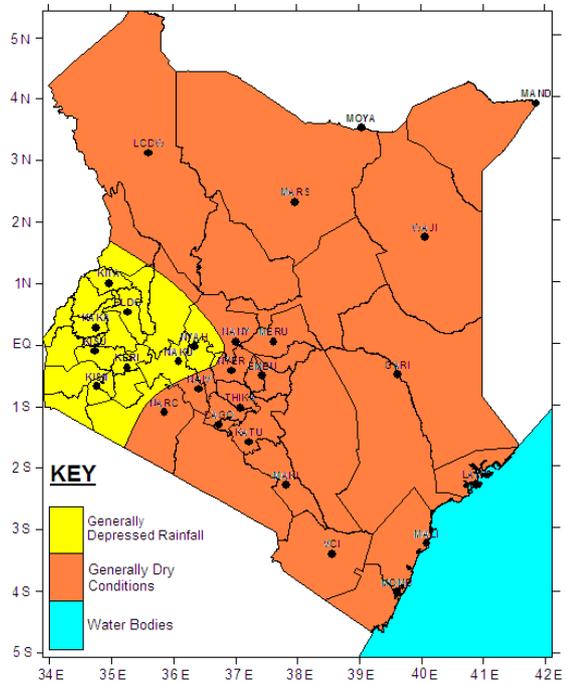


FIGURE 3: RAINFALL OUTLOOK FOR AUGUST 2016