



REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT, NATURAL RESOURCES & REGIONAL
DEVELOPMENT AUTHORITIES

KENYA METEOROLOGICAL DEPARTMENT

Dagoretti Corner, Ngong Road, P. O. Box 30259, Nairobi, Kenya,
Telephone: 254-20-3867880-5, Fax: 254-20-3876955/387373,
E-mail:director@meteo.go.ke

Ref. No. KMD/FCST/4-2016/MO/10

Date: 30 September 2016

WEATHER REVIEW FOR SEPTEMBER 2016 AND THE OUTLOOK FOR OCTOBER 2016

1. SUMMARY

Most parts of the country remained generally sunny and dry in September 2016. Several parts of Western Kenya recorded substantial amounts of rainfall that was, however, generally depressed at most stations as compared to the September Long-Term Means (LTMs). Kisumu, Nakuru and Kisii were the only stations in the region that recorded more than 100 percent of their September LTMs.

The month of October marks the onset of October-November-December (OND) “Short-Rains” season over most parts of the country. The outlook for October 2016 indicates that most parts of the country will experience generally depressed rainfall with sunny and dry weather conditions prevailing over most of the eastern sector for most of October. However, the Western Highlands (Kericho, Kitale, Eldoret, Kakamega, Bungoma), Lake Victoria Basin (Kisumu, Kisii, Busia), Central Rift Valley (Nakuru, Narok, Naivasha) and Nairobi area (Dagoretti, Wilson Airport, Kabete, etc) are likely to experience near-average to above-average (generally enhanced) rainfall.

The onset of the OND 2016 “Short-Rains” is expected to be late over most parts of the country except the western region where rainfall is expected to continue from September.

2. REVIEW OF THE WEATHER DURING SEPTEMBER 2016

Rainfall analysis for September 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 the northern Coastal strip recorded monthly rainfall totals of less than 10mm. Some stations like Lodwar, Wajir, Mandera, Moi Airbase, Thika and Machakos recorded no rainfall at all throughout the month.

Several stations in Western Kenya recorded significant amounts of rainfall. The rainfall was, however, below average at most stations as compared to their September LTMs. Kisumu, Nakuru and Kisii were the only stations that recorded significant rainfall amounts exceeding 100 percent of their LTMs for the month. The stations recorded 123, 109 and 108 percent of their September LTMs respectively.

Up to 29th September, Kisii station recorded the highest monthly rainfall total of 182.1mm (108%) as compared to its September LTM of 168.6mm. Kakamega, Kericho, Kisumu, Nakuru, Eldoret Airport, Kitale, Eldoret (Kapsoya) and Nyahururu stations recorded 127.0 (73%), 125.6 (69%), 121.7 (99%), 89.9 (109%), 79.6 (73%), 78.6 (71%), 63.9 (86%) and 60.6mm (86%) respectively. Mombasa, Mtwapa, Laikipia, Narok, Embu and Dagoretti Corner stations recorded between 20 and 50mm while the rest of the stations recorded less than 20mm as shown in **Figure 1**.

3. PREVAILING SYNOPTIC CONDITIONS DURING SEPTEMBER 2016

During the month of September 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 also observed over the eastern and central equatorial Pacific Ocean (the Niño areas). This was an indication that La Niña-like conditions were still 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. 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.

4. WEATHER OUTLOOK FOR OCTOBER 2016

The month of October marks the onset of October-November-December (OND) “Short-Rains” season over most parts of the country. The mean rainfall distribution for the month of October is as shown in **Figure 2**.

This rainfall forecast for October 2016 is based on regression of Sea Surface Temperature Anomalies (SSTAs) as well as SST gradients on rainfall at various meteorological stations in the country. The forecast indicates that most parts of the western Highlands, Lake Victoria Basin, Central Rift Valley and Nairobi area are likely to experience near-average to above-average (enhanced) rainfall. Several parts of the central Highlands and Northwestern Kenya are expected to receive near-average to below-average (depressed) rainfall while the entire Northeastern, Southeastern and the Coastal strip are expected to experience below-average (highly depressed) rainfall. The specific outlook for individual areas (see **figure 3**) is as follows:

- a) **The Highlands West of the Rift Valley (Kitale, Kericho, Nandi, Eldoret, Kakamega), Lake Victoria Basin (Kisumu, Kisii, Busia), Central Rift Valley (Nakuru, Narok, Naivasha etc) and Nairobi area (Dagoretti, Ngong, Wilson Airport, Kabete, Jomo Kenyatta International Airport, Eastleigh etc)** are likely to receive near-average rainfall with a tendency to above-average (enhanced rainfall);
- b) **The Highlands East of the Rift Valley (Nyeri, Muranga, Kiambu, Embu, Meru) and Northwestern Kenya (Lodwar, Lokichoggio, Lokitaung etc)** are likely to experience near-average to below-average (depressed) rainfall;
- c) **The Northeastern Kenya (Marsabit, Garbatulla, Isiolo, Wajir, Mandera, Moyale), Southeastern Kenya (Machakos, Makindu, Voi, Kitui, Makueni etc) and the entire Coastal strip (Lamu, Malindi, Msabaha, Mombasa, Mtwapa, Kilifi)** are expected to experience below-average (highly depressed) rainfall. Most of the areas in these regions are likely to remain generally sunny and dry throughout the month;

5. EXPECTED ONSET DATES

The specific onset dates for individual areas are as follows:

- Nyanza and Western Counties (Kisumu, Siaya, Homa Bay, Nyamira, Migori, Kisii, Busia, Vihiga, Kakamega, Bungoma etc): These counties are expected to continue experiencing rainfall during the first week of October continuing from the month of September;
- Central Rift Valley and Central Kenya: The Central Rift Valley areas (Nakuru, Narok, Nyahururu etc), Central Highlands (Meru, Embu, Nyeri, Murang’a, Nanyuki etc) and Nairobi area (Dagoretti, Kabete, Eastleigh etc); are likely to experience the onset during the third to fourth week of October;
- Northern Rift Valley, Northern and Northeastern Counties and the Coastal strip: The onset in the Northwestern parts of the country (Turkana, West Pokot counties etc.), Northern and most of Northeastern Kenya (Moyale, Marsabit, Mandera, Wajir) and the Coastal strip (Lamu, Mombasa, Malindi, Kilifi etc) is expected during the fourth week of October to first week of November. Some areas are likely to remain generally dry in October.

- Southern parts of Northeastern Kenya (Garissa) and the Southeastern Lowlands (Makindu, Voi, Taita-Taveta, Tana River etc) are expected to experience their onsets in the first to second week of November with October remaining generally dry.

4. EXPECTED IMPACTS

- The continuation of sunny and dry weather conditions in most parts of Northeastern and Southeastern lowlands will lead to lack of 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 agricultural areas of the central highlands, Southeastern Kenya and the Coastal strip will impact negatively on the crop performance. This situation is likely to have a major impact on the food security in the country.
- Water resources in the marginal areas should be well managed in order to cater for the animal and human population needs and minimize the conflicts already being observed in some parts of Garissa and Kilifi.
- The major river catchment areas for the Seven-Folks hydroelectric power generating dams are forecast to receive near-average to below average rainfall. This may lead to decreased water levels in the dams and hence decreased capacity for hydroelectric power generation.

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

MR. PETER G. AMBENJE

**Ag. DIRECTOR OF METEOROLOGICAL SERVICES AND PERMANENT
REPRESENTATIVE OF KENYA WITH WMO**

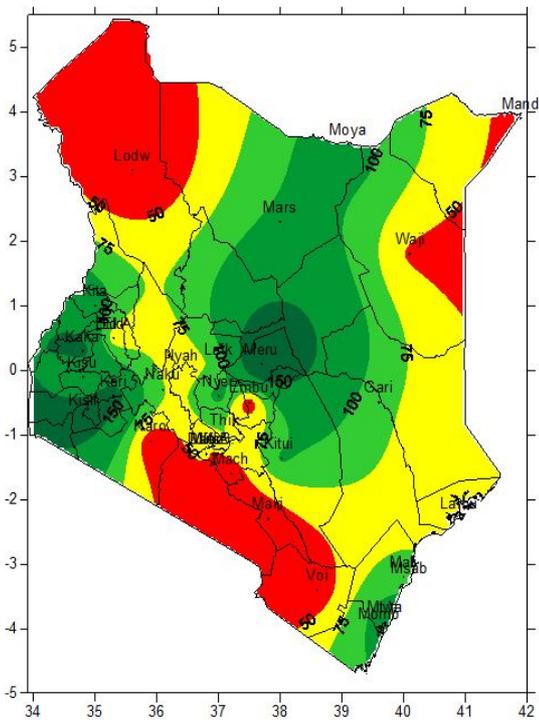
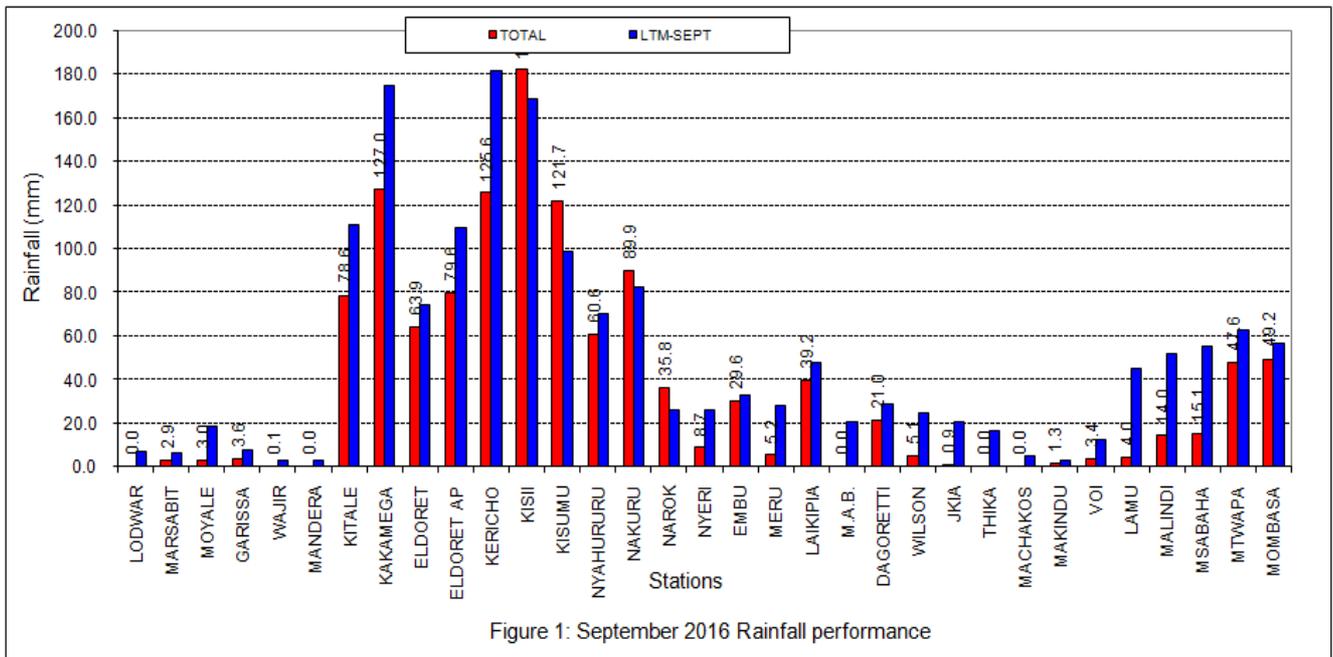


FIGURE 2: NORMAL (LTM) RAINFALL DISTRIBUTION DURING THE MONTH OF OCTOBER

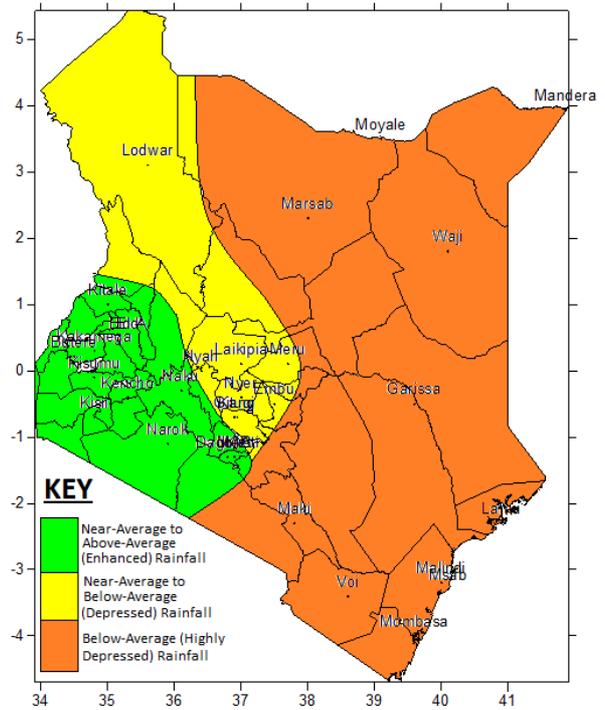


FIGURE 3: RAINFALL OUTLOOK FOR OCTOBER 2016