REPUBLIC OF KENYA
MINISTRY OF ENVIRONMENT & NATURAL RESOURCES
KENYAMETEOROLOGICALDEPARTMENT
Dagoretti Corner, Ngong Road, P. O. Box 30259, 00100 GPO, Nairobi, Kenya
Telephone: 254 (0) 20 3867880-7**,Fax:** 254 (0) 20 3876955/3877373/3867888,
e-mail: director@meteo.go.ke**, info@meteo.go.ke** **Website:** http://www.meteo.go.ke

Ref. No. KMD/FCST/4-2017/MO/05 Date: 28th April 2017

WEATHER REVIEW DURING MARCH-APRIL AND THE FORECAST FOR MAY 2017

1. HIGHLIGHTS

1.1 WEATHER REVIEW FOR MARCH TO APRIL 2017

- *Rainfall analysis from 1st March to 27th April 2017 indicates that the seasonal rainfall was generally depressed over most parts of the country including the western and central parts of Kenya.*
- *The depressed rainfall recorded over various parts of the country resulted into poor crop performance and also crop failure in some areas as well as reduced electricity generation and water scarcity.*
- *The onset of the March-May 2017 "long-rains" seasonal rainfall was delayed over several parts of the country and prolonged dry spells have characterized the season to date leading to poor distribution.*

1.2 THE FORECAST FOR MAY 2017

The outlook for May 2017 indicates that:

- *Most areas in the Western highlands (Kitale, Kakamega, Eldoret, Kisumu, Kisii), Rift Valley (Kericho, Nandi, Nyahururu), Central highlands including Nairobi area (Embu, Nyeri, Meru, Murang'a, Dagoretti, Wilson) and the Coastal strip (Mombasa, Mtwapa, Kilifi, Malindi, Msabaha, Lamu) are likely to receive near normal rainfall.*
- *Most parts of North-western Kenya, Northern Kenya (Moyale, Marsabit), North-eastern and South-eastern Kenya are expected to receive generally depressed rainfall, however some of these areas may experience a few days of intense rainfall.*

2. REVIEW OF RAINFALL PERFORMANCE DURING APRIL 2017

2.1 REVIEW OF THE RAINFALL PERFORMANCE DURING APRIL 2017

April marks the peak of the "Long Rains" season. During the first half of the month highly depressed rainfall was recorded over most parts of the country including the western and central highlands. In the second half, however most stations reported significant increases in rainfall characteristic of the peak month. However, these amounts were still way below their LTMs. Most meteorological stations in the country recorded rainfall that was well below 75 percent of their Long-Term Means (LTMs) for the month. Up to 27th April, only Kisii, Makindu and Machakos had exceeded 75% of their LTMs with 86.1%, 93.5% and 166.9% respectively. The stations with the lowest LTMS for the month were Lodwar (2.8%), Lamu (7.9%), Narok (12.1%), Laikipia (19%), Marsabit (19.2%), and Nyahururu (19.5%) that recorded less than 20 percent of their April LTMs.
The rainfall performance during April 2017 is shown in **Figure 1.**

In terms of daily rainfall amounts, heavy rainfall was received throughout the country with stations recording more than 20mm on 17th April. Malindi recorded 50mm, Mtwapa recorded 49.6mm, Dagoretti 47.6mm, Eldoret 45mm, Kakamega 33.6mm and Garissa 34.8mm. On 18th Machakos recorded 53.3mm.

2.2 MARCH-MAY SEASONAL RAINFALL PERFORMANCE UP TO 27TH APRIL 2017

Analysis of March-May 2017 seasonal rainfall indicates that most meteorological stations in the country have so far received highly depressed seasonal rainfall by 27th April. Most stations are way below 75% of their seasonal LTMs. Machakos is the only station to have achieved its LTM with 100.4% of its seasonal LTM. This is largely attributed to the high rainfall between 16th and 18th of April. Lodwar, Lamu and Nakuru so far have the lowest LTMs below 10% with 2.2%, 2.3% and 9.6% respectively. **(See figure 2)**.

3. SYNOPTIC CONDITIONS IN MAY 2017

During the month of May, warm Sea Surface Temperatures (SSTs) prevailed over much of the southwestern Indian Ocean (Mascarene region) and over the Mozambique Channel. This situation was very conducive for the formation of Tropical Cyclones (TCs) in the South-west Indian Ocean basin. As a result, a very severe TC named "Enawo" formed in the Mozambique Channel on 30th March. This diverted all the moisture that was to enter into our country to the TC region, and hence the depressed rainfall during the month.

The northern of Indian Ocean (adjacent to the Horn of Africa), was characterized by neutral SSTs. Pressures over the Arabian region were therefore slightly stronger than average for most of the month. The Mascarene region was characterized by moderate pressures. The Zonal (east-west) arm of the Inter-Tropical Convergence Zone (ITCZ), therefore remained to the south (in Tanzania) and also very diffuse for most of the period. This also led to the poor rainfall performance over most of the eastern half of the country. The Meridional (North-South) arm of the ITCZ was mainly over Uganda and central Africa. This resulted in depressed and poorly distributed rainfall over much of the western region.

4. EXPERIENCED IMPACTS

- The depressed rainfall over most agricultural areas in the country has resulted into poor crop performance and even crop failure in some regions;
- In the pastoral areas of Rift Valley and parts of northeastern Kenya, pasture for animals deteriorated and water availability was also limited as a result of poor rainfall performance in the areas;
- Depressed rainfall in the River catchment areas of western and central highlands led to a further decrease in water levels in the Seven-Forks, Turkwel and Sondu Miriu hydroelectric power generation dams as well as in Ndakaini Dam the main supply of most piped fresh water for the country;

5. MAY 2017 FORECAST

The rainfall forecast for May 2017 is based on regression of sea surface temperatures (SSTs), SST gradients and the expected evolution of global SST patterns as well as upper air circulations patterns on Kenyan rainfall.

The forecast indicates that several parts of western and central Kenya as well as the Coastal strip are likely to experience near-average rainfall. Most parts of Northwestern Kenya, Northern Kenya (Moyale, Marsabit), Northeastern and Southeastern Kenya are expected to receive generally depressed rainfall. Some localized parts of these areas, however, may experience a few days of intense rainfall. The specific outlooks for individual areas are as follows:

Most Counties in Western Kenya (*Kakamega, Bungoma, Vihiga, Busia, Siaya, Kisumu, Kisii, Migori, Nyamira etc);* a few counties in the Rift Valley region *(Kericho, Nandi, Trans Nzoia, Uasin Gishu)* and the Coastal region *(Mombasa, Kilifi, Lamu, Kwale*); and Central region *(Nyandarua, Nyeri, Murang'a, Kirinyaga, Embu, Meru);* Nairobi are likely to receive near-normal rainfall in May;

Some Counties in Northern Rift Valley (*Turkana, Samburu etc) Eastern Region* (Marsabit, Isiolo, Kitui, Makueni), North Eastern *(Garissa, Wajir, Mandera)* and parts of the Coast Province (*Tana River, Taita-Taveta*) are likely to receive generally depressed rainfall in May as depicted in **figure 3.**

6. POTENTIAL IMPACTS

- Poor crop performance is expected to continue over most parts of southeastern Kenya. The situation is, however, likely to improve in the agriculturally high-potential areas of Kitale, Eldoret, Kakamega, Kericho, Kisii and Nandi Hills areas, where near-average rainfall is forecasted and also expected to continue into June-July-August period. The overall crop performance may be dictated by how the Fall Armyworm is controlled managed in these areas.
- Most of the pastoral areas of Northeastern and Northwestern Kenya are expected to experience depressed rainfall. Pasture and water availability for livestock are therefore expected to remain limited in Counties like Turkana, Wajir, Isiolo and Garissa.
- Cases of lightning strikes are still probable in western Kenya. Contingency measures should still be put in place to avoid loss of lives and destruction of property.
- The water levels in the Seven-Forks and Turkwel hydro-electric power generation dams are expected to improve slightly as a result the expected near-average rainfall in the catchment areas.

7. EXPECTED CESSATION OF THE 2017 "LONG RAINS" SEASON

- The Western parts of the country including parts of central Rift Valley (Nakuru, Nyahururu) and the Coastal strip are expected to continue receiving rainfall into June.
- The southern parts of Central Rift Valley (Narok, Kajiado, Magadi) and the Central regions including Nairobi are likely to experience cessation of the "Long Rains" during the third to fourth week of May.
- In the Northwestern, Northeastern and Southeastern parts of the country, the cessation is likely to occur during the second to third week of May.

NB: This forecast should be used in conjunction with regular 5-day and 7-day updates as well as the daily (24-hr) forecasts issued by this Department.

Peter G. Ambenje.
Ag. DIRECTOR OF METEOROLOGICAL SERVICES & PERMANENT REPRESENTATIVE OF KENYA WITH THE WORLD METEOROLOGICAL ORGANIZATION (WMO)

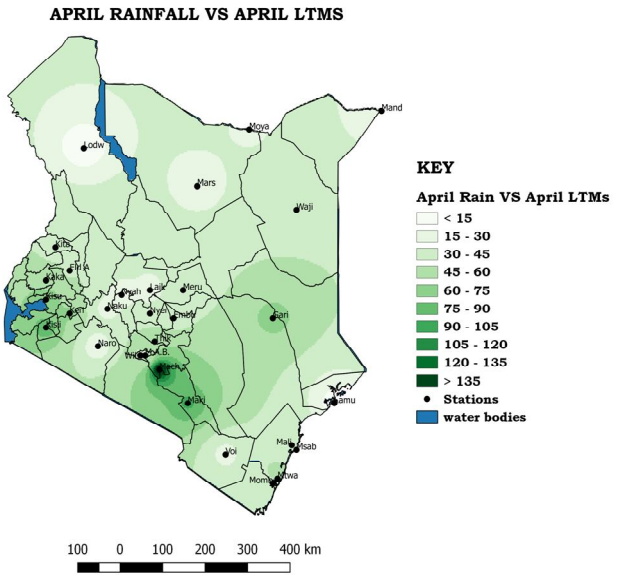

FIGURE 1: RAINFALL PERFORMANCE IN APRIL 2017

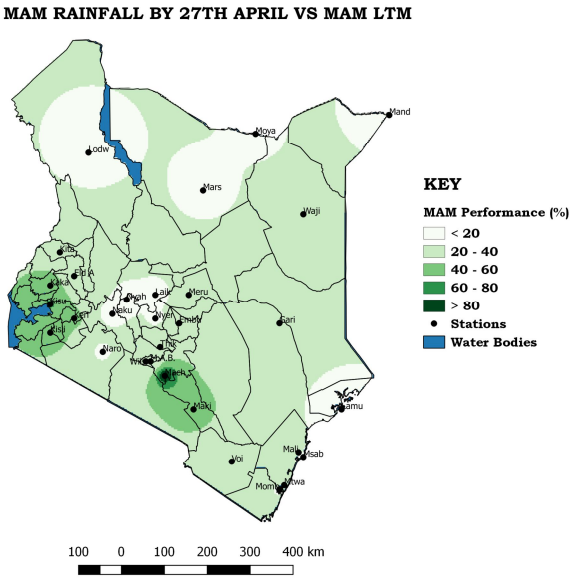

FIGURE 2: MARCH-MAY SEASONAL RAINFALL PERFORMANCE UP TO 27TH APRIL 2017

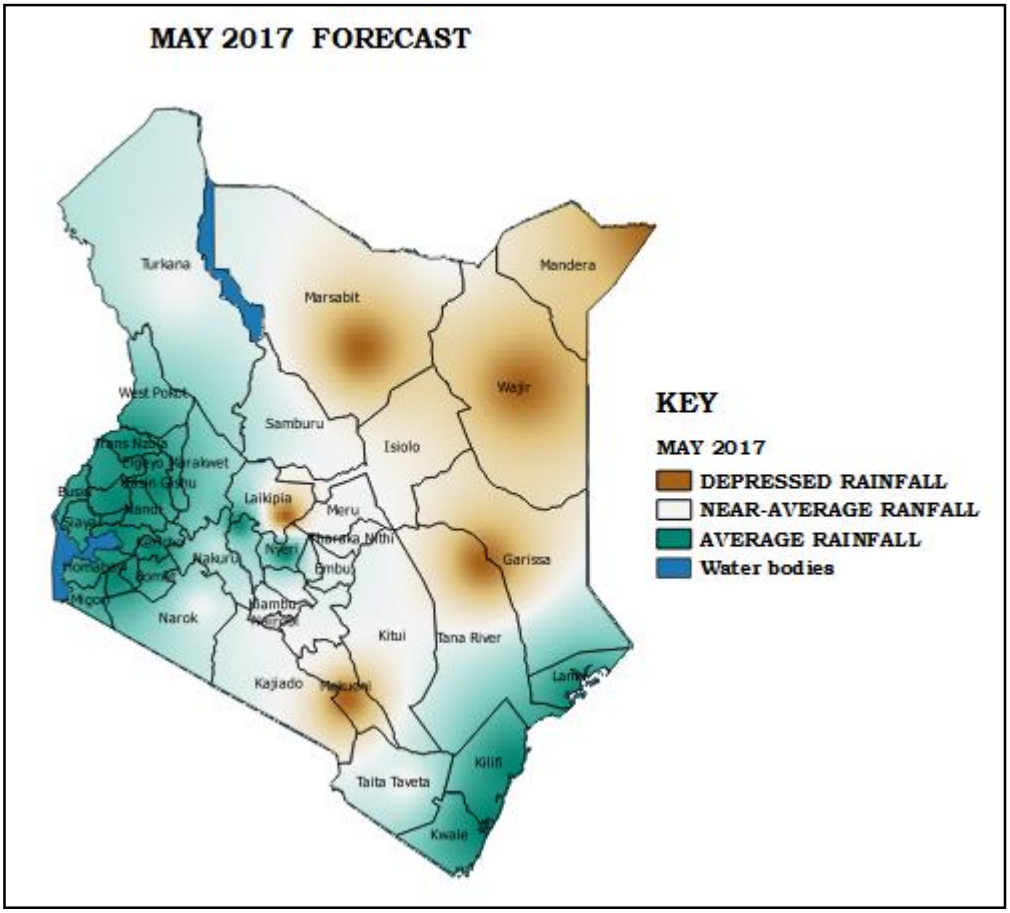

FIG 3: MAY 2017 FORECAST