



**REPUBLIC OF KENYA**  
**MINISTRY OF ENVIRONMENT & FORESTRY**  
**KENYA METEOROLOGICAL DEPARTMENT**

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**THE OUTLOOK FOR MAY 2021 AND WEATHER REVIEW FOR APRIL 2021**

**1. HIGHLIGHTS**

**1.1. *The Forecast for May 2021***

May marks the cessation of the “Long Rains” season over several parts of the country except for the Coastal region and Western Kenya. The outlook for May 2021 indicates that several parts of the Lake Victoria Basin region and Western Kenya; Central & Southern Rift Valley; Central Kenya including Nairobi and North Western Kenya are likely to experience slightly enhanced rainfall. Counties in the South-eastern and North-eastern are likely to receive near average rainfall. Counties in the Coastal region are likely to experience below average rainfall. The distribution is likely to be poor in the Northwest, Northeast, Southeast as well as the Coastal region.

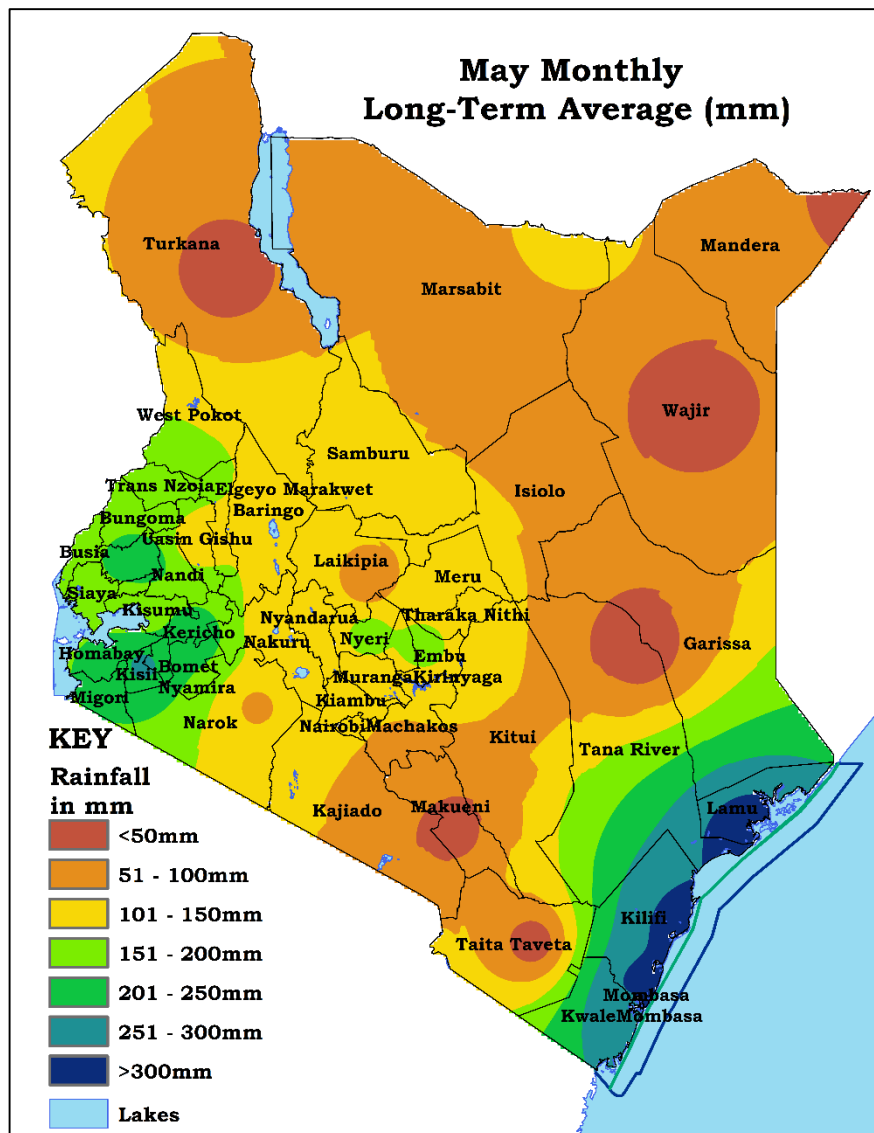
**1.2. *Weather Review for April 2021***

The month of April 2021 was characterized by occasional rainfall over the Lake Victoria Basin, highlands west of the Rift valley, central and southern Rift Valley, the highlands east of the Rift Valley as well as parts of the south-eastern lowlands. The northwest, northeast and the coast remained generally dry throughout the month with few days experiencing rainfall especially at the beginning and towards the end of the month.

However, isolated cases of heavy rainfall were recorded over the highlands west of Rift Valley, highlands east of Rift Valley, Nairobi area and few areas over northeast during the month. Kisumu and Wilson are the only stations that recorded above normal rainfall in April with 134% and 125.7%, respectively. Other stations that recorded near average rainfall are Dagoretti, Eastleigh, Kericho, Mandera, Thika, Kakamega, Kisii, Eldoret, Voi, J.K.I.A and Embu. All the other stations recorded below normal rainfall. Rainfall analysis during the months of March and April 2021 indicates that the seasonal rainfall was depressed over most parts of the country for the period.

## 2. MAY 2021 FORECAST

The rainfall forecast for May 2021 is based on regression of sea surface temperatures (SSTs), SST gradients and the expected evolution of global SST patterns as well as upper air circulation patterns on Kenyan rainfall. **Figure 1b** illustrates the Mean monthly rainfall in May.



**Figure 1a: May Mean Monthly Rainfall**

### 2.1 The Rainfall Forecast for May 2021

The forecast indicates that several parts of the Lake Victoria Basin, Highlands West of the Rift Valley and Central Kenya including Nairobi; Counties in North Western Kenya; and Southern and Central Rift Valley are likely to experience near average rainfall with a slight tendency to above normal rainfall (slightly enhanced rainfall). Counties in the South-eastern and Northeastern are likely to receive near average rainfall. Counties in the coastal region are likely to experience below normal rainfall as shown in **Figure 1b** below. The distribution is expected to be poor in these regions.

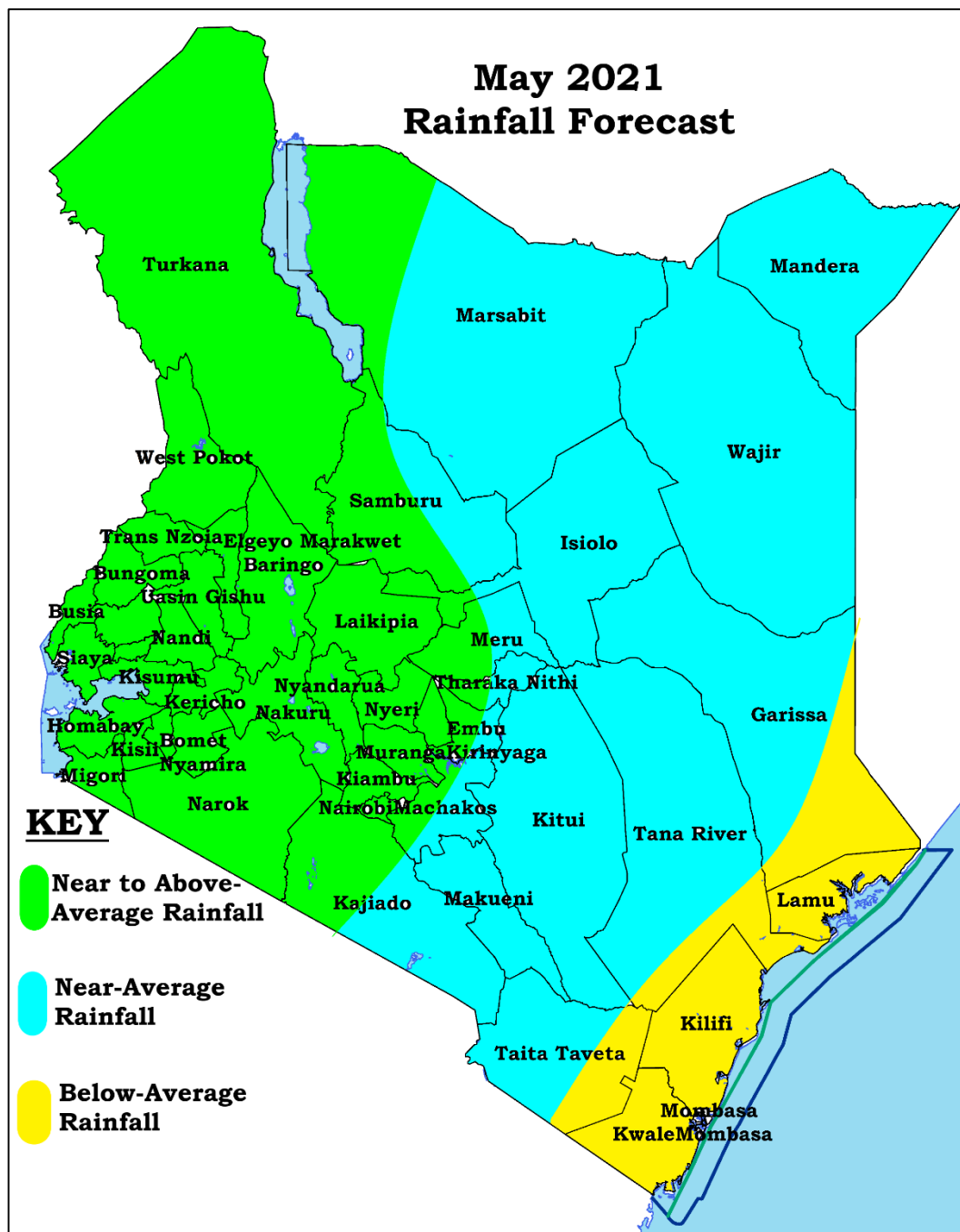


Figure 1b: Rainfall Forecast for May 2021

**2.2. SPECIFIC OUTLOOK FOR INDIVIDUAL AREAS**

**2.2.1. The Lake Victoria Basin; Highlands West of the Rift Valley; and Central and South Rift Valley** (Siaya, Kisumu, Homa Bay, Migori, Kisii, Nyamira, Trans Nzoia, Baringo, Uasin Gishu, Elgeyo Marakwet, Nandi, Laikipia, Nakuru, Narok, Kericho, Bomet, Kakamega, Vihiga, Bungoma and Busia): Rainfall is expected to continue during the month of May 2021. However, the rainfall amounts are expected to be above average during the first half of the month and near average during the second half of the month. The rains will continue into the month of June.

**2.2.2. North-western Region** (Turkana, West Pokot and Samburu): The first half of the month is likely to be characterized with near to slightly

above average rainfall. Occasional rainfall is likely to occur during the second half of the month. The expected total rainfall amounts are likely to be near the long-term average for the region.

**2.2.3. Highlands East of the Rift Valley and Central Kenya** (Nairobi, Nyandarua, Nyeri, Kirinyaga, Murang'a, Kiambu, Meru, Embu, and Tharaka Nithi): Above average rainfall is expected during the first half of the month. However occasional dry spells are likely especially during the second half of the forecast period. The rainfall amounts are likely to be above the long-term average for the region.

**2.2.4. North-eastern Region** (Mandera, Marsabit, Wajir, Garissa and Isiolo): Occasional rainfall is expected at the beginning of the month. The rainfall is however likely to reduce in the third to fourth week as the rainy season comes to an end. The expected rainfall amounts are likely to be near the long-term average for the month of May.

**2.2.5. South-eastern Lowlands** (Kajiado, Kitui, Makueni, Machakos and Taita Taveta): Occasional rainfall is expected during the first half of the month. It is however expected to reduce in the third to fourth week as the rainy season comes to an end. The rainfall amounts are likely to be near the long-term average for the month of May.

**2.2.6. The Coastal Strip** (Mombasa, Tana River, Kilifi, Lamu and Kwale): is expected to receive occasional rainfall in May. The expected rainfall amounts are likely to be below the long-term average. May marks the peak of the Long rains season in the Coastal Strip.

## **2.3. POTENTIAL IMPACTS**

### **2.3.1. Agriculture and Food Security**

The expected rainfall is likely to be conducive for agricultural production especially in the high-potential counties in the Lake Victoria basin Region, Highlands West of the Rift Valley as well as Central and Southern Rift Valley where near average to above-average rainfall is forecasted. The rains are expected to continue into the June-July-August season.

### **2.3.2. Disaster Management**

There is a likelihood of flooding in low-lying areas and flood plains especially over the Western parts of Kenya where occasional rainfall is expected. Cases of lightning strikes are still likely in the Lake Victoria Basin and highlands west of Rift Valley. Landslides/mudslides may occur in the hilly areas of the highlands west and east of the Rift Valley.

The expected rainfall during the first half of the month over the ASAL regions is expected to improve regeneration of foliage and pasture as the rainy season comes to an end. However, this may not sustain the pasture to the next rainy season. Thus,

there is likelihood of shortage of water and pasture for livestock beyond the month of May in counties in the Northeastern, Northwestern and southeastern lowlands. Consequently, this may also lead to potential conflicts.

### **2.3.3. Water Resource Management and Energy**

The water catchment areas over the highlands west and east of the Rift Valley are expected to experience occasional rainfall during the month. It is, therefore, expected that the optimum water level in the hydroelectric power generation dams will be maintained. Rainwater harvesting is encouraged to boost water availability for households.

### **2.3.4. Environment**

The enhanced rainfall over the Lake Victoria Basin and highlands west of the Rift Valley is expected to sustain soil moisture. Residents of these areas are advised to plant trees in order to contribute to national target of 10% forest cover by 2022.

### **2.3.5. Health**

There is still a likelihood of vector borne diseases such as Malaria over the Lake Victoria Basin and the coastal strip. Water borne diseases may occur in flood prone areas.

## **2.4. Expected Cessation of The MAM 2021 “Long Rains” Season**

- The Western Kenya, parts of central Rift Valley (Nakuru, Laikipia, Baringo) and the Coastal strip are expected to continue receiving rainfall into June.
- The Highlands East of the Rift valley including Nairobi county 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 also likely to occur during the third to fourth week of May.

## **3. REVIEW OF THE WEATHER DURING APRIL 2021**

### **3.1. Global Drivers of the Climate System in April 2021**

During the month of April 2021, Equatorial sea surface temperatures (SSTs) were below average from the west-central to eastern Pacific Ocean implying La Nina conditions are present. Equatorial SSTs were above average to near average over the western Indian Ocean and neutral over the central and eastern Indian Ocean. This pattern presented a neutral phase of the Indian Ocean Dipole (IOD). The zonal and meridional arms of the rain-bearing Inter-Tropical Convergence Zone (ITCZ) were mainly diffuse over the region. Between 18<sup>th</sup> and 24<sup>th</sup> April, Tropical Cyclone “Jobo” was also manifested over the Western Indian Ocean. Jobo did not have any significant influence on rainfall over the country. However, isolated storms were reported over the Lake Basin and highlands east of the Rift Valley on 24<sup>th</sup> April.

### **3.2. Review of Rainfall Performance During April 2021**

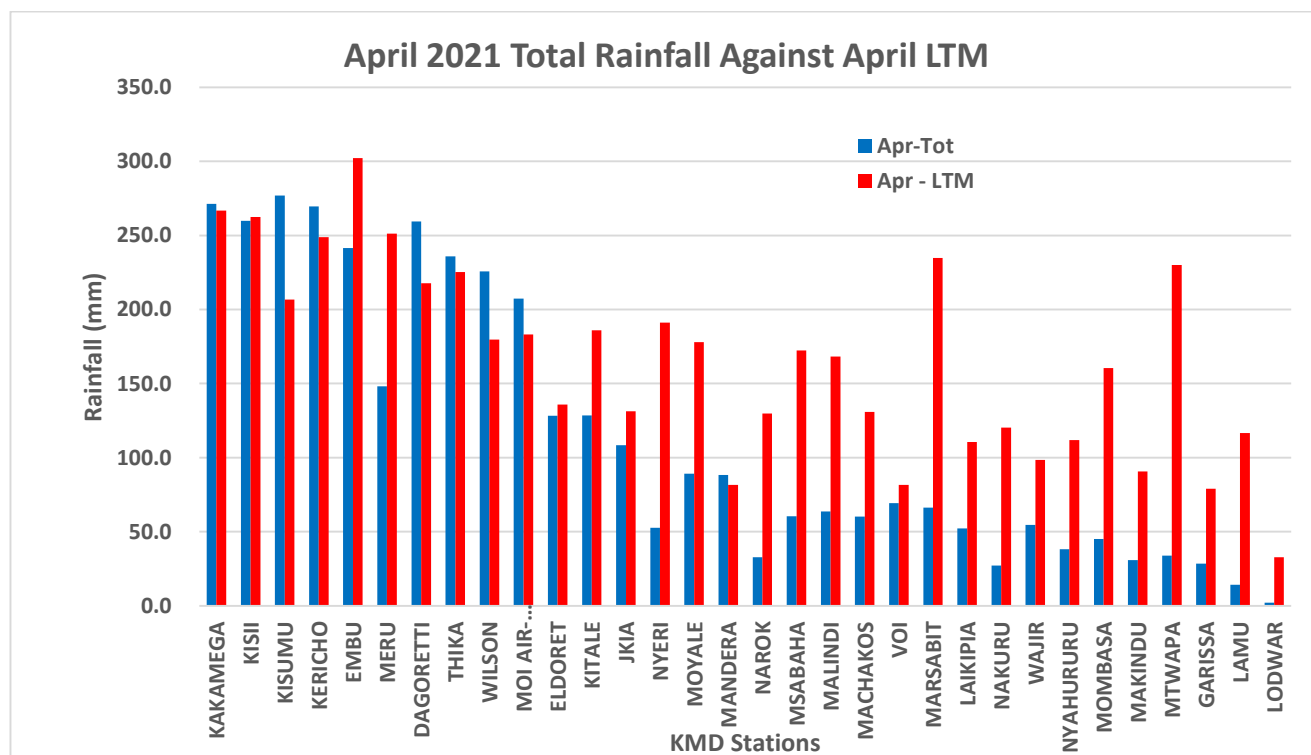
April marks the peak of the Long Rains (March-April-May) season. The month began with dry weather conditions over several parts of the country except the Lake basin, highlands west and east of the Rift valley where occasional rainfall was experienced.

The most enhanced rainfall of 337.7mm was recorded at Suba station. This was followed by Kisumu at 276.9mm, Kabete at 272.3mm and Kakamega at 271.3mm. Other stations that recorded more than 200 mm include Kericho, Kitui, Kisii, Dagoretti, Kangema, Embu, Thika, Wilson and Moi Air Base. Several stations reported rainfall that was less than 100mm with Lodwar recording the lowest amount at 2mm.

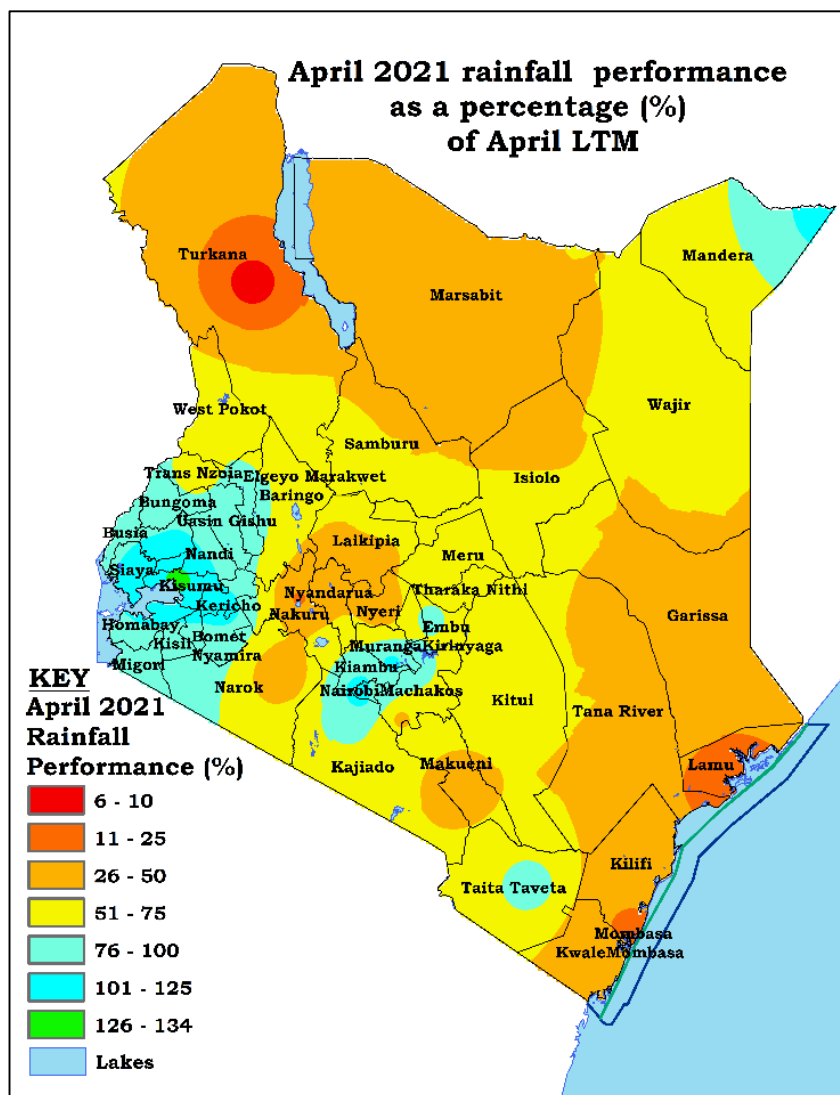
From mid-April, several Meteorological stations across the country started to experience light to moderate rainfall with isolated heavy rainfall between 15th and 25th April 2021 with the exception of the northwest and a few stations over the southeast and coast where dry weather conditions persisted. For example, Suba station recorded 87.6mm on 24th April, Kisumu and Eastleigh recorded 56.6m and 51.8mm respectively on 21st April.

Kisumu and Wilson are the only stations that recorded above normal rainfall during the month of April at 134% and 125.7% respectively. Other Met stations that recorded near average rainfall include Dagoretti 259.5mm (119.2% of LTM), Moi air-base 207.4mm (113.2%), Kericho 269.6mm (108.3%), Mandera 88.2mm (108.2%) Thika 235.8mm (104.7%), Kakamega 271.3mm (101.7%), Kisii 259.9mm (99.0%), Eldoret 128.3mm (94.4%), Voi 69.2mm (84.8%), J.K.I.A 108.4mm (82.5%) and Embu 241.5mm (79.9% of LTM). The rest of the stations recorded less than 75%.

**Figure 2a** shows the total amount of rainfall recorded in April 2021 (**the blue bars**) as compared to the LTMs - (**the red bars**) while **Figure 2b** depicts the spatial distribution.



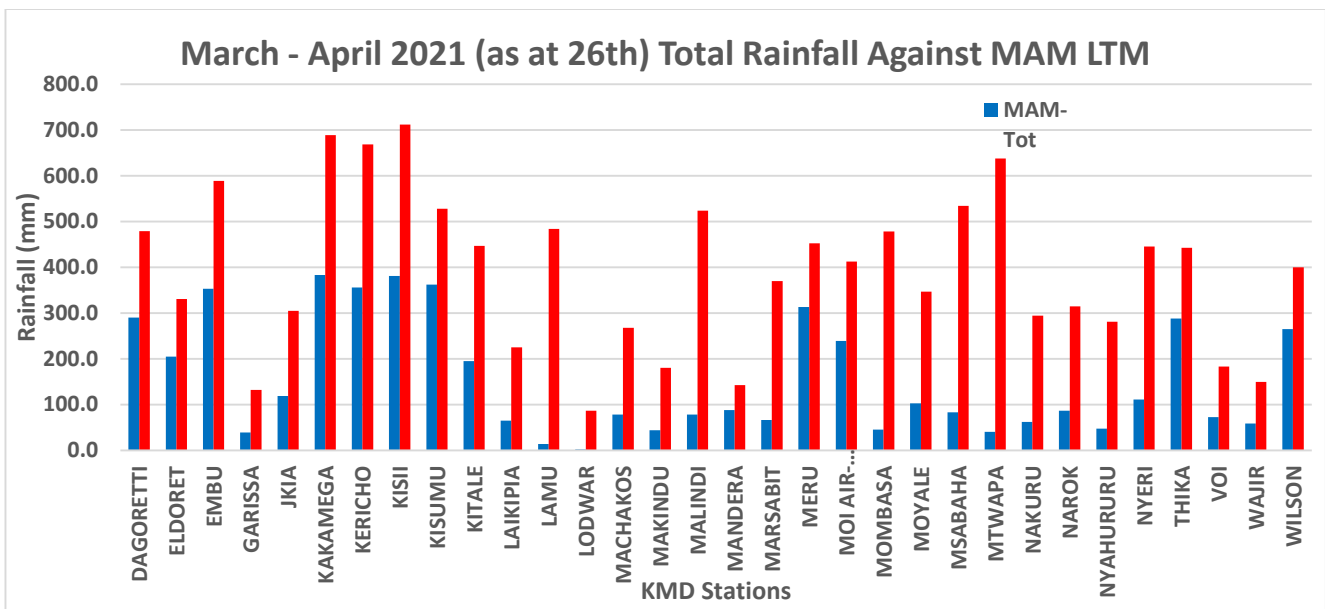
**Figure 2a: April 2021 Rainfall as Compared to the April Long-Term Mean**



**Figure 2b: April 2021 Rainfall Performance as a percentage of the April LTM**

### **3.3. MARCH-MAY SEASONAL RAINFALL PERFORMANCE UP TO APRIL 26<sup>TH</sup> 2021**

Analysis of March-May 2021 seasonal rainfall indicates that all meteorological stations in the country received depressed rainfall up to 26<sup>th</sup> April. The highest amount of 383.5mm (55.7% of MAM LTM) was recorded in Kakamega station. Other stations that recorded more than 300mm are Kisii 383.1mm, Kisumu 361.9mm, Kericho 355.8mm, Embu 353.4mm and Meru 313.1mm. Mandera, Narok, Msabaha, Malindi, Machakos, Voi, Marsabit, Laikipia, Nakuru, Wajir, Nyahururu, Mombasa, Makindu, Mtwapa, Garissa, Lamu and Lodwar recorded less than 100 mm as depicted in Figure 4 below.



**Figure 4: March & April 2021 Rainfall Performance against March-April-May (Seasonal) Rainfall Average (LTM)**

#### **4. EXPERIENCED IMPACTS OF APRIL 2021**

##### **4.1. Agriculture and Food Security**

The long dry spell over the eastern sector led to reduced pasture for livestock in the pastoralist community. During the month, there were reports of livestock deaths in Mandera and Marsabit Counties.

There were reports of crop failure in Soy and Moiben constituencies of Uasin Gishu County in the Highlands west of Rift valley.

##### **4.2. Disaster Risk Management**

There was a reported case of landslide in Muranga County that led to destruction of property. Flooding occurred in Tana River, Budalangi, Kisumu, Migori and Busia and led to displacement of people. Sections of Garissa-Hola-Garsen road and Bura-Madogo road were washed away due to heavy rains. Heavy rains caused power lines to fall on the ground in Nakuru near Kabarak University. Hailstones reported in Naivasha and Kisii led to destruction of crops.

##### **4.3. Water Resource Management and Energy**

Some rivers including the Mara, Tana, Athi, Ewaso Ngiro Rivers and several streams across the country had reduced water flow due to depressed rainfall experienced in the catchment areas.

##### **4.4. Environment**

The occasional rainfall in the Lake Victoria basin and the Highlands West of the Rift Valley provided sufficient moisture to sustain vegetation growth.



***NB: This outlook should be used with the 24-hour, 5-day, 7-day, special forecasts and regular updates/advisories issued by this Department. Weekly County forecasts are available from County Meteorological Offices.***

A handwritten signature in blue ink, consisting of several overlapping loops and a vertical line, positioned above the name Stella Aura.

Stella Aura, MBS

**DIRECTOR OF METEOROLOGICAL SERVICES**