



# REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT AND MINERAL RESOURCES

KENYA METEOROLOGICAL DEPARTMENT

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## WEATHER REVIEW DURING MARCH – APRIL AND THE OUTLOOK FOR MAY 2010

### 1. SUMMARY

#### Rainfall Review in March - April 2010

- *Rainfall recorded in March-April 2010 indicates general good performance of the “Long Rains” (March-May) season over most parts of the country.*
- *Enhanced rainfall was experienced in various parts of the country resulting in flooding and even landslides with several people losing their lives as well as infrastructure being destroyed.*
- *Depressed rainfall was recorded at the Coastal strip and in some few areas in western and north-eastern parts of the country.*

#### The forecast for May 2010

- *The month of May marks the cessation of the “Long Rains” season over most parts of the country except the Western highlands and Coastal areas.*
- *The outlook for May 2010 indicates that most parts of the country are likely to experience near normal rainfall amounts. However:*
  - ✓ *The Western highlands, Central Rift Valley, Central Highlands including Nairobi area, Southeastern lowlands, the Coastal Strip and parts of Northeastern Kenya are likely to receive enhanced rainfall; and*
  - ✓ *Much of the Northwestern parts and a few areas in Northeastern districts are likely to receive slightly depressed rainfall.*

### 2. REVIEW OF THE PERFORMANCE OF THE “LONG RAINS” FROM MARCH TO APRIL 2010

Most parts of the country experienced good rainfall performance from March to April 2010. The rainfall recorded in most Meteorological Stations across the country was well above 70 percent of their Long-Term Means (LTMs) for the “Long Rains” (March-May) season. Stations like Garissa and Mandera in Northeastern Kenya and Nyahururu in the central Rift Valley, had, within the two month period of March to April, respectively recorded 179, 145 and 142 percent of their seasonal (March-April-May) LTMs. This was well over 125 percent that is the threshold for accumulated monthly or seasonal rainfall being categorized as above normal (enhanced). Moi Airbase in Nairobi, Nakuru, Lodwar, Wajir, Machakos, Meru and Makindu recorded between 100 and 125 percent of their seasonal LTMs.

However, several stations along the Coastal strip (Mombasa, Mtwapa, Malindi, Msabaha) and a few stations in western Kenya (Eldoret, Narok) and Northeastern Kenya (Marsabit) recorded less than 60 percent of their LTMs. Eldoret Airport station recorded the most depressed rainfall of 34 percent of its seasonal LTM while Marsabit Meteorological Station recorded just 39 percent. *Figure 1 below shows the performance of the rainfall in April 2010.*

The rainfall distribution, both in time and space was generally good over most parts of the country. The rainfall was characterized by heavy storms in some areas. The heaviest storm of 236.4mm was recorded at Lamu station on 14<sup>th</sup> April. During the same day, Malindi station recorded 93.5mm while Msabaha station recorded 79.8 and 70.1mm on 13<sup>th</sup> and 14<sup>th</sup> April respectively. Meru station

recorded 94.7mm on 29<sup>th</sup> April. A few rainfall storms also occurred during the month of March. On 24<sup>th</sup> March, Machakos, Thika, Wilson Airport and Moi Airbase stations recorded 119.7, 86.2, 85.1 and 81.2 mm respectively while Makindu and Garissa stations recorded 82.8 and 86.1 mm on 6<sup>th</sup> and 20<sup>th</sup> March respectively.

Up to 30<sup>th</sup> April, Kericho Meteorological Station had recorded the highest rainfall amount of 546.1 (81%) as compared to its seasonal LTM of 675.7mm. Kisumu, Meru, Moi Airbase, Kisii, Kakamega, Embu and Dagoretti Corner stations recorded 499.9 (92%), 494.5 (106%), 487.3 (124%), 482.3 (71%), 467.8 (69%), 417.8 (74%) and 409.3mm (84%) as compared to their LTMs of 541.2, 467.4, 394.3, 681.0, 678.7, 565.3 and 488.7mm respectively. Lamu, Nyahururu, Moyale, Kitale, Thika, Nakuru, Wilson Airport, Nyeri, Machakos and Malindi stations recorded between 300 and 400mm. The rest of the stations recorded less than 300mm. There was no station that recorded less than 100mm (*see Figure 2*).

### 3. IMPACTS

The good rainfall over most parts of the country continued to impact positively on various sectors:

- In the agricultural sector, most farming communities in the country continued to experience good crop performance due to the well distributed rainfall;
- In the pastoral areas, pastoralists expressed satisfaction due to enough pastures and water for their animals as a result of good rainfall performance;
- Water for domestic consumption especially in the urban areas has improved significantly following the good rainfall performance; and
- The Turkwel, Sondu Miriu and Tana River catchment areas experienced heavy rainfall during the two-month period (March-April). This resulted into a significant increase in the water levels in the hydroelectric power generation dams.

There were also some negative impacts that were associated with heavy rainfall the pounded various parts of the country during the review period. These include:

- Displacement of several people in various parts of the country due to flooding;
- A few people lost their lives in various parts of the country while others were rendered homeless by floods;
- Landslides occurred in parts of northwestern districts and the North Rift;
- Infrastructure such as bridges were destroyed; and
- Crops were swept away in some areas

### 4. MAY 2010 FORECAST

The rainfall forecast for May 2010 is based on regression of sea surface temperatures (SSTs), Sea Surface Temperature (SST) gradients and the expected evolution of global SST patterns as well as upper air circulations patterns on Kenyan rainfall. The forecast indicates that most parts of the country will continue to experience good rainfall performance. The Western highlands, Lake Basin, Central Rift Valley, Central Highlands including Nairobi area, most of Northeastern and Southeastern lowlands and the Coastal Strip are likely to receive near-normal rainfall with a tendency to above normal (enhanced rainfall) especially during the first half of the month. The Northwestern districts and a few areas in Northeastern Kenya are expected to experience mainly near-normal rainfall with a slight tendency to below normal (slightly depressed) rainfall. The specific outlooks for individual areas are as follows:

**The Western Highlands** (Kitale, Kericho, Nandi, Eldoret, Kakamega, Bungoma, Butere/Mumias, Vihiga etc); **Lake Basin** (Kisumu, Nyando, Kisii, Busia); **Central Rift Valley** (Narok, Nakuru, Naivasha, Nyahururu); **Central Highlands** (Nyeri, Embu, Meru, Murang'a); **Nairobi Area** (Dagoretti, Kabete, Wilson, Jomo Kenyatta International Airport, Eastleigh etc); **the Coastal Strip** (Mombasa, Malindi, Kilifi, Lamu); **Southeastern lowlands** (Machakos, Makindu, Voi, Taveta) and **most parts of Northeastern Kenya** (Wajir, Mandera, Garissa, Garbatulla) are likely to receive near-normal rainfall tending to above normal (enhanced rainfall) in May.

The Northwestern (Lodwar, Lokichoggio, Lokitaung) and a few areas in Northeastern Kenya (Moyale, Marsabit), are likely to receive mainly near normal rainfall tending slightly to below-normal (slightly depressed rainfall) in May (**See figure 3**).

## **5. POTENTIAL IMPACTS**

- Good crop performance is expected to continue over most agricultural areas of the country. This is more so in the high-potential areas of Kitale, Eldoret, Kakamega, Kericho, Kisii and Nandi Hills areas and most of the central districts where good rainfall performance is expected to continue.;
- Most of the pastoral areas of Northeastern and Southern Rift Valley are still expected to experience good rainfall performance. This will maintain good pasture and also availability of water for livestock;
- There are still high chances of flooding occurring not just in flood-prone areas of Budalang'i, Nyando, and Kano plains as well as the coastal strip but also in parts of the country that have been drenched by heavy rainfall in the first two months (March-April) of the "Long Rains" season. Families, some who are already displaced by floods are therefore advised to be on a lookout;
- Cases of lightning strikes and gusty winds are still probable particularly in western Kenya and specifically in Kericho-Nandi-Hills area, Kisii and Butere/Mumias. Contingency measures should still be put in place to avoid loss of lives and destruction of property; and
- The water levels in the Seven-Forks and the Turkwel hydroelectric power generation dams are expected to improve further due to the expected good rainfall performance in the catchment areas.

## **6. EXPECTED CESSATION OF THE "LONG RAINS" SEASON**

- The Western highlands, Lake Basin, northern parts of Central Rift Valley and Coastal parts of the country are expected to continue receiving rainfall into June.
- The Northwestern, southern parts of Central Rift Valley and Southeastern lowlands are likely to experience the cessation during the second to third week of May.
- In the Central districts including Nairobi and Northeastern parts of Kenya, the cessation is likely to occur during the third to fourth week of May.

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

**Dr. Joseph R. Mukabana, MBS.**

DIRECTOR OF METEOROLOGICAL SERVICES & PERMANENT REPRESENTATIVE OF KENYA WITH THE WORLD METEOROLOGICAL ORGANIZATION (WMO)

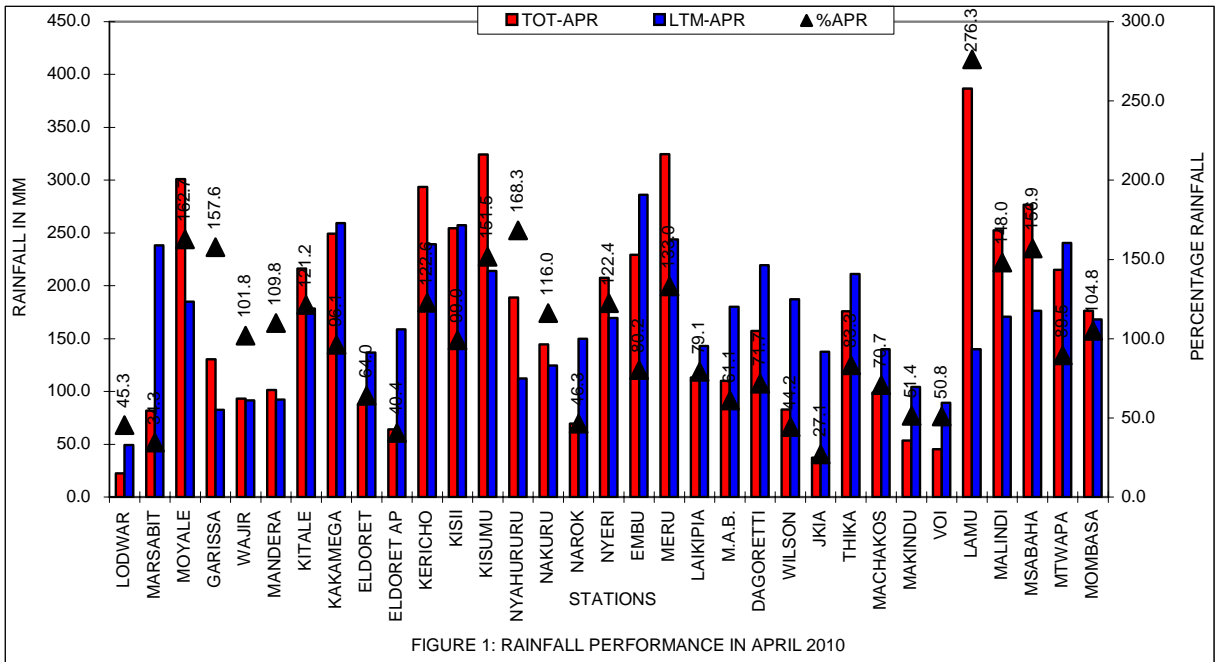


FIGURE 1: RAINFALL PERFORMANCE IN APRIL 2010

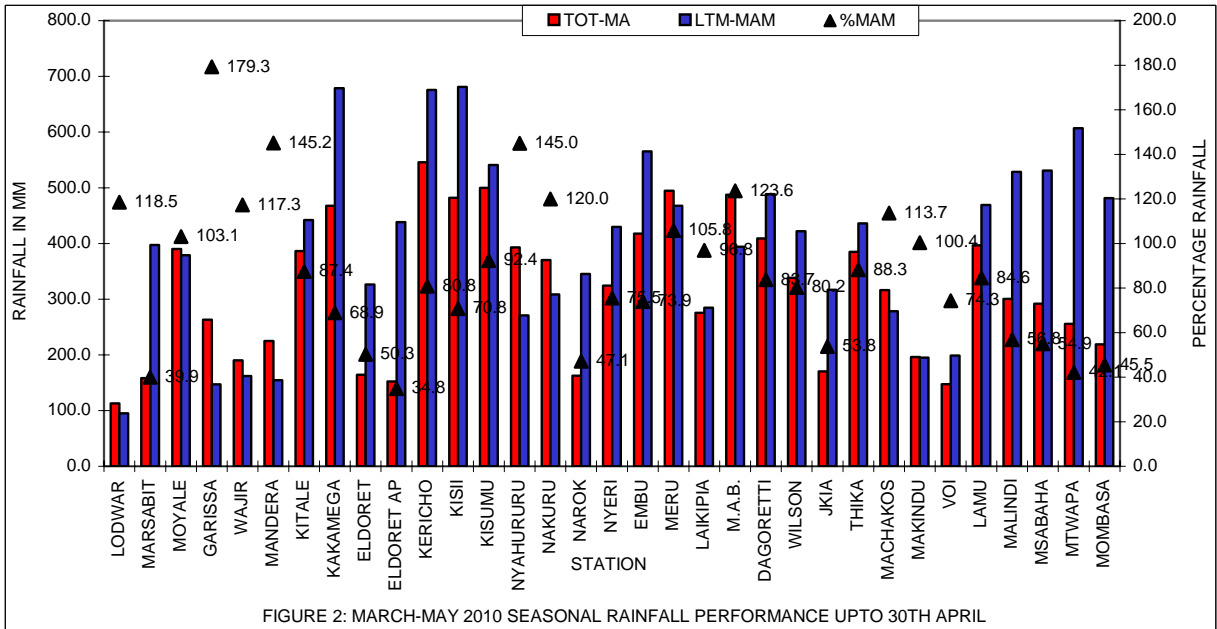


FIGURE 2: MARCH-MAY 2010 SEASONAL RAINFALL PERFORMANCE UPTO 30TH APRIL

