

WEATHER REVIEW DURING MARCH AND THE OUTLOOK FOR APRIL 2010

1. SUMMARY

1.1 Rainfall Review in March 2010

- Enhanced rainfall was recorded over most parts of the country in March 2010. The rainfall caused flooding in various parts of the country and more so the North-western parts where several people lost their lives, infrastructure was destroyed and roads were rendered impassable.
- The Coastal strip remained generally dry for most of the month.

1.2 The forecast for April 2010

- The outlook for April 2010 indicates that most parts of the country, except the Coastal strip and a few areas in South-eastern lowlands, are likely to experience enhanced rainfall that will be well distributed both in time and space.

2. REVIEW OF THE WEATHER DURING MARCH 2010

2.1 Observed Rainfall

The month of March 2010 was characterized by wet weather conditions over most parts of the country. The wettest conditions occurred in the Northwestern and Northeastern areas as well as Nairobi area where the rainfall received over most stations was over 200 percent of the corresponding Long-Term Mean (LTM) rainfall for the month of March. The rainfall caused flooding in various parts of the regions, especially in the Turkana district in Northwestern Kenya where serious flooding has led to loss of human life and destruction of infrastructure. The flooding was also experienced in areas located downstream of some of the major rivers such as Tana, Athi and Sabaki. Several areas along the Coastal strip, however, remained generally dry for most of the month.

Up to 30th March, Moi Airbase Meteorological Station in Nairobi recorded the highest rainfall amount of 287.5mm (335%), as compared to its LTM rainfall of 85.9mm. Kericho, Wilson Airport, Kisii, Machakos, Dagoretti Corner and Thika received 252.7 (145%), 246.6 (291%), 225.1 (113%), 217.0 (266%), 209.4 (226%) and 206.1 mm (186%) as compared to their respective LTMs of 173.8, 84.8, 199.6, 81.5, 92.8 and 110.7 mm, respectively. Nakuru, Embu, Kakamega, Nyahururu, Kisumu, Nanyuki and Meru stations recorded between 150 and 200 mm while the rest of stations recorded less than 150mm. Along the Coastal strip, Mombasa, Mtwapa, Lamu, Msabaha and

Malindi recorded 29.8, 20.5, 10.3, 9.9 and 8.8 mm, respectively (*see Figure 1*).

In some areas, the total rainfall recorded in March alone is almost equivalent to the seasonal LTMs for the Long Rains (March-May) season. The Meteorological Stations where this has been observed include Lodwar, Garissa, Mandera and Machakos stations where the March 2010 rainfall is 83%, 79%, 80% and 78% respectively of their seasonal (March-May) LTMs.

A few rainfall storms were recorded during the month. On 24th March, Machakos, Thika, Wilson Airport and Moi Airbase stations recorded 119.7, 86.2, 85.1 and 81.2 respectively. Makindu and Garissa stations recorded 82.8 and 86.1 mm on 6th and 20th March respectively. These figures were above the 50mm threshold value for torrential rains.

2.2 Rainfall Onset

The seasonal rainfall onset was timely over most parts of the country. Indeed, some regions started recording rainfall as early as the beginning of the month with short-lived dry spells.

2.3 Sea Surface Temperature Anomaly Patterns and the ITCZ

Warmer than average Sea Surface Temperatures (SSTs) prevailed in the SW Equatorial Indian Ocean. Warmer than average SSTs also continued to occur over the Equatorial Eastern and Central Pacific Ocean, indicating that the weak El Niño conditions still prevailed in the Pacific. The temperature patterns enhanced the rainfall generating mechanism that led to enhanced rainfall over most parts of the country. The rain-bearing low-level pressure belt, commonly known as the Inter-Tropical Convergence Zone (ITCZ), which follows the overhead sun, was well established over the country especially during the second half of the month.

3. EXPERIENCED IMPACTS

The heavy rainfall over various parts of the country impacted both positively and negatively on various sectors. Some of the impacts are follows:

3.1 Positive impacts

- In the agricultural sector, the timely onset and heavy rainfall was a pointer to a potential good crop performance for farming communities in the country;

- In the pastoral areas, there was improved pasture and water for animals as a result of the good rainfall performance; and
- The water levels in the hydro-electric power generating dams increased significantly.

3.2 Negative Impacts

- Several people lost their lives in various parts of the country due to massive flooding;
- Floods also wreaked havoc in Mogotio district, displacing hundreds of people and destroying property. Roads were cut off and bridges destroyed; and
- Tourism in Masai Mara Game Reserve was interrupted following the heavy rainfall in the region that caused massive flooding.

4. FORECAST FOR APRIL 2010

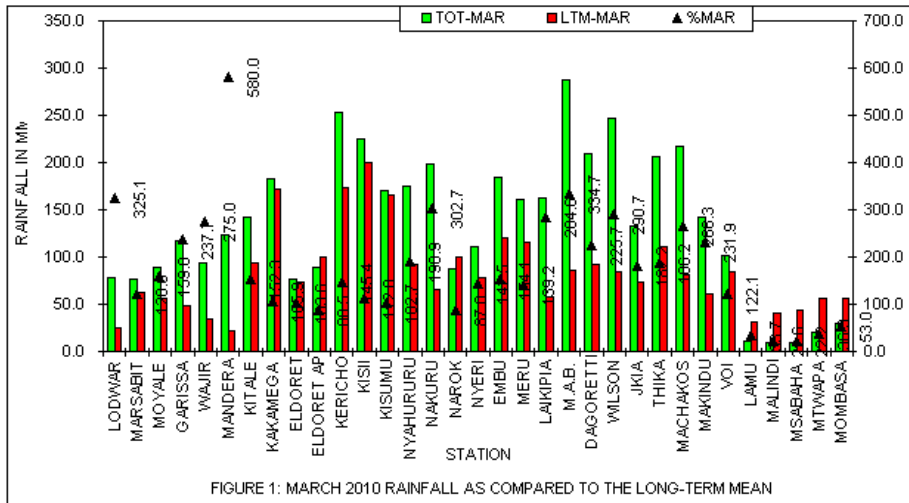
4.1 RAINFALL FORECAST

The rainfall forecast for April 2010 is based on regression of Sea Surface Temperature Anomalies (SSTAs) on Kenyan rainfall as well as Sea Surface Temperature (SST) gradients and the expected evolution of global SST patterns. Analogue years were also considered. The forecast indicates that much of the country is likely to receive enhanced rainfall during the month (*See Figure 2*). However, the Coastal parts of the country are likely to receive depressed rainfall during the month. The rainfall is expected to be well distributed both in time and space. The specific outlooks for individual areas are as follows:

The Western Highlands (Kitale, Kericho, Nandi, Eldoret, Kakamega), **Lake Basin** (Kisumu, Kisii, Busia), **Northwestern regions** (Lodwar, Lokichoggio, Lokitaung), **Central Rift Valley** (Narok, Nakuru, Naivasha), **Highlands East of the Rift Valley** (Nyeri, Embu, Meru, Murang'a, Kiambu), **Nairobi Area** (Dagoretti, Wilson, Eastleigh), **most of Northeastern Kenya** (Garissa, Wajir, Mandera, El Wak, Garbatulla) and parts of **Southeastern Kenya** (Machakos, Makindu) are likely to receive near normal rainfall tending to above normal (enhanced rainfall) in April. The distribution in time and space is expected to be good.

Northern Kenya (Marsabit, Moyale, North Horr) is likely to receive near normal rainfall with good distribution in time and space.

The Coast Strip (Mombasa, Malindi, Kilifi, Lamu) and **a few areas in Southeastern lowlands** (Voi) are likely to



The Ministry of Public Health should be on lookout to map possible outbreak areas and to intensify surveillance of such diseases.

Kenya Meteorological Department (KMD)

KNOW YOUR WEATHER!



April 2010 Monthly Forecast

receive near-normal to below normal (depressed) rainfall in April (See figure 2).

5. EXPECTED IMPACTS

- Good crop performance is expected in most parts of the country due to the expected good rainfall performance. Farmers are therefore advised to take advantage of the good rains in order to maximize on the crop yield. However, in some areas, land will be water-logged;
- Pasture for livestock will continue to improve in the pastoral areas due to the expected good rainfall performance.
- There are very high chances of floods occurring in the flood-prone areas of Nyando, Budalang'i, Kano plains and lower Tana River areas;
- Landslides are likely to occur in areas such as Murang'a;
- Cases of lightning strikes will also increase especially in western Kenya. Contingency measures should, therefore, be put in place to avoid any further loss of live and property.
- The Seven-Folk and Turkwel power generating dams are expected to experience normal to above normal inflows due to the expected enhanced rainfall in the catchment areas. The water levels are there expected to continue increasing significantly.
- Diseases like malaria may be on the increase due to excessive rainfall and the expected flooding.

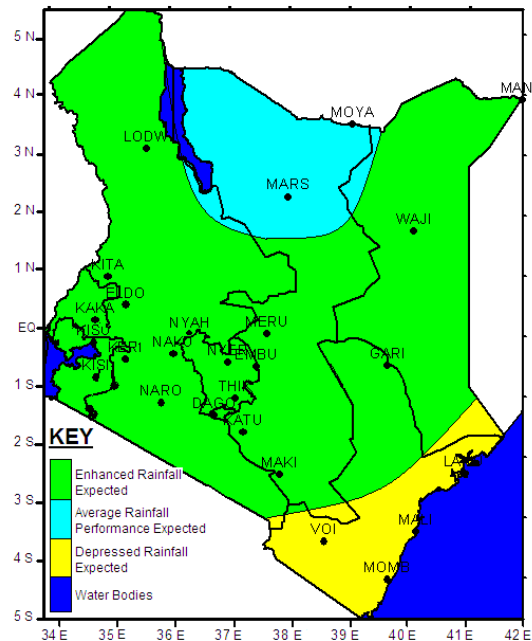


FIGURE 2: RAINFALL FORECAST FOR APRIL 2010



A Public Education and Awareness
Publication
of

The Public Weather Services
Kenya Meteorological Department
Dagoretti Corner, Ngong Road,
P.O. BOX 30259 - 00100
Nairobi GPO, KENYA

Tel: 254-20-3867880-7, 3876957

Cellphone: 254-724-255153/4

Fax: 254-20-3876955, 3877373

Email: director@meteo.go.ke

Website: www.meteo.go.ke

NB: This forecast should be used in conjunction with regular updates issued by this Department.