



**REPUBLIC OF KENYA  
MINISTRY OF ENVIRONMENT, CLIMATE CHANGE & FORESTRY  
KENYA METEOROLOGICAL DEPARTMENT**

Dagoretti Corner, Ngong Road, P. O. Box 30259-00100, GPO, Nairobi, Kenya  
Telephone: +254 (0) 20 38567880-7, +254 724 255 153-4  
E-mail: [director@meteo.go.ke](mailto:director@meteo.go.ke), [info@meteo.go.ke](mailto:info@meteo.go.ke) Website: <http://www.meteo.go.ke>

## **AGROMETEOROLOGICAL BULLETIN**

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### **DEKAD 4 PERIOD: 1<sup>ST</sup> – 10<sup>TH</sup> FEBRUARY 2023**

#### **1.0 HIGHLIGHTS**

- Most parts of the country continued to report dry conditions except over Narok, Kakamega and Kisii stations where moderate rainfall was received in a single day.
- Average mean air temperature remained high over most parts of the country. The cooler regions in the Country had mean air temperatures ranging from (15.1 – 19.3) °C while the warmer regions had average mean air temperature rising up to of 30.2°C (Figs. 3.3 & 3.4).
- Few-Scattered cloud cover dominated the sky over most parts of the country therefore increasing daily total radiation and number of sunshine hours.
- Total pan evaporation, remained high over most parts of the country with highest readings of 101.5 mm being recorded at Lodwar station in North Western Kenya.
- During the next 10 days (11<sup>th</sup> – 20<sup>th</sup> February 2023), most parts of the country are expected to continue remaining dry except few areas within Nyanza and western where light-moderate rainfall is likely to occur due to local effect.

#### **2.0 WEATHER AND CROP REVIEW FOR THE PERIOD: 1<sup>ST</sup> – 10<sup>TH</sup> FEBRUARY 2023**

##### **2.1 HIGHLIGHTS**

During the fourth dekad (1<sup>st</sup> – 10<sup>th</sup> February 2023), most parts of the country continued to report dry conditions except at Narok, Kakamega and Kisii stations where at least a single day with moderate rain fell. The prevailing dry conditions especially over most arable regions in central and Eastern Kenya continue to take a toll on crops that have already shown signs of water stress and whole farms are drying up.

##### **2.2 WESTERN AND NYANZA REGION**

All stations from the region continued to report less rainfall than their long-term dekadal means. Light rainfall was reported by all stations except Kakamega and Kisii, which reported a single day of moderate rainfall. Average mean air temperatures went up by 1.0 °C and ranged between 22.7 °C and 25.8 °C. Scattered cloud cover dominated the sky during the morning and afternoon hours.

### **2.2.1 KAKAMEGA:**

The station reported a cumulative rainfall amount of 8.8 mm against its Long term dekadal mean of 24.4 mm. Scattered cloud cover dominated the station in the morning and afternoon hours throughout the dekad. Average mean air temperature at the station was 23.2°C. Most farmers are busy preparing their land for the next season.

### **2.2.2 KISII:**

The station received moderate rainfall for only a day during the fourth dekad. A cumulative amount of 7.8 mm fell against its long-term dekadal mean of 25.3 mm. Mean air temperature slightly increased from 21.9°C to 22.7°C. Scattered cloud cover persisted during both morning and afternoon hours throughout the entire dekad. Total pan evaporation at Kisii was 43.3 mm. Harvesting of both maize and beans is over and most farmers are now preparing their farms for the next season.

## **2.3 RIFT VALLEY PROVINCE**

All stations from the region reported less rainfall than their long-term dekadal means. Moderate/light rainfall reported at Narok and Kericho stations while the rest of the region continued to remain dry. Scattered cloud cover in the morning and afternoon hours dominated the sky throughout the region with average mean air temperature ranging between 17.8 °C and 20.4 °C.

### **2.3.1 KITALE:**

The station did not receive any rainfall during the dekad. Cloud cover was few during the morning and increased to scattered during afternoon hours throughout the dekad. Total pan evaporation was 56.0 mm and average mean air temperature of 20.4°C.

Farmers are busy preparing their farms for the next cropping season.

### **2.3.2 KERICHO:**

The station reported a cumulative amount of 2.0 mm of rain against its long-term dekadal mean of 23.4 mm. Average mean air temperature was 18.5 °C and scattered cloud cover persisted over the station in the morning and afternoon hours throughout the dekad. Total pan evaporation was 60.5 mm. Most farmers are busy preparing their farms for the next season.

## **2.4 CENTRAL AND NAIROBI PROVINCES.**

The Central region remained mostly dry during the current dekad except at Kangema and Nyeri stations where light rainfall was reported. Scattered cloud cover dominated the region during the morning and afternoon hours. Mean air temperature ranged between 15.1 °C and 22.6 °C.

### **2.4.1 NYERI:**

Received a total cumulative amount of 0.7 mm against its long-term dekadal mean rainfall of 11.6 mm. Cloud cover was few during the morning and increased to scattered during afternoon hours throughout the dekad. Average mean air temperature went up from 18.4 °C to 19.3 °C

Maize is at flowering stage and in a poor state due to the prevailing dry conditions. Infestation by maize stalk borer is worsening the situation and therefore, below normal yield is expected. Beans have dried prematurely and therefore, below normal or no yield is expected.

#### **2.4.2 THIKA:**

The station did not receive any rainfall during the dekad. Cloud cover was few during the morning and the afternoon hours and persisted throughout the dekad. Average mean air temperature was 22.6 °C and total pan evaporation 69 mm. Both maize and beans are at flowering stage and in poor state, which corresponds to below normal growth. The prevailing dry conditions is likely to lead to crop failure in the area.

#### **2.4.3 KABETE:**

The station did not receive any rainfall during the dekad. Broken cloud cover during the morning which decreased to few during the afternoon persisted throughout the dekad. Average mean air temperature increased to 20.8 °C and total pan evaporation to 106.5 mm.

Both maize and beans are at flowering stage but in a poor state, which corresponds to below normal growth. Due to prevailing dry conditions, bean leaves are yellowing and flowers aborting while maize has not transitioned to the next phase therefore, crop failure is expected.

Coffee variety *Ruiru hybrid 11* is at 70% pinhead and 30% berry soft stage and the crop state is fair which corresponds to normal growth. The extent of spread of weeds is not much in the farm though 30% of the crop has been affected by leaf rust.

Banana variety *Giant Cavendish* is at 100% suckers stage and there is a considerable amount of weeds but they do not affect the plant. However, 40% of the crop has been affected by Panama banana disease.

#### **2.4.4 NYAHURURU:**

The station did not receive any rainfall during the dekad. Average mean air temperature was 15.1°C Cloud cover was few during the morning and increased to scattered during afternoon hours throughout the dekad. Maize is at harvesting stage and due to insufficient rainfall, below normal yield is expected.

### **2.5 EASTERN REGION:**

The entire Eastern region continued to remain dry during the current dekad. Average mean air temperatures ranged between 20.0 °C and 26.0 °C. Scattered cloud cover was generally observed over the entire region during both morning and afternoon hours.

#### **2.5.1 MERU:**

The station did not receive any rainfall during the dekad. Cloud cover was few during the morning and afternoon hours and persisted throughout the dekad. Maize was at flowering stage and beans at flowering stage and both crops were in fair state which corresponds to normal growth. No adverse effects had been reported.

#### **2.5.2 EMBU:**

The station did not receive any rainfall during the dekad Average mean air temperature increased slightly to 21.1 °C during the dekad. Cloud cover was few during the morning and afternoon hours and persisted throughout the dekad. Beans have attained maturity stage but the crop state is poor due to prevailing dry conditions. Maize is at flowering stage and the state is poor which corresponds to below normal growth. The prevailing dry conditions seem to adversely affect the crop.

### **2.5.3 KATUMANI:**

Katumani station did not receive any rainfall during the dekad. Cloud cover was few during the morning and afternoon hours and persisted throughout the dekad. Total pan evaporation of 75.5 mm was reported during the dekad.

Maize variety *Ukamez* is at 100% tasseling stage though the crop state is poor due to insufficient rainfall. Beans variety *KAT 56* have failed due to lack of sufficient rainfall and therefore, no yield is expected.

Mangoes (variety apple) are at 100% fruit setting stage. The crop condition is fair which corresponds to normal growth. Weeds are seldom seen within the farm and insufficient rainfall seems to be adversely affecting the mangoes, which are still at a sensitive phase.

Oranges (Washington Navel) were at 100% fruit setting and the crop condition was fair corresponding to normal growth. Infestation by aphids and insufficient rainfall are affecting the phase. Weeds are seldom seen within the farm.

### **2.6 COASTAL REGION:**

The entire coastal strip generally remained dry with most stations reporting only trace during the dekad. Broken cloud cover dominated the region during the morning decreasing to few during the afternoon hours. Mean air temperature ranged between 28.0 °C and 29.9 °C.

#### **2.6.1 MTWAPA:**

The station remained dry during the dekad. Average mean air temperature was 28.2 °C. Broken cloud cover dominated the sky during the morning decreasing to few in the afternoon hours.

Mangoes (variety apple) were at 100% full ripeness stage. The crop condition was fair which corresponds to normal growth. Weeds are seldom seen within the farm but because of wild animals like monkeys and baboons much fruit is lost and below normal yield is expected.

No major activities are being carried out by farmers in the area due to the prevailing dry conditions. Most farms are lying dormant.

#### **2.6.1 MSABAHA:**

Reported trace against its Long term dekadal mean of 0.3 mm of rainfall. Average mean air temperature increased slightly to 28.3 °C and broken cloud cover was observed during morning hours reducing to few during the afternoon hours.

No major activities are being carried out by farmers in the area due to the prevailing dry conditions. Most farms are lying dormant.

### **2.7 NORTH EASTERN REGION:**

All stations from the North Eastern region reported dry conditions during the current dekad.

Few/Scattered cloud cover was generally observed over the region during the morning and afternoon hours. Mean air temperature ranged between 30.2 °C and 30.9 °C. Pasture and forage regeneration completely stopped and water loss from earth pans increased because of high temperatures and prevailing dry windy conditions.

1<sup>ST</sup> – 10<sup>TH</sup> FEBRUARY 2023 CUMULATIVE

RAINFALL MAP

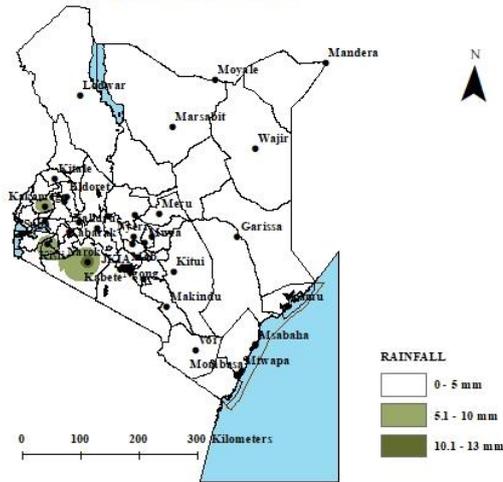


Fig: 3.1

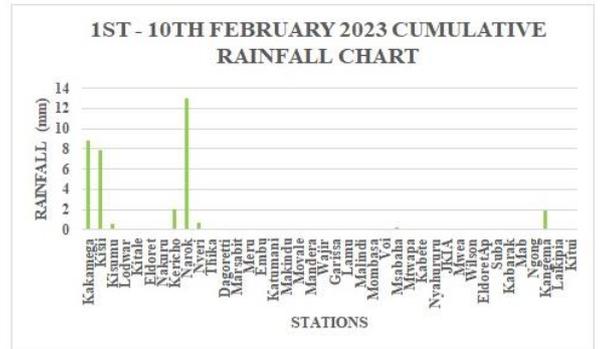


Fig: 3.2

1<sup>ST</sup> – 10<sup>TH</sup> FEBRUARY 2023 MEAN TEMPERATURE

DISTRIBUTION MAP

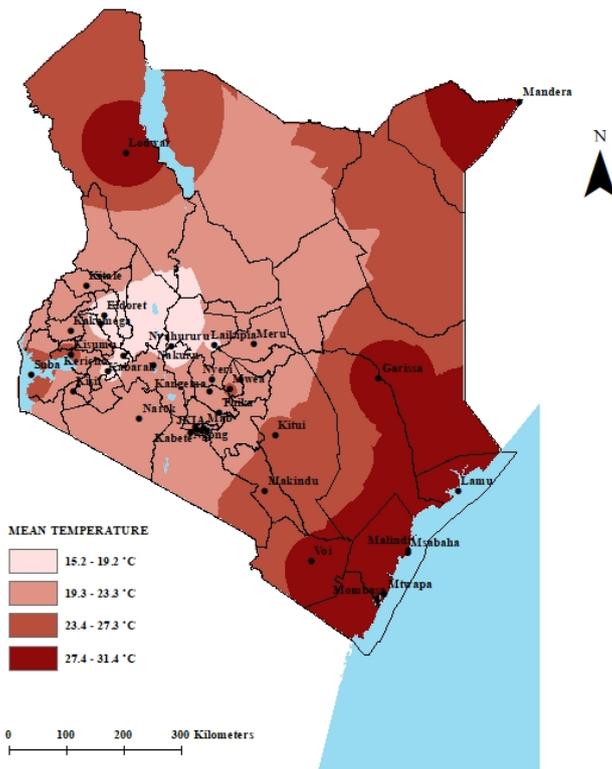


Fig: 3.3

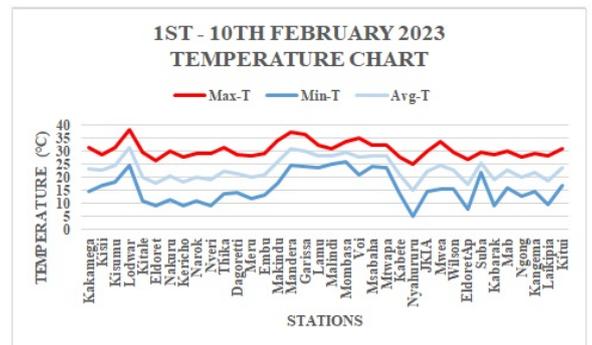


Fig: 3.4

#### **4.0 EXPECTED WEATHER AND CROP CONDITIONS DURING THE NEXT 10 DAYS; 11<sup>TH</sup> – 20<sup>TH</sup> FEBRUARY 2023.**

During the next 10 days, sunny and dry conditions will be experienced over most parts of the country except over few isolated areas within western and Nyanza where light rainfall is expected due to local effect.

Over western and Nyanza regions, the expected weather conditions will help in drying the harvested grains therefore, reduce post-harvest loses.

In Central and Eastern parts of the country, these conditions are expected to deplete further soil moisture levels within the region (Nyeri, Thika and Kabete) and this will negatively impact on the condition of both maize and beans in the region.

Northern Western/Eastern are likely to continue experience dry conditions during the next dekad. This is likely to worsen pasture and forage situation in the region. The current status of water resources in the region is also expected to continue to worsen as most earth/water pans will continue to loose water through evaporation.

Communities in these areas are therefore advised to set up committees to manage prudently grazing and watering areas to avoid resource based conflicts.

South Eastern lowlands and the coastal regions are expected to remain dry therefore, worsening the current poor condition of food crops in these regions. Large scale farmers in these region can consider irrigating their farms.



**MARY GITHINJI FOR: DIRECTOR OF METEOROLOGICAL SERVICES.**