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# AGROMETEOROLOGICAL BULLETIN

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**DEKAD 15 PERIOD: 21ST – 31ST May 2023**

## 1.0 HIGHLIGHTS

- During the current dekad several parts of the country received light to moderate rainfall. Most stations reported an increase in the total amount of rainfall received as compared to the previous dekad .

- Mtwapa station in Coastal region reported the highest amount of rainfall followed by Malindi (Figs; 3.1 & 3.2).

- Average mean air temperature dropped all over the country. The cooler regions in the Country had mean air temperatures ranging between 13.0˚C – 19.0 ˚C while the warmer regions had mean air temperature reaching 31.4˚C (Figs. 3.3 & 3.4).

- Total pan evaporation, increased over most stations with highest readings of 75.05 mm being recorded at Mandera station in North Eastern Kenya.

During the next 10 days (1st – 10th)June 2023 several parts of the country are expected to continue receiving light rainfall.

## 2.0 WEATHER AND CROP REVIEW FOR THE PERIOD: 21ST – 31ST MAY 2023

### 2.1 SUMMARY

During the period under review, several parts of the country reported light to moderate rainfall same as the previous dekad. The rainfall amount reported over most stations generally increased in amount compared to the previous dekad. Mtwapa station reported

the highest rainfall readings in the Country (151.4 mm) followed by Malindi station which reported (143.2 mm).

Over Western, Nyanza and some parts of Rift Valley, beans are at maturity while maize is at tasselling leaf stage.

In Central, Nairobi, Eastern and the Coastal regions, beans have attained flowering stage while maize is past ninth leaf stage.

In the pastoral regions in North Eastern rains and over the game reserves, pasture and forage regeneration has greatly improved during the current dekad and most Water/Earth pans have been recharged hence improving the poor status of water resources in these regions.

## 2.2 WESTERN AND NYANZA REGION

Some stations from the region reported enhanced rainfall as compared to their long-term dekadal means whereas others reported a decrease. Light to moderate rainfall was reported by all stations in the region during the dekad. Average mean air temperatures decreased in the region and ranged between 21.1 ˚C and 22.5 ˚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 67.9 mm against its Long term dekadal mean of 77.79 mm, the station had a total of five (5) consecutive rainy days with three (3) days recording more than 5.0 mm (moderate rainfall). Scattered cloud cover dominated the station in the morning and afternoon hours throughout the whole dekad. Average mean air temperature at the station dropped from 22.9˚C to 22.5˚C. Maize is at flowering stage and beans are at maturing stage. Normal yield is expected for both crops.

### 2.2.2 KISII:

The station received moderate to heavy rainfall during the dekad. A cumulative rainfall amount of 115.4 mm was received against its long-term dekadal mean of 78.94 mm. The station reported five (5) consecutive rainy days with seven (7) days recording more than 5.0 mm (moderate to heavy rainfall). Mean air temperature dropped from 21.8 ˚C in the previous dekad to 21.1 ˚C. Scattered cloud cover persisted during both morning and afternoon hours throughout the dekad. Maize is at flowering stage and beans are at maturing stage. Normal yield is expected for both crops

## 2.3 RIFT VALLEY PROVINCE

Several stations from the region reported reduced rainfall compared to the previous dekad. Light to moderate to rainfall was reported by all stations in the region during the dekad. Average mean air temperatures generally dropped in the region and ranged between 18.0 ˚C and 19.0 ˚C. Scattered cloud cover dominated the sky during the morning and afternoon hours.

### 2.3.1 KITALE:

The station generally received light to moderate rainfall during the dekad. A cumulative rainfall amount of 48.91 mm was received against its long-term dekadal mean of 49.32mm. The station reported one (1) consecutive rainy days with four (4) days receiving more than 5.0 mm of rainfall. Scattered cloud cover dominated the station in the morning and afternoon hours throughout the whole dekad. Average mean air temperature dropped to 20.0˚C unlike in the previous dekad which was 20.6 ˚C. Maize is at emergence stage and beans flowering stage and both crops are in doing well due to sufficient rainfall.

### 2.3.2 KERICHO:

A cumulative amount of 77.8 mm of rainfall was reported against its long-term dekadal mean of 76.5 mm. The station had three (3) consecutive rainy days with four (4) days recording more than 5.0 mm of rainfall during the dekad. Average mean air temperature dropped from 18.85 ˚C in the previous dekad to 18.26 ˚C in the current dekad. Broken cloud cover persisted over the station in the morning and in the afternoon hours. Maize is at flowering stage and beans are at maturing stage. Normal yield is expected for both crops.

### 2.3.3 KABARAK:

The station reported a cumulative amount of 12.5 mm of rain against its long-term dekadal mean of 26.55 mm. The station had a total of three (3) consecutive rainy days with zero (0) days recording more than 5.0 mm of rainfall during the dekad. Average mean air temperature dropped from 19.47 ˚C in the previous dekad to 18.92 ˚C in the current dekad. Scattered cloud cover persisted over the station in the morning and in the afternoon hours throughout the entire dekad. Most farmers in the area have completed planting and both maize and beans and the two crops are at emergence stage.

## 2.4 CENTRAL AND NAIROBI PROVINCES.

Several stations from the Central region reported reduced rainfall as compared to their long-term decadal mean. Light to moderate rainfall was reported by all stations in the region. Average mean air temperatures generally dropped in the region and ranged between 14.7 ˚C and 19.7˚C. Broken cloud cover dominated the sky during the morning and afternoon hours throughout the dekad.

### 2.4.1 NYERI:

Received a total cumulative amount of 19.41 mm against its long-term dekadal mean rainfall of 38.91 mm. The station had four (4) consecutive rainy days with one (1) day recording more than 5.0 mm (light to moderate) rainfall during the dekad. Broken cloud cover dominated the sky during the morning and afternoon hours throughout the dekad. The average mean air temperature was 19.3˚C which was a decrease from 20.0 ˚C in the previous dekad. Maize is emergence stage, whereas beans have attained flowering stage. Weeding continues as spraying of maize fields is done due to infestation by stalk borer and fall worms.

### 2.4.2 THIKA:

Received a total cumulative amount of 11.7 mm against its long-term dekadal mean rainfall of 15.89 mm. The station had three (3) consecutive rainy days with one (1) day recording more than 5.0 mm (light to moderate). Broken cloud cover dominated the sky during the morning and afternoon hours throughout the dekad. Maize is at flowering of tassel stage and beans at maturing stage. Crops are doing well though there is reduction of rainfall.

### 2.4.3 DAGORETTI

Received a total cumulative amount of 9.02 mm against its long-term dekadal mean rainfall of 28.63 mm. The station had a total of two (2) rainy days with no days recording more than 5.0 mm (light to moderate). Broken cloud cover dominated the sky during the morning and afternoon hours throughout the dekad. The average mean air temperature was 19.3 ˚C and total pan evaporation was 35.0 mm. Maize is at tasselling stage and beans at podding stage and generally doing well. Fall worms have started attacking maize though not in a large extent.

### 2.4.4 KABETE:

The station received a total cumulative amount of 15.5 mm against its long-term decadal mean of 36.28 mm of rainfall. The station had three (3) consecutive rainy days with no (0) days recording more than 5.0 mm (light to moderate ) rainfall. Broken cloud cover dominated the sky during the morning and afternoon hours throughout the dekad.

Coffee variety *Ruiru hybrid 11* is at 90% berry soft and the crop state is fair which corresponds to normal growth. 30% of the crop has been affected by leaf rust and Coffee Berry Disease (CBD). Weeding is in state three.

### 2.4.5 NYAHURURU:

The station received a total cumulative amount of 19.8 mm against its long-term dekadal mean of 20.74 mm of rainfall. The station had one (1) rainy days with no (0) day recording more than 5.0 mm (light to moderate). Broken cloud cover dominated the sky during the morning and afternoon hours throughout the dekad. Average mean air temperature at the station was 14.7˚C. Maize is past ninth leaf stage and beans have attained the flowering stage. Both crops are in a moderate state and therefore normal yield is expected.

## 2.5 EASTERN REGION:

Several stations in the region reported light to moderate rainfall with Moyale leading the region with 99.6 mm of rainfall. Broken cloud cover dominated the sky during the morning and afternoon hours throughout the dekad. Average mean air temperatures decreased and ranged between 13.1 ˚C and 22.23˚C.

### 2.5.1 MERU:

The station received a total cumulative amount of 2.1 mm against its long-term dekadal mean of 22.56 mm of rainfall. The station reported one (1) day with no day reporting more than 5.0 mm (moderate to heavy) rainfall during the dekad. Scattered cloud cover dominated the sky during the morning and afternoon hours throughout the dekad. Average mean air temperature at the station was 19.7˚C. Maize is at flowering stage and beans are at maturing stage. Normal yield is expected for both crops.

### 2.5.2 EMBU:

The station received a total cumulative amount of 21.24 mm against its long-term dekadal mean of 27.71 mm of rainfall. The station had two (2) consecutive rainy days with one (1) day recording more than 5.0 mm (light to moderate) rainfall during the dekad. Broken cloud cover dominated the sky during the morning and afternoon hours throughout the dekad. Average mean air temperature at the station was 19.7 ˚C. Maize is at flowering stage and beans are at maturing stage. Normal yield is expected for both crops.

### 2.5.3 KATUMANI:

The station received a total cumulative amount of 2.9 mm against its long-term dekadal mean of 8.09 mm of rainfall. The station had one (1) consecutive rainy day with zero (0) day recording more than 5.0 mm (light to moderate) rainfall. Scattered cloud cover dominated the sky during the morning and afternoon hours throughout the dekad. Total pan evaporation was 35.9 mm.

Maize is at flowering of the tassel stage while beans at ripeness stage. Weeding is at fair state.

Mangoes (variety apple) are at 90% appearance of new leaves stage and first weeding is in progress.

Oranges (Washington Navel) were at 100% flowering.

### 2.6 COASTAL REGION:

Several stations in the region reported moderate to heavy rainfall with Mtwapa leading the region with 151.4 mm of rainfall. Broken cloud cover dominated the region during the morning and afternoon hours. Mean air temperature ranged between 25.3 ˚C and 27.9 ˚C.

### 2.6.1 MTWAPA:

The station received a total cumulative amount of 151.4 mm against its long-term dekadal mean of 105.39 mm of rainfall. Average mean air temperature was 27.1 ˚C. Broken cloud cover dominated the sky during the morning and afternoon hours. Maize is at tassling stage and the expected yield above average. Mangoes are at fruit setting stage and in moderate state.

### 2.6.1 MSABAHA:

The station received a total cumulative amount of 102.6 mm against its long-term dekadal mean of 102.91 mm of rainfall. Broken cloud cover dominated the sky during the morning and afternoon hours throughout the dekad. Maize is at flowering of the tassel stage.

### 2.7 NORTH EASTERN REGION:

Several stations in the region reported increased rainfall amounts with Garissa reporting 8.81 mm of rainfall. Broken cloud cover was generally observed over the region during the morning and afternoon hours. Mean air temperature was 30.0℃.

Pasture and forage regeneration has greatly improved since the beginning of the rain season and most Water/Earth pans have been recharged hence improving the poor status of water resources in these regions.

## 3.0 DEKAD 15 2023 RAINFALL AND TEMPERATURE MAPS/CHARTS

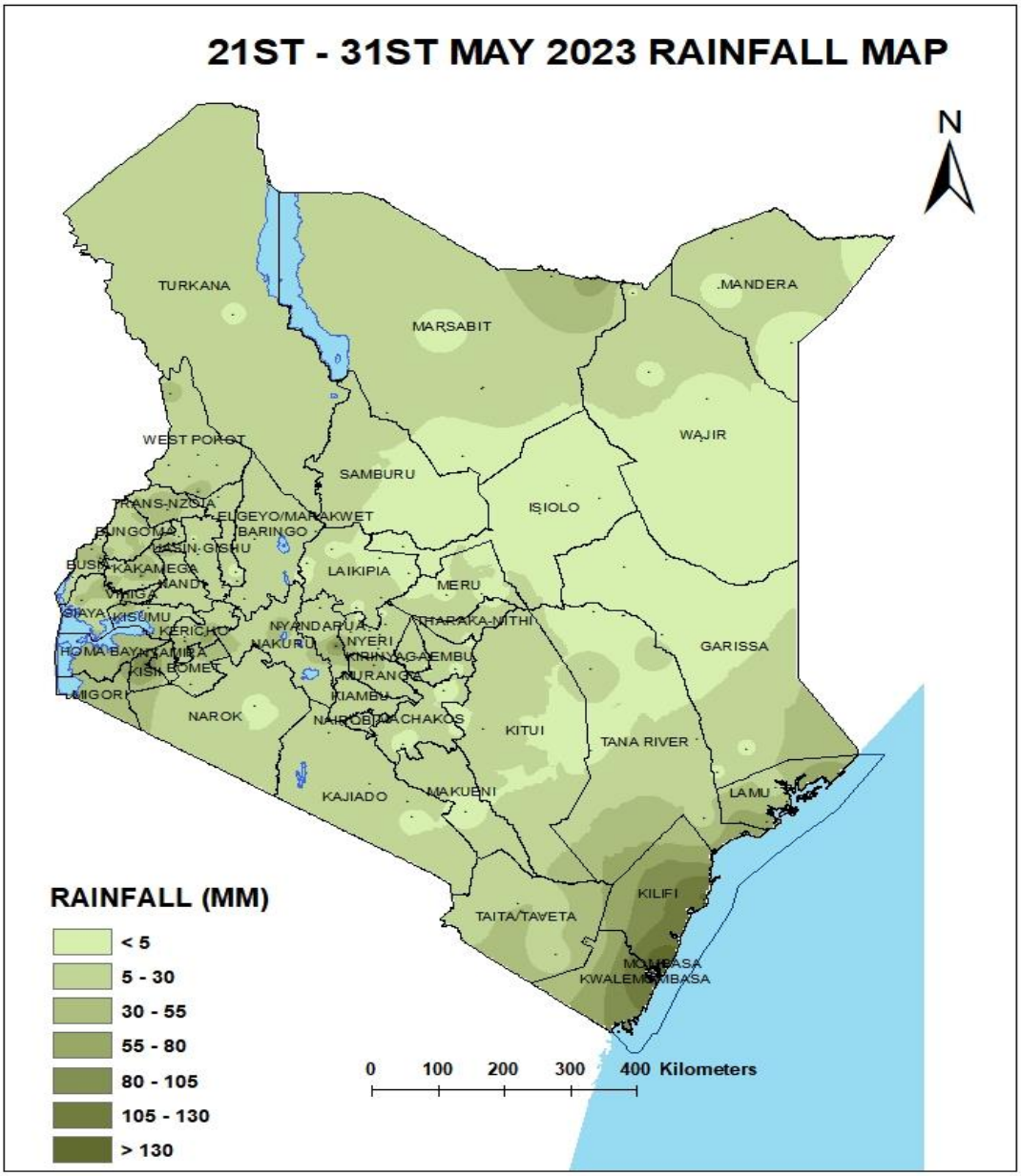


**Fig: 3.1**

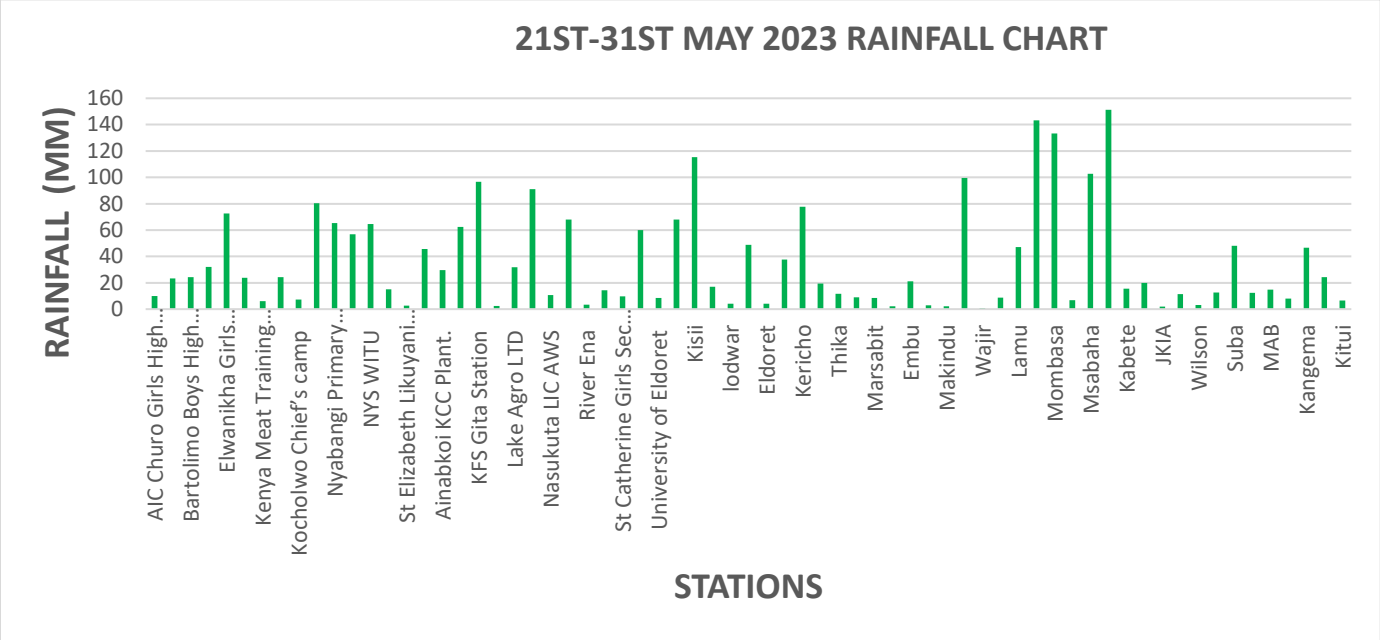
21ST-31ST MAY 2023 RAINFALL CHART
RAINFALL (MM)
160
140
120
100
80
60
40
20
0
AIC Churo Girls High...
Bartolimo Boys High...
Elwanikha Girls...
Kenya Meat Training...
Kocholwo Chief's camp
Nyabangi Primary...
NYS WITU
St Elizabeth Likuyani...
Ainabkoi KCC Plant.
KFS Gita Station
Lake Agro LTD
Nasukuta LIC AWS
River Ena
St Catherine Girls Sec...
University of Eldoret
Kisii
lodwar
Eldoret
Kericho
Thika
Marsabit
Embu
Makindu
Wajir
Lamu
Mombasa
Msabaha
Kabete
JKIA
Wilson
Suba
MAB
Kangema
Kitui
STATIONS

**Fig: 3.2**

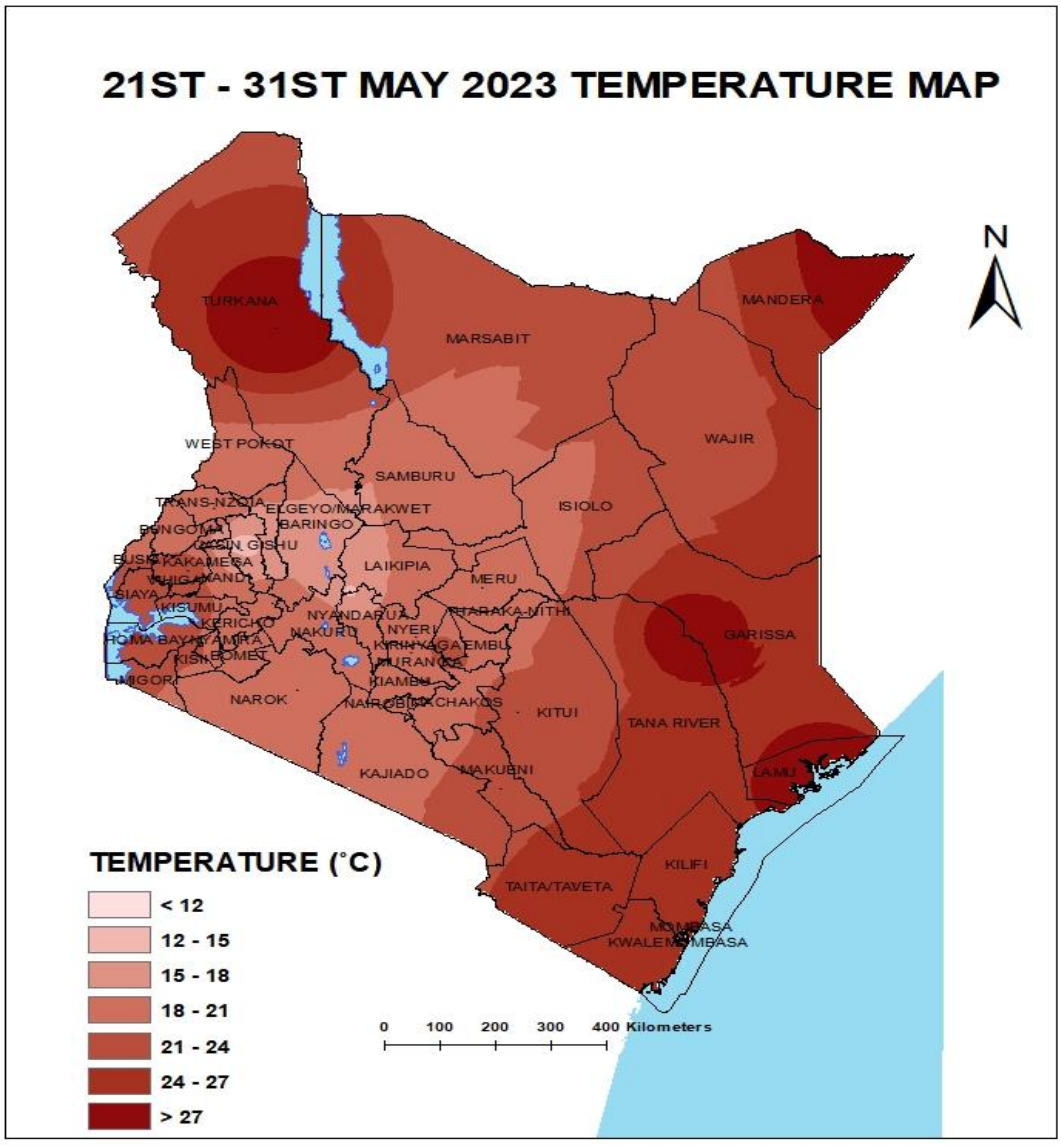
21ST - 31ST MAY 2023 TEMPERATURE MAP
N
TURKANA
MARSABIT
MANDERA
WAJIR
WEST POKOT
SAMBURU
ISIOLO
TRANS-NZOIA
ELGEYO/MARAKWET
BARINGO
LAIKIPIA
MERU
THARAKA-NITHI
NYANDARUA
NYERI
NAKURU
KIRINYAGA
EMBU
MURANG'A
KIAMBU
GARISSA
KERICHO
KISII
NAROK
NAIROBI
MACHAKOS
KITUI
TANA RIVER
KAJIADO
MAKUENI
LAMU
KILIFI
TAITA/TAVETA
MOMBASA
KWALE
TEMPERATURE (°C)
< 12
12 - 15
15 - 18
18 - 21
21 - 24
24 - 27
> 27
0 100 200 300 400 Kilometers

**Fig: 3.3**

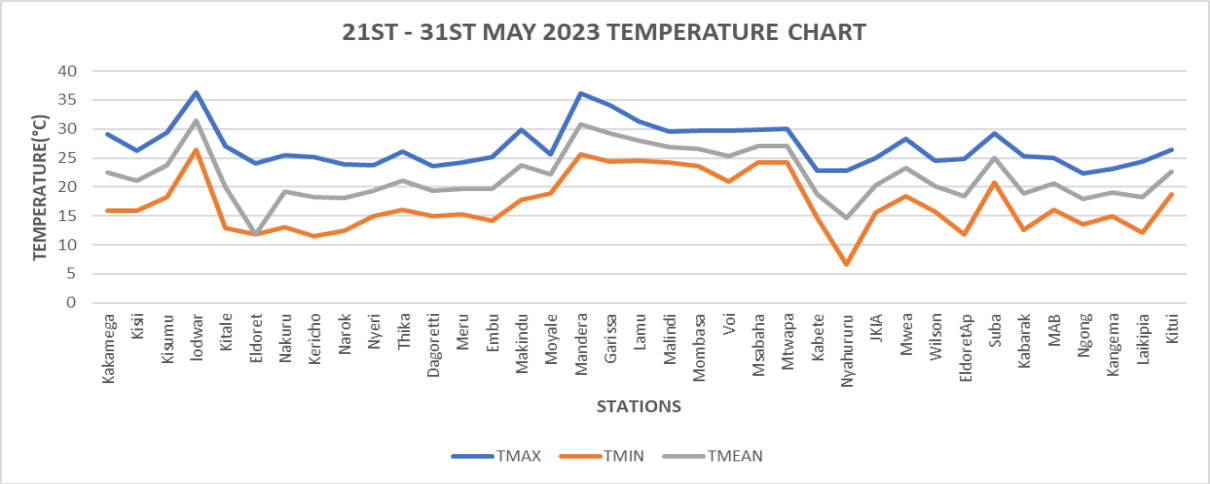


**Fig: 3.4**

| Station | Maximum consecutive wet days ( >1.0 mm) | Maximum consecutive dry days | Number of rainy days ( > 5.0 mm) | Cumulative Rainfall from start of MAM 2023 RFseason |
|---|---|---|---|---|
| Kakamega | 5 | 1 | 3 | 743.95 |
| Kisii | 5 | 3 | 7 | 755.22 |
| Kitale | 1 | 3 | 4 | 299.09 |
| Kericho | 3 | 2 | 4 | 506.91 |
| Nyeri | 4 | 1 | 1 | 320.37 |
| Thika | 3 | 3 | 1 | 434.42 |
| Dagoretti | 2 | 3 | 0 | 508.36 |
| Meru | 1 | 8 | 0 | 472.34 |
| Embu | 2 | 1 | 1 | 477.91 |
| Katumani | 1 | 7 | 0 | 239.23 |
| Msabaha | 5 | 0 | 6 | 375.94 |
| Mtwapa | 4 | 3 | 7 | 490.42 |
| Kabete | 3 | 3 | 0 | 528.02 |
| Nyahururu | 1 | 5 | 0 | 244.02 |
| Kabarak | 3 | 4 | 0 | 362.83 |

**Fig: 3.5**

## 4.0 EXPECTED WEATHER AND CROP CONDITIONS DURING THE NEXT TEN (10) DAYS; 1ST – 10TH JUNE 2023.

During the next ten (10) days, rainfall is expected to continue over some parts of the country including over Highlands east and west of the Rift Valley and the Coastal region.

Over Western and Nyanza regions, rainfall is likely to continue therefore farmers are expected to harvest beans and do post harvest activities like winnowing,drying in order to avoid losses brought about by rotting of the produce.

In Central Nairobi and Eastern parts of the country, light rains are expected, since maize is above the ninth leaf and beans at flowering stages, farmers should focus on weeding and spray maize fields attacked by stalkborer and fall armyworms to on improve their expected yield.

North Western/Eastern are likely to have sunny intervals during the next dekad. The expected weather conditions will be ideal for grazing animals and pastoralists are advised to deworm and spray their livestock for pest control.

South Eastern lowlands regions are expected to experience sunny intervals with declined rainfall activities therefore farmers are expected to harvest their beans and do post harvest activities on beans.

For inquiry or any clarification, please use the contacts on the letter head.

Mary Githinji

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