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AGROMETEOROLOGICAL BULLETIN

DEKAD 1 PERIOD: 1ST – 10TH JANUARY 2023

1.0 HIGHLIGHTS

- Most of the country continued to have a low profile of rainfall activities with much of it mainly confined to Eastern and central regions of the Country.
- Western, Nyanza and Central Rift Valley continued to report showery and thundery activities but the amount of rainfall decreased considerably compared to the previous dekad. Other regions realized a slight increase though the amounts were bit low.
- Mean air temperatures remained quite high over most parts of the country. The cooler regions had mean air temperatures ranging from 14.0 °C to 19.0 °C. The highest mean air temperature of 30.5 °C was recorded at Mandera station (Figs. 3.3 & 3.4)
- Scattered cloud cover was reported over most parts of the country therefore increasing the daily

number of sunshine hours in this regions. However, Eastern, Central and Nairobi area reported broken cloud cover with low pan evaporation readings and less number of sunshine hours.

- During the next 10 days (11th – 20th January 2023), Most parts of the country are likely to remain dry except over some parts of western, Nyanza and the Coast strip where moderate rainfall is expected mainly due to local meso scale effect.

2.0 WEATHER AND CROP REVIEW FOR THE PERIOD: 1ST – 10TH JANUARY 2023

2.1 HIGHLIGHTS

The first dekad (1st – 10th January 2023) began with most of the country having a low profile of rainfall activities with much of it mainly confined to Eastern and central regions of the Country. Only few stations recorded a significant amount of rainfall which gave some reprieve to crops in these regions.

2.2 WESTERN AND NYANZA REGION

Most stations from the region recorded less rainfall than their long term decadal means.

The amounts received were also less than what the region had reported during the previous dekad. Mean air temperatures ranged between 20.5 °C and 24.9 °C. Scattered cloud cover dominated the region during the morning and afternoon hours.

2.2.1 KAKAMEGA:

The station recorded a single day of moderate rainfall and five consecutive dry days during the dekad. It registered 11.0 mm of rain against its Long term dekad mean of 26.9 mm. The amount reported was also less than readings observed during the previous dekad. Scattered cloud cover dominated the area during the morning and afternoon hours throughout the dekad. Mean air temperature was 21.6°C.

Both maize and beans were at Maturity stage at Kakamega station and no adverse effects had been reported. Normal yield is expected for both crops.

2.2.2 KISII:

The station received two days of moderate rainfall and recorded 21.4 mm of rain against its long term dekad mean of 33.2 mm. The reported amount was less compared to readings observed during the previous dekad. Scattered cloud cover during morning and afternoon hours predominated kisii area and mean air temperature was 20.5°C. Total pan evaporation was 33.9 mm.

Maize variety (Pioneer Phb30g19) was at 94% full ripeness stage and in good state. No adverse effects had been reported and therefore above normal yield is expected from the region.

2.3 RIFT VALLEY PROVINCE

Most stations from the region recorded less rainfall than their long term dekad means. The amounts received were also less than what the region had reported during the previous dekad. Scattered cloud cover in the morning and afternoon generally

prevailed throughout the region. Mean air temperature ranged between 16.6 °C and 18.9 °C.

2.3.1 KITALE:

The station recorded seven consecutive dry days during the dekad and registered 1.0 mm of rain against its Long term dekad mean of 11.2 mm. The amount reported was also less than readings observed during the previous dekad. Scattered cloud cover dominated the area during the morning and afternoon hours throughout the dekad and mean air temperature was 21.6°C.

2.3.2 KERICHO:

The station recorded a single day of moderate rainfall and registered 15.4 mm of rain against its Long term dekad mean of 26.5 mm. The reported amount was also less compared to readings observed during the previous dekad. Scattered cloud cover during morning and afternoon hours predominated the area with mean air temperature of 17.6 °C. Total pan evaporation was 48.5 mm.

Maize was at wax ripeness stage and in good state. No adverse effects had been reported and therefore above normal yield is expected from the region..

2.4 CENTRAL AND NAIROBI PROVINCES.

Several stations from the region recorded less rainfall than their long term dekad means. However, the amounts received were more than what the region had reported during the previous dekad. Scattered cloud cover in the morning and afternoon generally prevailed throughout the region. Mean air temperature ranged between 14.6 °C and 19.9 °C.

2.4.1 NYERI:

Received two days of moderate rainfall and a total amount of 45.5 mm against its Long

term dekadal mean of 16.4 mm of rainfall. The amount received was more compared to the previous decade. Scattered cloudy conditions persisted during both mornings and afternoon hours throughout the dekad. Mean air temperature was 17.5 °C and Maize was past ninth leaf stage and beans at flowering stage and both crops were in fair state which corresponds to normal state. There were no adverse effects reported.

2.4.2 THIKA:

The station reported 8.1 mm against its Long term dekadal mean of 25.2 mm of rainfall. The station received slightly more than what had been reported during the previous dekad. Moderate cloudy conditions during mornings and afternoon hours prevailed and mean air temperature was 19.9 °C. Total pan evaporation was 43.1 mm.

Both Maize and beans were at flowering stage but both crops were in poor state which corresponds to below normal growth. Insufficient rain is affecting both crops.

2.4.3 KABETE:

The station recorded a single day of moderate rainfall and six consecutive dry days during the dekad. It registered 18.6 mm of rain against its Long term dekadal mean of 19.2 mm. The amount reported was slightly more than readings observed during the previous dekad. Scattered cloud cover dominated the area during the morning and afternoon hours throughout the dekad. Mean air temperature was 18.0 °C. Total pan evaporation was 67.6 mm.

Maize was past ninth leaf stage and beans at budding stage and both crops were in fair state which corresponds to normal growth. No adverse effects had been reported.

2.4.4 NYAHURURU:

Reported total rainfall of 8.4 mm against its Long term dekadal mean of 10.7 mm of rainfall. The station reported more rainfall

than in the previous decade. Mean air temperature was 14.6 °C and scattered cloud conditions persisted during both mornings and afternoon hours throughout the dekad.

Maize was at full ripeness stage and in fair state which corresponds to normal growth. No adverse effects had been reported.

2.5 EASTERN REGION:

The Eastern region was leading in the country with the highest amount of rainfall during the first dekad. Most stations from the region recorded more rainfall than their long term dekadal means. The amounts received were also more than what the region had reported during the previous dekad. Mean air temperatures ranged between 18.4 °C and 24.9 °C. Scattered cloud cover dominated the region during the entire dekad.

2.5.1 MERU:

The station received two days of moderate rainfall and recorded 53.5 mm against its Long term dekadal mean of 36.9 mm of rainfall. The amount received was also more than what the station had reported during the previous dekad. Mean air temperature was 18.4 °C with scattered cloud cover during morning and afternoon hours. Total pan evaporation during the dekad was 25.0 mm.

Maize was past ninth leaf 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 recorded two days of moderate rainfall and six consecutive dry days during the dekad. It reported 29.2 mm of rainfall against its Long term dekadal mean of 13.9 mm of rainfall. Mean air temperature was 19.1 °C with scattered cloudy conditions during morning and afternoon hours.

Beans were at flowering stage but the crop state remains poor due to the dry conditions which have been prevailing. Maize was at past ninth leaf stage and the state not also good as the crop had started showing signs of stunted growth.

2.5.3 KATUMANI:

Received two days of moderate rainfall and a total amount of 23.5 mm against its Long term dekadal mean of 23.2 mm of rainfall. The amount received was more than what was received in the previous decade. Moderate cloud conditions were experienced during both mornings and afternoon hours with total pan evaporation of 49.5 mm during the dekad.

Maize was at tasseling stage and the crop state was poor due to insufficient rainfall. Beans had attained flowering stage and the crop state was poor. Lack of sufficient rainfall has adversely affected the beans and therefore below normal yield is expected.

Mangoes (variety apple) were at 100% fruit setting stage. The crop condition was fair which corresponds to normal growth. Weeds are seen very seldom within the farm and insufficient rains seems to be adversely affecting the mangoes, which are 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 seen very seldom within the farm

2.6 COASTAL REGION:

Remained generally dry except at Mombasa station where a single day with moderate rainfall was reported. Scattered cloud cover dominated the region during both morning and afternoon hours. Mean air temperatures ranged between 28.1 °C and 29.1 °C.

2.6.1 MTWAPA:

Had only 3.0 mm of rainfall against its Long term dekadal mean of 6.1 mm of rainfall. Mean air temperatures averaged around 28.1 °C and moderate cloud cover during the dekad.

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

Lack of a clear onset of the just ended (October – December 2022) short rain season led many farmers in the area to avoid planting maize and beans.

2.6.1 MSABAHA:

Received a total amount of 0.2 mm against its Long term dekadal mean of 9.0 mm of rainfall. The amount received was almost the same as the previous decade and therefore dry conditions have persisted for almost three dekads. Mean air temperature was 28.8 °C and scattered cloud cover dominated the coastal region during mornings and afternoon hours.

Lack of a clear onset of the just ended (October – December 2022) short rain season led many farmers in the area to avoid planting maize and beans.

2.7 NORTH EASTERN REGION:

Garissa region recorded two days of moderate rainfall and six consecutive dry days during the dekad. It reported 37.1 mm of rainfall against its Long term dekadal mean of 9.5 mm of rainfall. Dry conditions continued to prevail over the rest of the region.

Scattered to broken cloud cover was predominated the region during both morning and afternoon hours. Mean air temperature in the region ranged between 29.9 °C and 30.5 °C. Pasture and forage regeneration is expected to have slowed down and water loss from earth pans to

increase because of high temperature and windy conditions.

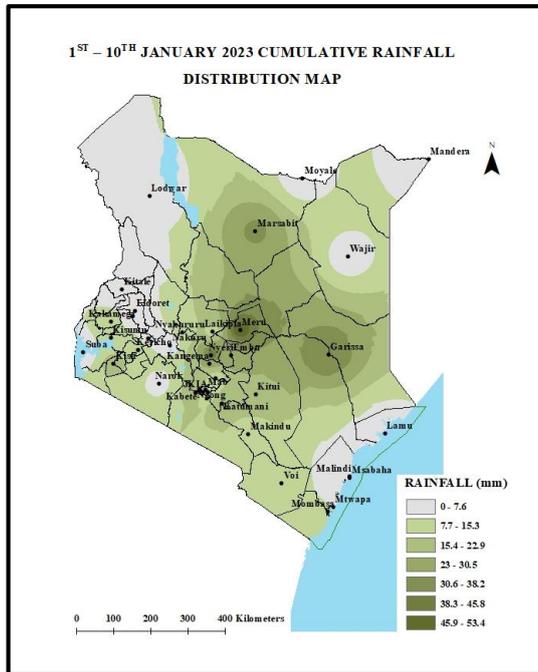


Figure 3.1: Actual rainfall totals for dekad 1, 2023

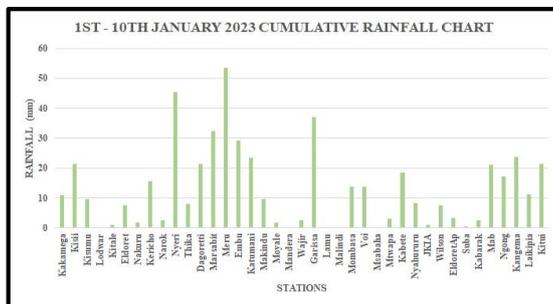


Figure 3.2: Dekadal rainfall totals in (mm)

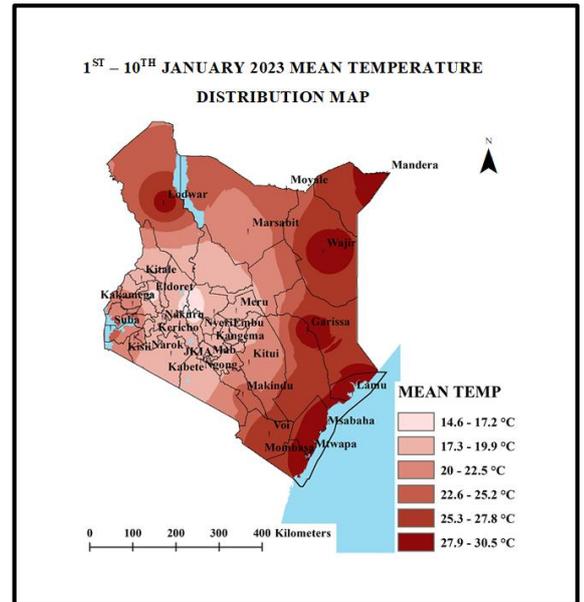


Figure 3.3: Mean temperature distribution for dekad 1, 2023

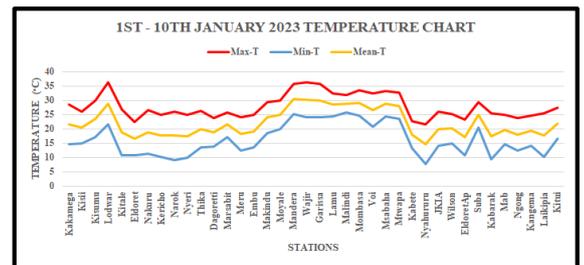


Figure 3.4 Dekadal mean temperatures in (°C).

4.0 EXPECTED WEATHER AND CROP CONDITIONS DURING THE NEXT 10 DAYS; 11TH – 20TH JANUARY 2023.

During the next 10 days, most parts of the country are likely to remain dry except over some parts of western, Nyanza and the Coast strip where moderate rainfall is expected mainly due to local meso scale effect.

The expected weather condition over these regions isn't likely to significantly affect maize which is already at full ripeness in Kisii, and Kakamega and at wax ripeness at Kericho.

Central Highlands, Nairobi area and the surrounding are likely to experience dry

conditions with occasional rains in the morning.

The forecasted weather 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 experience dry conditions during the next dekad. The expected weather conditions are likely to affect negatively pasture and forage regeneration in the region. The current status of water resources in the region is also expected to be affected negatively as most earth/water pans will be depleted further. 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 receive moderate rainfall (greater than 5.0 mm) during the next dekad. The expected rains will improve soil moisture levels within the region and therefore improve the condition of both maize and beans in the region which are at past ninth leaf stage for maize and flowering stage for beans.

**The Director,
Kenya Meteorological Department,**

**For clarification, feedback or
further guidance, please Contact:**