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AGROMETEOROLOGICAL BULLETIN

DEKAD 36
PERIOD: 21ST – 31ST DECEMBER 2022

1.0 HIGHLIGHTS

- During the current dekad, rains which were mainly confined to western, central rift valley and Nyanza regions decreased considerably and by the middle of the decade, most of the country was quite dry. Only seven stations all from the Highlands West of the Rift Valley and central Rift Valley reported 50 mm of rainfall during the entire decade. The other stations reported precipitation less than 40 mm with majority of them reporting less than their long term decadal mean.
- Counties in western, Nyanza and Central Rift Valley reported showery and thundery activities up to the middle of the decade thereafter cloudy conditions in the afternoon. Fog patches were observed mainly at Kitale and Eldoret in Tranzoia County during the dekad.
- The central districts continued reporting low amount of rainfall with precipitations confined to the highlands areas. Mean air temperatures remained below 21.0˚C with broken cloud cover in the morning and afternoon.
- Eastern and Northeastern region remained generally dry with drizzle and fog having been observed both in the early and later part of the decade over Marsabit and Meru stations. Scattered cloud cover predominated the entire region especially during the day.
- The coastal strip was more or less like the Eastern region and reported less amounts than in the previous dekad.
  Mombasa Airport reported 8.1 mm of rainfall and was the leading in the region. Mean air temperatures were above 26˚C

2.0 WEATHER AND CROP REVIEW FOR THE PERIOD: 21ST – 31ST DECEMBER 2022

2.1 HIGHLIGHTS

The beginning of the 36th decade saw the cessation of the short rains as after 21st December 2022, only few stations recorded significant amount of rainfall. Crops in several regions continued to be in good state having shown no signs of

water stress because of sufficient soil moisture from previous dekads.

2.2 WESTERN AND NYANZA REGION

Most stations from the region recorded more rainfall than their long term decadal means. The amount reported also surpassed what the region had received during the previous dekad. Mean air temperatures generally remained the same as in the previous dekad and cloud cover moderate during the morning and afternoon hours.

2.2.1 KAKAMEGA:

The station received four days of moderate rainfall and recorded 96.4 mm of rain against its Long term decadal mean of 35.6 mm. The reported amount also surpassed readings observed during the previous dekad. Mean air temperature was 21.7˚C and scattered cloud cover during the morning and increased to broken state in the afternoon.

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

2.2.2 KISII:

The station received four days of moderate rainfall and recorded 58.1 mm of rain against its Long term dekadal mean of 49.96 mm. The reported amount was less than readings observed during the previous dekad. Mean air temperature was 19.9˚C and cloudy conditions during morning and afternoon hours predominated the dekad. Total pan evaporation at Kisii was 27.9 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 county

2.3 RIFT VALLEY PROVINCE

Trans-Nzoia County led the region with the highest rainfall readings followed by Kericho and Narok counties. Mean air temperatures slightly increased compared to the previous dekad. Moderate cloud cover in the morning and afternoon generally prevailed throughout the region.

2.3.1 KITALE

The station received a single day with moderate rainfall and recorded 17.4 mm of rain against its Long term decadal mean of 21.2 mm. This amount surpasses rainfall readings reported during the previous decade. Mean air temperature was 19.3 ˚C and scattered cloud cover predominated the entire dekad.

2.3.2 KERICHO

The station received six days of moderate rainfall and recorded 72.4 mm of rain against its Long term decadal mean of 47.6 mm. The recorded amount surpassed readings observed during the previous dekad. Mean air temperature was 18.3 ˚C and cloud cover was mainly scattered during morning hours and increased to broken state in the afternoon.

Maize was at wax ripeness stage and in good state which corresponds to normal growth. Beans were at Maturity stage and in good state. Because no adverse effects had been reported, normal yield is expected.

2.4 CENTRAL AND NAIROBI PROVINCES.

Dry conditions prevailed in the region except over Nyandarua county which received two days with moderate rainfall. Mean air temperatures in the region generally ranged between 17.4 ˚c and 20.7 ˚c and moderate cloud cover were

observed in the morning and afternoon hours

2.4.1 NYERI:

Received two days of moderate rainfall and a total amount of 23.5 mm against its Long term dekadal mean of 28.48 mm of rainfall. The amount received was more than in the previous decade. Mean air temperature was 18.9˚C and scattered cloudy conditions persisted during both mornings and afternoon hours throughout the dekad.

Maize was at ninth leaf and beans at budding stage and both crops were in fair state which corresponds to normal state. There were no adverse effects reported.

2.4.2 THIKA:

Received a single day of moderate rainfall totaling 6.7 mm against its Long term dekadal mean of 27.5 mm of rainfall. The station received less than what had been reported during the previous dekad. Mean air temperature was 20.7˚C with moderate cloudy conditions during mornings and afternoon hours. Total pan evaporation was 41.7 mm.

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

2.4.3 KABETE:

Remained fairly dry as only 9.4 mm of rain was recorded against 17.0 mm of the previous dekad. The amount was far below its long term decadal mean of 36.4 mm of rainfall. Mean air temperature for the station was 19.0˚C with moderate cloudy conditions during both mornings and afternoon hours. Total pan evaporation during the dekad was 69.4 mm.

Maize was at ninth leaf 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:

Received two days of moderate rainfall and a total amount of 43.0 mm against its Long term dekadal mean of 21.6 mm of rainfall. The station reported more rainfall than in the previous decade. Mean air temperature was 17.4 ˚C and broken cloudy conditions persisted during both mornings and afternoon hours throughout the dekad.

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

2.5 EASTERN REGION

Varying rainfall amounts ranging from 0.0 mm to 16.2 mm were reported in the region. Mean air temperatures also varied from station to station with broken cloudy conditions being experienced throughout the dekad.

2.5.1 MERU:

The station received a single day of moderate rainfall and recorded 16.2 mm against its Long term dekadal mean of 37.6 mm of rainfall. The amount received was less than what the station had reported during the previous dekad. Mean air temperature was 18.4˚C with cloudy conditions during morning and afternoon hours. Total pan evaporation during the dekad was 17.7 mm.

Maize was at ninth leaf and beans at budding 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 reported dry conditions during the dekad against its Long term dekadal mean of 23.22 mm of rainfall. Soil moisture conditions at the station continued to deteriorate as very little rainfall was recorded for two consecutive decades (2.7 mm and 0.0 mm)

Mean air temperature was 19.8 ˚C with scattered cloudy conditions during morning and afternoon hours.

Beans were at flowering stage but in the crop state was poor due to the prevailing dry conditions. Maize was at past ninth leaf stage and the state not so good as the crop has started showing signs of student growth.

2.5.3 KATUMANI:

Received two days of moderate rainfall and a total amount of 0.7 mm against its Long term dekadal mean of 26.4 mm of rainfall. The amount received was less than in the previous decade. Moderate cloud conditions were experienced during both mornings and afternoon hours with total pan evaporation of 55.7 mm during the dekad.

Maize was at ninth leaf 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.

2.6.1 MTWAPA:

Had only 0.1 mm of rain during the period under review. Mean air temperatures averaged around 27.8 ˚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 yied 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 0.3 mm against its Long term dekadal mean of 7.4 mm of rainfall. The amount received was almost the same as the previous decade and therefore dry conditions have persisted for almost two dekads. Mean air temperature was 26.8 ˚C and cloudy conditions remained scattered during both mornings and afternoon hours throughout the dekad.

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

Dry conditions have continued to prevail in the region for two consecutive dekads now and Scattered to broken cloud cover was predominated the region during both

morning and afternoon hours. Mean air temperature in the region ranged between 29.6 ℃ and 30.7 ℃.

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.

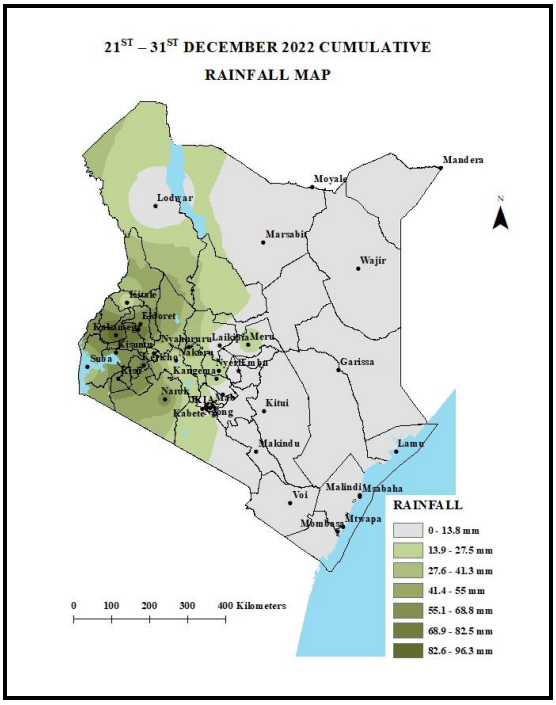

Figure 3.1: Actual rainfall totals for dekad 36, 2022

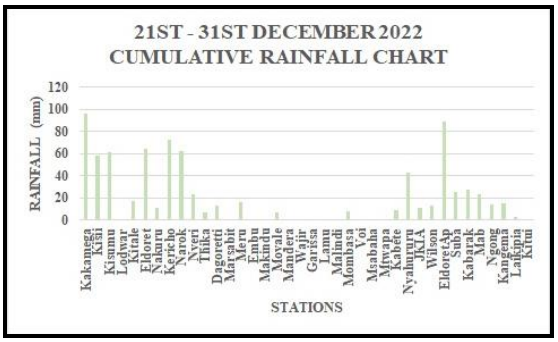

Figure 3.2: Dekadal rainfall totals in (mm)

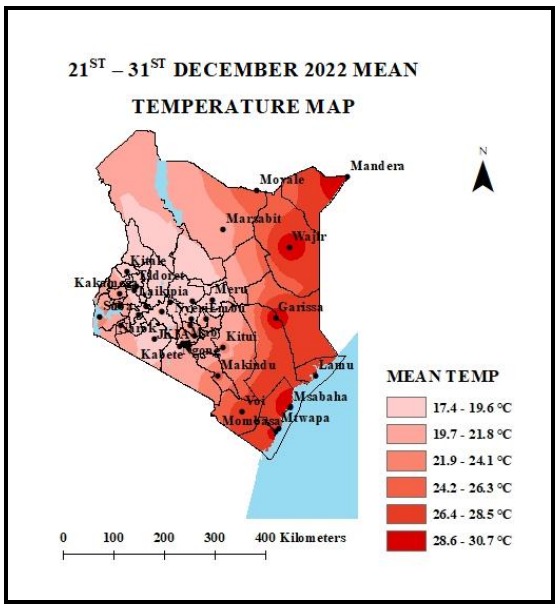

Figure 3.3: Mean temperature distribution for dekad 36, 2022

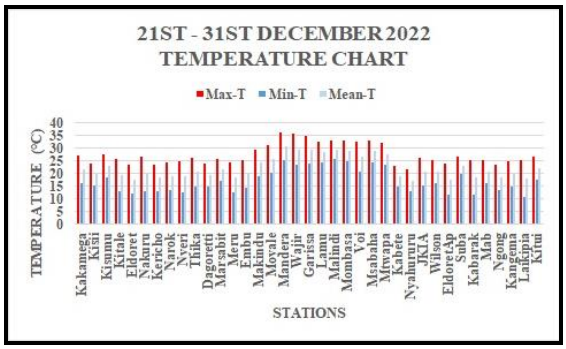

Figure 3.4 Dekadal mean temperatures in (°C).

4.0 EXPECTED WEATHER AND CROP CONDITIONS DURING THE NEXT 10 DAYS; 1ST – 10TH JANUARY 2023.

During the next 10 days, Counties in western Kenya, Nyanza and Central Rift Valley are expected to experience dry or light rainfall conditions during the coming dekad.

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

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

moderate rainfall during the the next dekad (1st – 10th Jan. 2023).

The forecasted weather conditions are expected to improve soil moisture levels within the region (Nyeri, Thika and Kabete) and this will improve the condition of both maize and beans in the region.

Northern part of Eastern and the North Eastern regions 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 start being depleted. 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 ninth leaf stage for maize and budding stage for beans.

The North western regions 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 status of water resources in the region is also expected to be affected negatively as most earth/water pans will be start being depleted. Communities in these areas are therefore advised to set up committees to manage prudently grazing and watering areas to avoid resource based conflicts.

For clarification, feedback or further guidance, please Contact:

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