



KENYA METEOROLOGICAL DEPARTMENT
DEKADAL AGROMETEOROLOGICAL BULLETIN
WEATHER AND CROP REVIEW FOR DEKAD 15, 2012
21– 31 MAY 2012

1. HIGHLIGHTS ON RAINFALL AND TEMPERATURE

During the current dekad, most stations countrywide reported a decrease in the amount of rainfall both in intensity and spatial distribution compared to the previous dekad. The highest rainfall received countrywide was 140.9 mm at Kericho station in Rift Valley region, compared to 257.7 mm reported at Malindi station in Coast region in the previous dekad. The second highest rainfall of 127.3 mm was received at Kakamega station in Western region. Mombasa station recorded the highest rainfall of 100.5 mm in the Coast region. Central region had Nyahururu station reporting the highest rainfall of 52.6 mm, while Kisii station in Nyanza region reported the highest rainfall of 39.8 mm. Embu station in Eastern region reported the highest rainfall of 39.2 mm. In Nairobi region the highest amount of rainfall of 22.8 mm was received at Moi Air Base station. The highest rainfall received in North Eastern region was 9.4 mm at Moyale station.

Generally, there was a decreasing trend in both maximum and minimum temperatures. However, most of coastal stations reported an increase in both maximum and minimum temperatures. The highest maximum temperature recorded countrywide was 35.2^oc at Lodwar station in Rift Valley region compared to 35.7^oC at Mandera station in North Eastern region in the previous dekad. Nyahururu station in Central Kenya reported the lowest maximum temperature of 21.4^oC which was a decrease from 21.0 ^oC recorded in the previous dekad at the same station.

For more comprehensive summary of rainfall and other meteorological parameters, see Figures 3.1 to 3.4 as shown below.

2.0 CROP AND WEATHER REVIEW FOR DEKAD 15; 21 – 31 MAY 2012

2.1 NYANZA AND WESTERN REGIONS

2.1.1 Kakamega

This station received 127.3 mm of rainfall which was an increase from 103.4 mm reported in the previous dekad. The mean air temperature and total pan evaporation recorded were 20.6^oc and 39.3 mm respectively. There was no report on sunshine hours.

Maize and beans were at emergence and flowering stages respectively. Beans have been adversely affected by excessive rainfall though normal yield is still expected.

2.1.2 Kisii

This station received 39.8 mm of rainfall compared to 91.9 mm in the previous dekad. The mean air temperature and total pan evaporation recorded were 20.4^oC and 37.8 mm respectively. The average sunshine hours for the period were 6.7 hours.

Maize and beans were at emergence and flowering stages. Both crops were in fair state though beans have been damaged by black aphids with normal yield still expected.

2.2 RIFT VALLEY REGION

2.2.1 Kitale

The station received rainfall of 52.9 mm compared to 24.9 mm reported in the previous dekad. The average air temperature and pan evaporation recorded were 19.3⁰C and 37.9mm respectively. There was 8.4 hours of sunshine recorded.

Maize and beans were at emergence and flowering stages respectively. The crops are in fair state and weeding is in progress.

2.2.2 Eldoret-Kapsoya

The station recorded rainfall of 19.1 mm compared to 59.3mm in the previous dekad. The average air temperature and total pan evaporation recorded were 17.3⁰c and 54.3 mm respectively. There was no sunshine report.

Maize and beans were at emergence stage and in fair state. Farmers have started weeding their crops.

2.3 CENTRAL KENYA HIGHLANDS AND NAIROBI AREA REGION

2.3.1 Nyeri

The station reported 27.6 mm of rainfall a drastic reduction compared to 83.6 mm in the previous dekad. The average air temperature and total pan evaporation recorded were 18.3⁰c and 32.6 mm respectively. There was no report on sunshine hours.

Maize and beans were at emergence and flowering stages respectively. Maize has been adversely affected by stalk borer though still in fair state, while beans were adversely affected by excessive rainfall and leaf hoppers and in poor state.

2.3.2 Kabete

The station recorded rainfall of 40.5 mm compared to 69.6 mm in the previous dekad. The average air temperature and pan evaporation recorded were 18.6⁰c and 31.5 mm respectively. There was 6.4 hours of sunshine.

Maize and Beans were at emergence stage in fair and poor states respectively. Beans have been adversely affected by excessive rainfall.

Coffee was at 100% pinhead stage and in moderate state but damaged by leaf rust and leaf minor at less than 10% each. Bananas were at 100% appearance of suckers stage and in moderate state though damaged by thrips and cigar end rot at less than 10% each.

2.3.3 Thika

The station recorded 6.1 mm of rainfall compared to 12.4 mm in the previous dekad. The total mean air temperature and pan evaporation recorded at the station were 20.0⁰c and 24.4 mm respectively. There was no report on sunshine hours.

Maize, beans and potatoes were all at emergence stage and in fair state except beans which were in poor state due to excessive rainfall.

2.3.4. Nyahururu

The station received rainfall of 56.6 mm compared to 45.2mm reported in the previous dekad. The mean air temperature and pan evaporation recorded were 14.2⁰c and 41.1mm respectively. There was 7.7 hours of sunshine recorded.

Maize, beans and potatoes were at emergence stage and in fair state.

2.3.5. Dagoretti

The station recorded 16.1 mm of rainfall compared to 86.0 mm recorded in the previous dekad. The average air temperature and pan evaporation recorded were 8.3⁰c and 32.1 mm respectively. Sunshine hours reported were 6.7 hrs per day.

2.4 EASTERN KENYA REGION

2.4.1 Meru

The station received 18.6 mm of rainfall compared to 7.32 mm in the previous dekad. The average air temperature and pan evaporation recorded were 18.5⁰c and 45.1 mm respectively. There was 8.8 hours per day of sunshine.

Maize and beans were at emergence and flowering stages respectively. Both crops are in fair state.

2.4.2 Embu

The station reported rainfall of 39.2 mm compared to 108.9 mm in the previous dekad. The average air temperature and pan evaporation were 19.5⁰c and 30.4 mm respectively. Sunshine hours reported were 6.6 hrs per day.

Maize and beans were at emergence and flowering stages respectively. Both crops are in fair state and normal yield is expected.

2.4.3 Katumani (Machakos)

The station recorded 6.2 mm of rainfall compared to 2.81 mm in the previous dekad. The average air temperature recorded was 18.9⁰c. There was no report on pan evaporation and sunshine parameters.

Maize and beans were at emergence and flowering stages respectively. Both crops are in good state though the two crops have been adversely affected by insufficient rain. Therefore below normal yields is expected.

2.5.0 COASTAL REGION

2.5.1. Msabaha

The station received an increase of rainfall of 66.5 mm compared to 183.4 mm in the previous dekad. The average air temperature and pan evaporation recorded were 26.8⁰c and 38.5 mm respectively. There was no sunshine report

Maize was at flowering stage and in fair state. Mangoes were at 80% fruit setting and both ripeness and flowering stages at 10% each and in good state.

2.5.2 Mtwapa

This station recorded decreased rainfall of 39.9 mm compared to 123.5 mm in the previous dekad. The average air temperature and pan evaporation recorded were 26.8⁰c and 54.4 mm respectively. There was no report sunshine.

Maize was at flowering stage and in good state though adversely affected by stalk borers. Farmers are still weeding in most farms. Water melon was at 100% flowering stage and in unsatisfactory state due to damage by aphids, leaf miners and leaf rust. Mangoes were at 100% fruit setting stage and in moderate state.

3.0 ANALYSIS OF RAINFALL, TEMPERATURE AND VEGETATION CONDITIONS

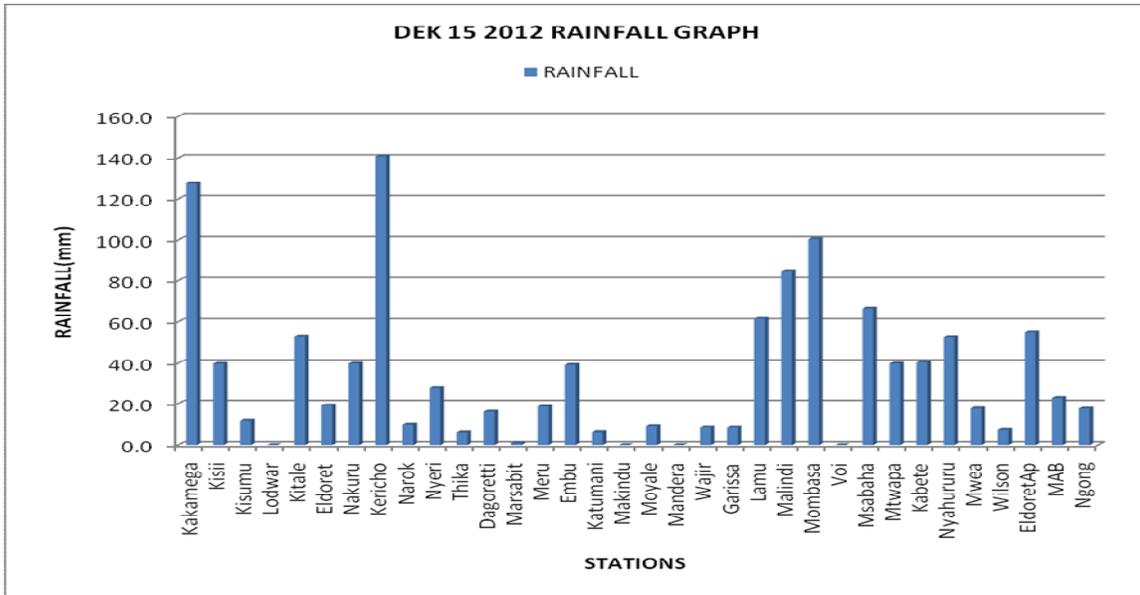


Figure 3.1: Dekadal rainfall totals for 21-31 May 2012

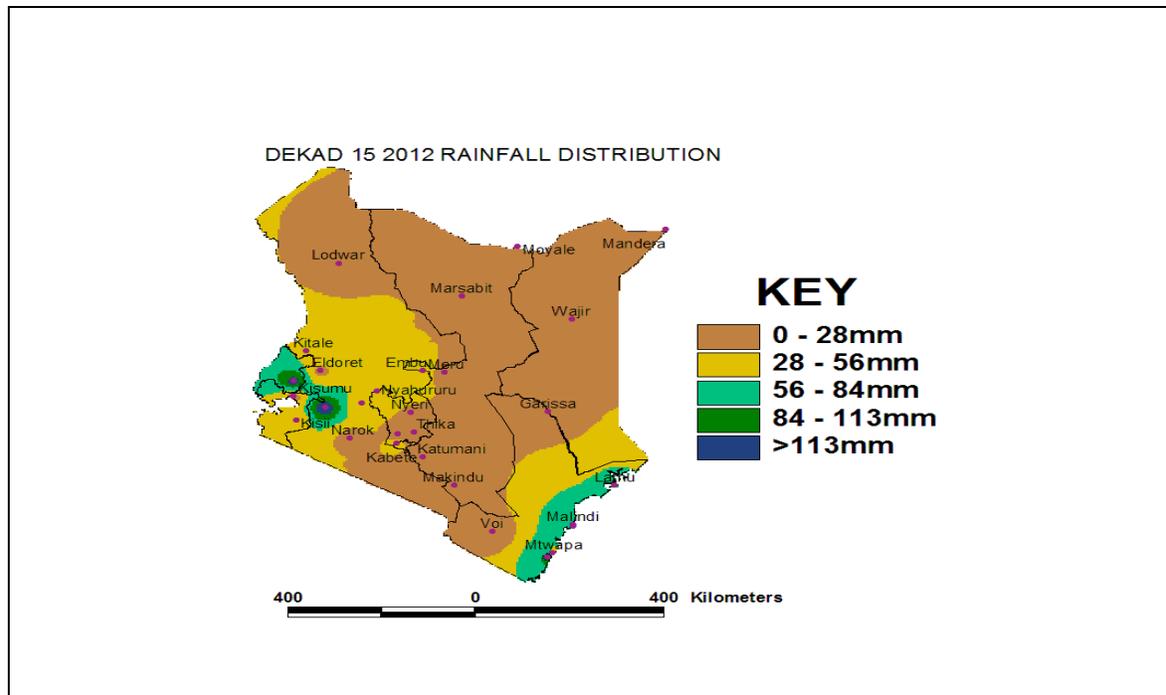


Figure 3.2: Dekadal rainfall distribution

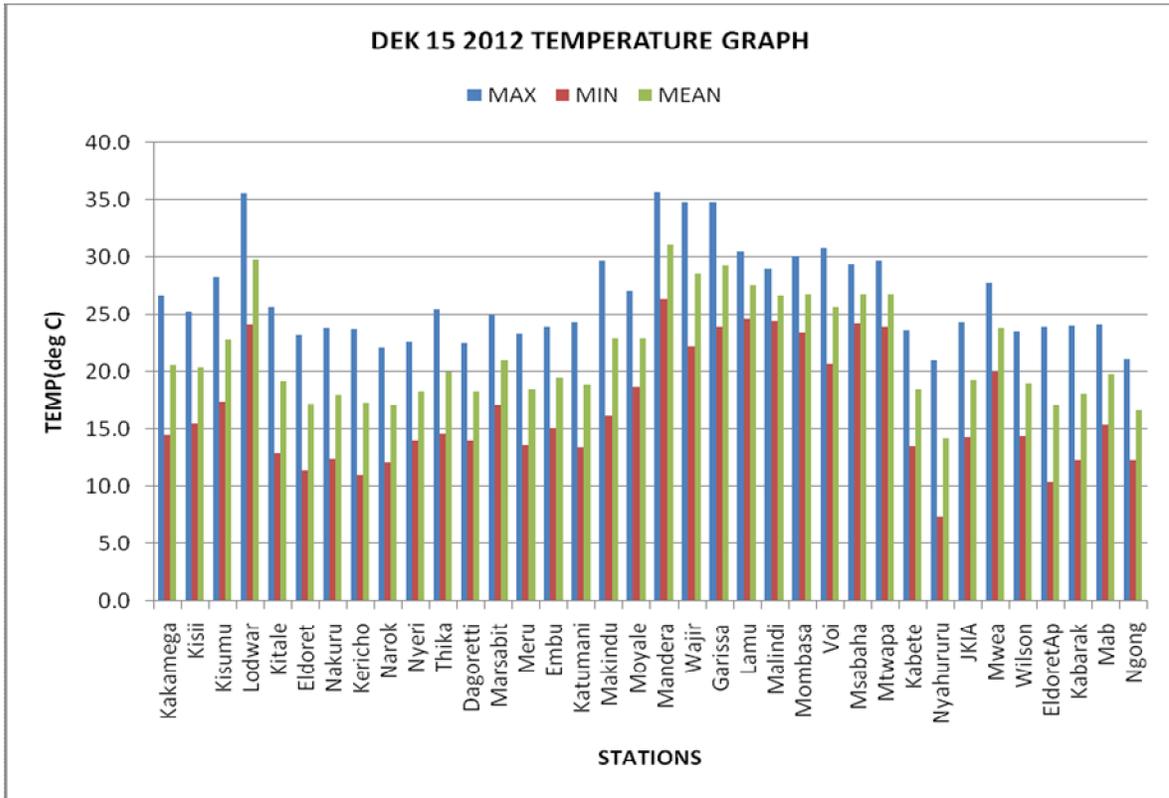


Figure 3.3: Maximum, Minimum and Average temperature in °C

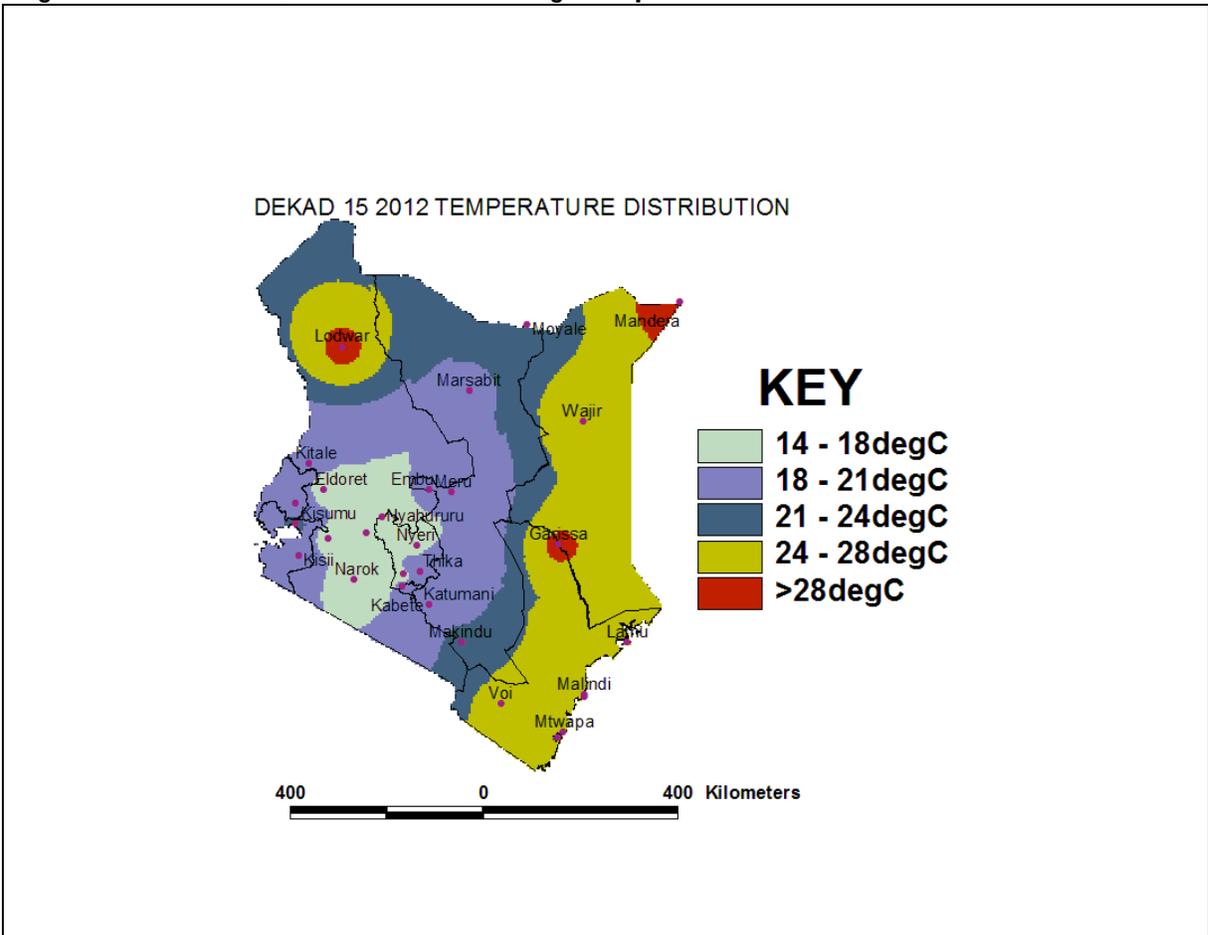


Figure 3.4: Mean temperature distribution



Figure 3.5: Normalized Difference Vegetation Index (NDVI)

4. EXPECTED WEATHER AND CROP CONDITIONS DURING THE NEXT 10 DAYS; 01-10 JUNE 2012

- + **Counties within the Lake Victoria Basin, Highlands west of the Rift Valley, Central and south Rift Valley (Kitale, Kakamega, Kisumu, Kisii, Migori, Nyamira, Kericho, Bomet, Uasin-Gishu, Nakuru, Narok, Nyandarua, etc)** Will experience occasional morning showers over few places breaking to sunny intervals then afternoon/night showers accompanied by thunderstorms over several places throughout much of the forecast period. The rainfall is expected to be of moderate intensity over most places but may exceed 20 mm over some localized areas especially over Trans-Nzoia and Bungoma counties on the third and fourth day of the forecast period.

The morning showers will sustain the crops on transition from vegetative growth to flowering stage. Beans in localized areas with rainfall exceeding 20 mm will still be affected.

- + **Over the Northwestern counties (Turkana, West Pokot etc),** Sunny intervals will be experienced in the morning, showers accompanied by thunderstorm are expected over several places during the first three days of the forecast period then reducing to few places on the fourth day followed by sunny intervals for the rest of the forecast period.

The expected showers will continue to replenish the pasture and general vegetation of the region.

- + **The Central highlands including Nairobi area (counties of Meru, Murang'a, Kiambu, Nyeri, Nairobi, Embu, etc) will** experience cool cloudy morning with sunny intervals followed by afternoon/night showers over several places during the first half of the forecast period. The second half of the period is expected to be cool and cloudy with light drizzle over few places in the mornings and mainly sunny intervals in the afternoon. However, the intensity of rainfall during the first half is likely to be high (>20 mm) in the localized locations on the second and third days of the forecast period.

These rainy and sunny conditions will be of much benefit to growing plants in the region. However, some of the plants sensitive to temperature variation such as potatoes and tomatoes are likely to be affected by the cool cloudy conditions.

- ✚ **Northeastern counties (counties of Marsabit, Mandera, Wajir, Garissa, Moyale etc),** Sunny intervals are expected throughout the forecast period.

The sunny conditions without rainfall will lead to reduction in pasture and withering of vulnerable crops grown in this region.

- ✚ **Southeastern lowlands (counties of Taita Taveta, Makueni, Machakos, Kitui, Mwingi, etc)** will experience sunny intervals over most places for much of the forecast period but afternoon/night showers are expected over Machakos county and parts of Makueni during the first half of the forecast period

The expected showers in Machakos and Makueni will continue replenishing the pasture for livestock and wildlife whereas the rest of the region will experience regression of pasture due to dry conditions.

- ✚ **In the Coastal strip (counties of Mombasa, Malindi, Kilifi, Lamu, Kwale, etc)** sunny intervals are expected during the first half of the forecast period while morning showers of light to moderate intensity are expected over several places during the second half of the forecast period.

The expected moderate showers will sustain mangoes and watermelons in their fruit setting stage.

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