



KENYA METEOROLOGICAL DEPARTMENT

DEKADAL AGROMETEOROLOGICAL BULLETIN WEATHER AND CROP REVIEW FOR DEKAD 05, 2011 11TH - 20TH FEBRUARY, 2011

1. WEATHER HIGHLIGHTS

Except some parts of North Eastern and North Western regions, most of the country reported wet conditions unlike in the previous dekad where dry conditions were reported in most stations. The highest rainfall activities were experienced in Nairobi area with Dagoretti receiving the highest amount of rainfall of 122.5mm, Jomo Kenyatta and Wilson airports receiving 78.4mm each followed by Kabete with 65mm. Nyeri and Thika stations in Central province reported 50mm and 28mm respectively. The Eastern and Coastal provinces also reported a lot of weather activities with Katumani reporting 72mm, Makindu 48mm, Mombasa 68mm and Voi 39mm.

In Nyanza province, Kisii station reported rainfall amount of 40mm, followed by Kisumu and Suba stations reporting 17mm and 16mm respectively. Marsabit and Moyale stations in North Eastern province reported 34mm and 22mm respectively while Eldoret and Narok stations in Rift Valley each reported amounts of 27mm. This was a big relief from the prolonged dry spell. For more comprehensive summary of rainfall and other meteorological parameters, see Figures 3.1 to 3.4 as shown below.

2. CROP AND WEATHER REVIEW FOR DEKAD 05; 11- 20 FEBRUARY 2011

2.1 NYANZA AND WESTERN PROVINCES

2.1.1 Kakamega

The station received 10.1 mm of rainfall as compared to 8.9 mm in the last dekad. Generally, western province received minimal amount of rainfall as compared to other provinces. The average air temperature recorded at the station was 22.0⁰c while the total pan evaporation and sunshine hours were 50.1 mm and 8.6 hours respectively.

Cassava was at 95% maturity stage and in moderate state. Farmers are still preparing their land.

2.1.2 Kisii

This station received the highest amount of rainfall 39.4 mm in Nyanza province. This was significant amount of rainfall as compared to 3.9 mm received in the last dekad. The average air temperature recorded was 22.0⁰c. Total pan evaporation and sunshine hours recorded were 39.4 mm down from 50.4mm 8.0 hours down from 9.69 hours in the previous dekad respectively.

Harvesting of maize is still on while land preparation continues.

2.2 RIFT VALLEY PROVINCE

2.2.1 Kitale

The station reported 12.2mm of rainfall compared to 5.7mm received in the previous dekad. This was not much rainfall compared to other stations in other provinces. The average air temperature and total pan evaporation recorded were 20.7⁰c and 44.7mm respectively. There was no report on sunshine hours and phenological observations.

2.2.2 Eldoret-Kapsoya

The average air temperature, total pan evaporation and rainfall recorded at the station were 18.5⁰c, 64.6mm, 26.1mm and 9.1hours respectively. Noteworthy is that the station had received the highest rainfall amount of 16.5mm in the country during the previous dekad.

No phenological observations were made.

2.3 CENTRAL AND NAIROBI PROVINCES

2.3.1 Nyeri

The average air temperature and rainfall recorded in Nyeri were 19.4⁰c and 51.2mm respectively. No reports were received on total pan evaporation and sunshine hours.

Maize which was at 53% flowering stage continued to be in poor state due to inadequate rainfall. It was also affected by 20% stalk borer, 1% head smart and suffered 80% moisture stress. Below normal yield is expected.

2.3.2 Kabete

The total rainfall, average air temperature, total pan evaporation and sunshine hours recorded at Kabete were 65.2mm, 20.1⁰c, 52.2mm and 8.2 hours per day respectively. The station was among the stations that received high rainfall during the dekad.

Maize which was at flowering stage was affected by stalk borer, head smart disease and moisture stress. Below normal yield is thus expected.

2.3.3 Thika

The station recorded 25.8mm of rainfall compared to 2.1mm the previous dekad and an average air temperature of 21.2⁰c. There was no report on pan evaporation, sunshine hours and phenological observations.

2.3.4. Nyahururu

The average air temperature, total pan evaporation, rainfall and sunshine hours recorded at the station were 16.0⁰c, 65.3mm, 2.3mm and 8.8hours per day respectively. Land preparation for the next season is still going on.

2.3.5. Dagoretti

This station received 122.5mm of rainfall which was the highest amount of rainfall reported in the country. The average air temperature, total pan evaporation and sunshine hours recorded were 20.3⁰c, 54.0mm and 8.3 hours per day respectively.

Maize crop which has stagnated at 90% flowering stage was in poor state.

2.4 EASTERN PROVINCE

2.4.1 Meru

The station reported 16.7mm of rainfall compared to dry conditions previously. The average air temperature and total pan evaporation recorded were 19.2⁰c and 46.7mm respectively.

There was no report on sunshine and phenological observations.

2.4.2 Embu

The station received 17.8mm of rainfall which was a slight increase from 12.4mm observed in the previous dekad. The average air temperature reported was 21.2⁰c which was the same as in the previous dekad. No reports were received on pan evaporation and sunshine.

Maize crop was at full ripeness stage but failed due to insufficient rain. Below normal yield is thus expected.

2.4.3 Katumani (Machakos)

This station received the highest rainfall amount of 71.8mm in Eastern province. This was a significant increase from the previous dekad where nil rainfall was reported. The average air temperature recorded was 21.3⁰c.

There was no report on evaporation, sunshine and phenological observations.

2.5 COAST PROVINCE

2.5.1. Msabaha

7.5mm of rainfall was recorded at the station, total pan evaporation of 52.6mm and an average air temperature of 28.0⁰c. No report was received on sunshine.

Mangoes (Ngowe type) were at 30% flowering stage and in good state.

2.5.2 Mtwapa

This station received 12.3mm of rainfall. This was a great improvement from the two previous dekads where weather activities remained quiet. Total pan evaporation reported was 51.3 mm and average sunshine hours per day reported were 7.4 hours down from 9.59 hours reported in the previous dekad.

Mango (Apple type) were at 80% flowering stage and in moderate state though the flowers were dropping due drought.

3.0 ANALYSIS OF RAINFALL, TEMPERATURE AND VEGETATION CONDITIONS

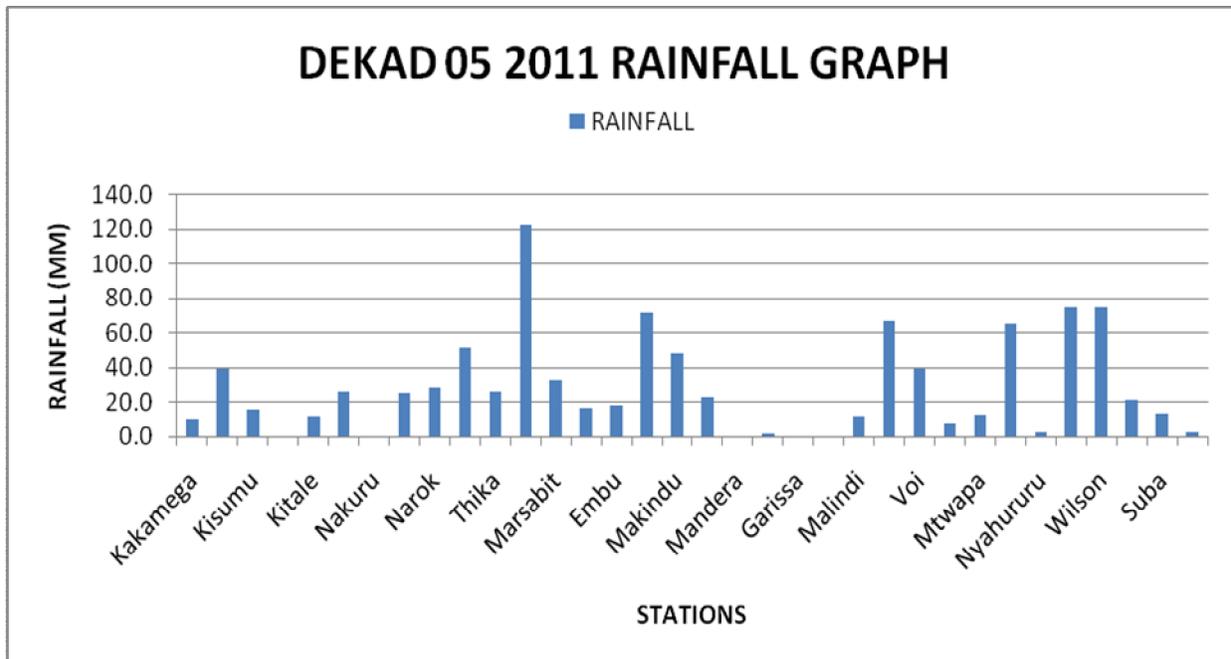


Figure 3.1: Actual Rainfall

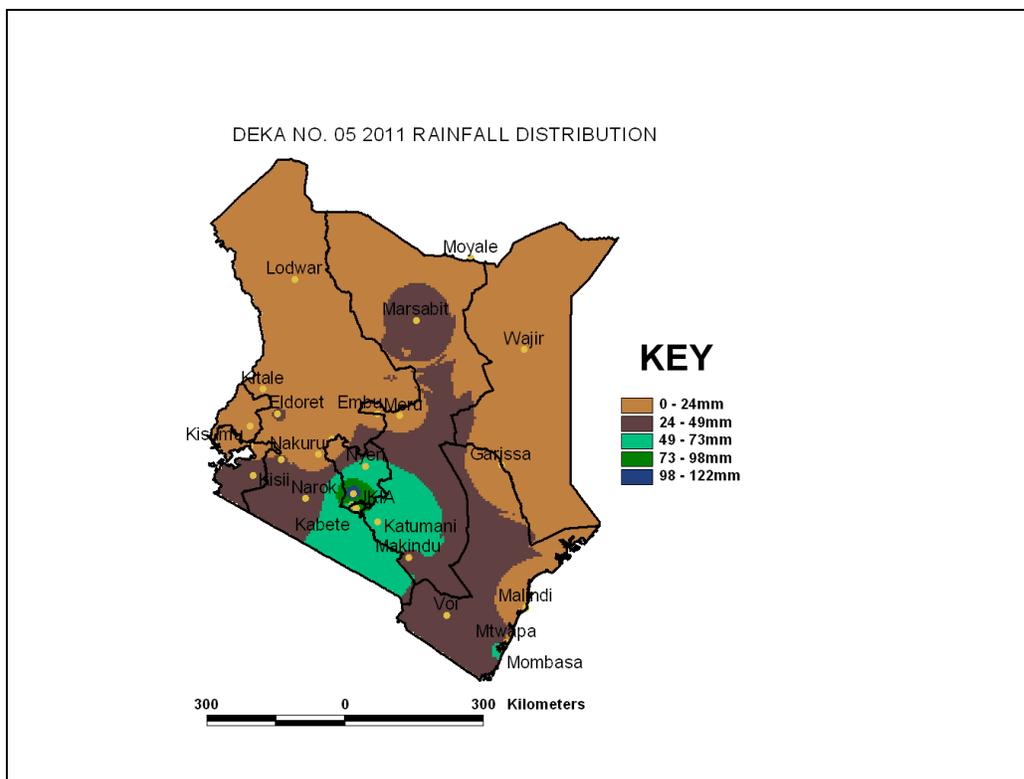


Figure 3.2: Rainfall distribution

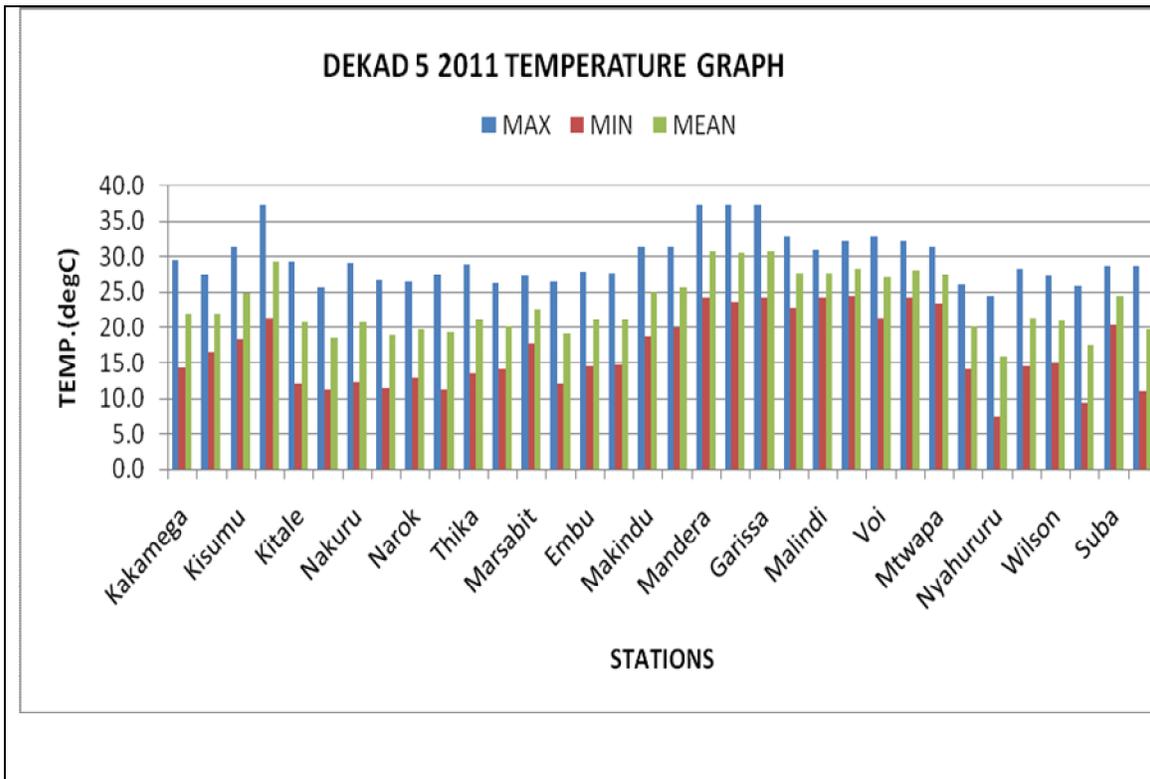


Figure 3.3: Mean Temperature

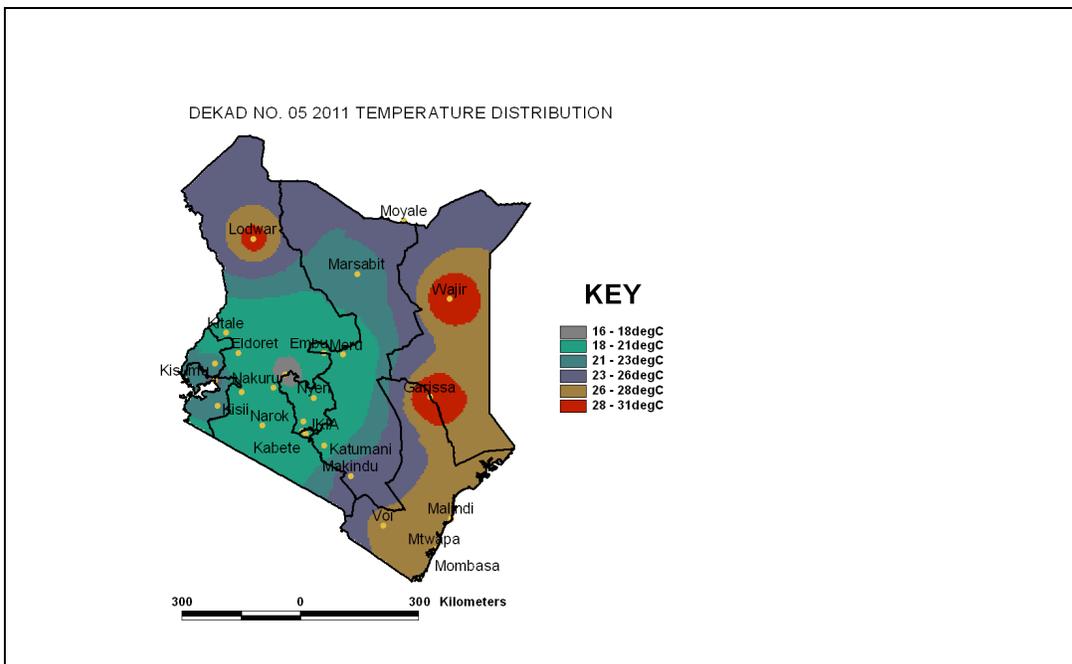


Figure 3.4: Mean Temperature Distribution

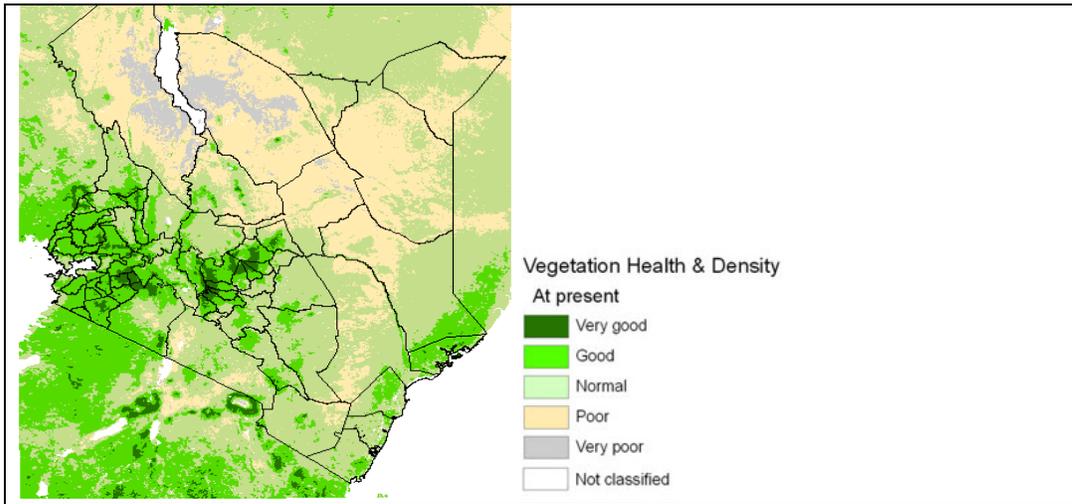


Figure 3.5: Normalised Difference Vegetation Index (NDVI)

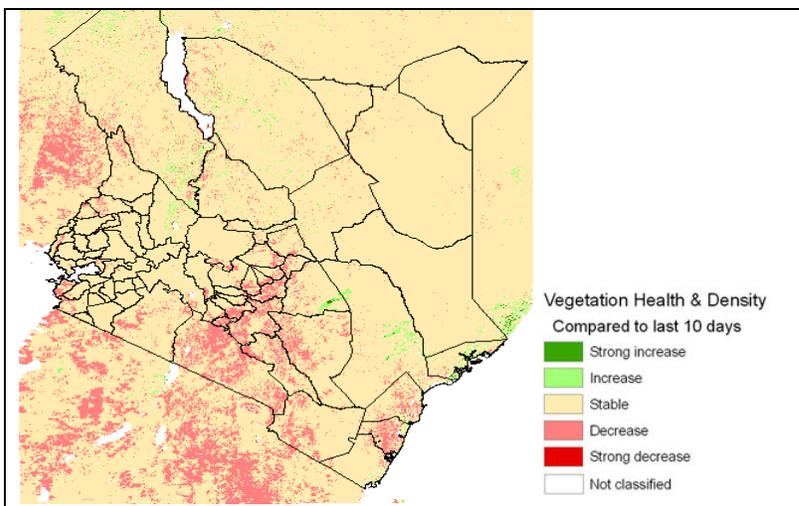


Figure 3.6: Vegetation Health and Density Comparison to the last 10 days

4. EXPECTED WEATHER AND CROP CONDITIONS DURING THE NEXT TEN DAYS (21ST TO 28TH FEBRUARY 2011)

✚ Western and North Rift Valley regions are expected to experience light rains in few places throughout the forecast period. The light rains are expected to benefit the Cassava crop in places like Kakamega while the sunny intervals will favour the harvesting and land preparation activities going on for the coming long rain season.

✚ Nyanza, Central Rift and South Rift areas are expected to experience light rains and sunny interval accompanied with light showers during the period under review.

The light rains will improve the pasture and general vegetation in these areas while the sunny intervals are suitable for the ongoing harvesting and land preparation.

✚ Nairobi area, Central Highlands and the environs are expected to experience sunny intervals throughout the forecast period. However, light to moderate rains may be observed in some

days. No significant impacts on agriculture are expected from the light rains since the region has been under a prolonged dry spell.

- ✚ In Eastern province, dry conditions are expected with light rains occurring in the middle of the period. The prolonged drought is expected to exacerbate the already stressed soil moisture conditions.
- ✚ Coastal region is expected to experience sunny intervals throughout the forested period. This will not go well with cashew nut trees in Lamu district.
- ✚ Areas in North Western districts of Lodwar, Lokitaung and Lokichoggio will experience sunny conditions throughout the dekad. As a result, pasture and the general vegetation in the region will remain stressed posing severe food insecurity for both human and animals.

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