



**KENYA METEOROLOGICAL DEPARTMENT
DECADAL AGROMETEOROLOGICAL BULLETIN**

**WEATHER AND CROP REVIEW FOR DEKAD 17, 2011
11TH -20TH JUNE, 2011**

1. WEATHER HIGHLIGHTS

There was slight pickup in weather activities observed during the dekad compared to the previous dekad. Nyahururu in Central Province recorded the highest amount of rainfall of 73.6mm. Rift Valley Province had *Eldoret airport*, *Kitale*, *Kericho*, *Nakuru* and *Narok* stations reporting 67.9mm, 51.6mm, 51.0mm, 34.1mm, and 18.2mm of rainfall respectively. *Dagoretti*, *Kabete* and *JKIA* stations in Nairobi Province received 31.7mm, 31.4mm and 10.9mm of rainfall respectively. Central Province had *Nyahururu*, *Nyeri* and *Thika*, stations reporting 73.6mm, 25.9mm and 20.5mm of rainfall. Eastern Province had *Meru*, *Embu* and *Moyale* stations reporting 30.5mm, 2.8mm and 1.8mm of rainfall respectively.

Both day time (maximum) and night time (minimum) temperatures decreased over much of the country. 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 DEKAD17; 11TH TO 20TH JUNE 2011

2.1 NYANZA AND WESTERN PROVINCES

2.1.1 Kakamega

This station recorded rainfall amount, average air temperature and total pan evaporation of 38.1mm, 20.8^oc and 39.1mm respectively. Sunshine hours recorded were 7.6 hours per day.

Maize (HBKSK 94) was at flowering stage and in good state. Beans were at harvest stage and in fair state with normal yield being expected.

2.1.2 Kisii

The station recorded rainfall amount, mean average air temperature and total pan evaporation of 9.3mm, 20.3^oC and 24.8mm respectively.

Maize was at flowering stage and in poor state while beans are at harvesting stage. Both crops were damaged by excessive rainfall and therefore below normal yield is being expected.

2.2 RIFT VALLEY PROVINCE

2.2.1 Kitale

The station recorded rainfall, average air temperature and total pan evaporation of 51.6mm, 19.1^oC and 28.1mm respectively. Sunshine hours recorded were 5.8 hours per day.

Maize (HB628) was after ninth leaf stage and in good state. Beans were at maturity stage and in good state and normal yield are expected for both crops.

2.2.2 Eldoret-Kapsoya

The station recorded rainfall, average air temperature and total pan evaporation of 40.5 mm, 17.3⁰c and 40.0mm respectively. Sunshine hours were not reported.

Maize (HB628) was at 100% ninth leaf and in moderate state while Beans were at emergence stage and in fair state. Weeding is almost over.

2.3 CENTRAL AND NAIROBI PROVINCES

2.3.1 Nyeri

The station recorded rainfall, average air temperature and total pan evaporation of 25.9 mm, 17.8⁰c and 21.8 mm respectively. No sunshine hours were recorded.

Maize (H513) was at 100% above ninth leaf stage and in unsatisfactory state due to damage by stalkborers while Beans (GRB/92) were at 100% flowering stage and in unsatisfactory state due to damage by aphids and therefore below normal yield is being expected.

2.3.2 Kabete

The rainfall, average air temperature and total pan evaporation recorded were 31.4mm 18.1⁰c, and 23.5mm respectively while no sunshine observation was made.

Maize was at after flowering stage and in fair state. Beans were at maturity stage and in fair state, however normal yield is expected. Coffees (SL34) was at 100% berry soft stage and in moderate state but was damaged by leaf rust and die bark less than 10% each. Bananas (Dwarf Caven Dish) were at 100% appearance of suckers' stage and in moderate state, however they were damaged by thrips and cigar end rot at less than 10% each.

2.3.3 Thika

The dekadal rainfall and mean air temperature at the station was 20.5mm and 19.7⁰c while total pan evaporation was 33.5mm. However no reports of sunshine were recorded.

Maize was at flowering stage and in fair state though affected by insufficient rain. Beans were at maturity stage and in fair state. Normal yield is expected for both crops as harvesting of beans in some areas are underway.

2.3.4. Nyahururu

The decadal rainfall of 73.6mm, average air temperature of 15.1⁰c, total pan evaporation of 42.6mm, and 5.2 hours of sunshine hours per day were recorded.

Maize was after emergence stage. Beans and Potatoes were at after flowering stage and in fair state however below normal yield is expected for Maize and Beans while potatoes normal yield is expected.

2.3.5. Dagoretti

This station reported rainfall, average air temperature and pan evaporation of 31.7mm, 18.7⁰c and 32.2 mm respectively. Sunshine hours recorded were 5.3hours per day.

Maize (DH04) was at 65% tasselling and 65% flowering stage and 10% being damaged by stalkborer though in good state, while Beans were at 75% ripeness stage and in moderate state with normal yield expected for both crops.

2.4 EASTERN PROVINCE

2.4.1 Meru

The station reported rainfall, average air temperature and total pan evaporation of 30.5mm, 18.5⁰c and 37.0 mm respectively. Sunshine hours recorded were 6.4 hours per day. *No phonological report received.*

2.4.2 Embu

The rainfall recorded was 2.8 mm; average air temperature and total pan evaporation reported at the station were 19.4⁰c and 29.8mm respectively.

Maize was at flowering stage while beans were at maturity stage and in fair state with normal yield being expected.

2.4.3 Katumani (Machakos)

The station reported an average air temperature of 19.6⁰c and nil rainfall. There was no report on evaporation and sunshine parameters.

Maize was at flowering stage and in poor state. Beans were at harvest stage and in poor state. Both crops were affected by insufficient rain and below normal yield is therefore expected.

2.5.0 COAST PROVINCE

2.5.1. Msabaha

This station reported no rainfall with average air temperature and pan evaporation of 26.9⁰c and 48.5mm respectively.

Mangoes (Ngowe type) were at 80% fruit ripeness stage and in good state while Maize was at flowering stage and in fair state though affected by insufficient rain.

2.5.2 Mtwapa

The station recorded rainfall, average air temperature and pan evaporation of 22.8 mm, 26.3⁰c and 46.8mm respectively. There was no report on sunshine hours.

Maize (DH4) was at 80% tasseling stage and in moderate state though was damaged by stalk borer. Mangoes (Apple) were at 100% ripeness stage and in moderate state however damage by insects was reported. Watermelon (sugar baby) was 60% flowering and in moderate state though damaged by leaf rust, aphids, moths and drought.

3.0 ANALYSIS OF RAINFALL, TEMPERATURE AND VEGETATION CONDITIONS

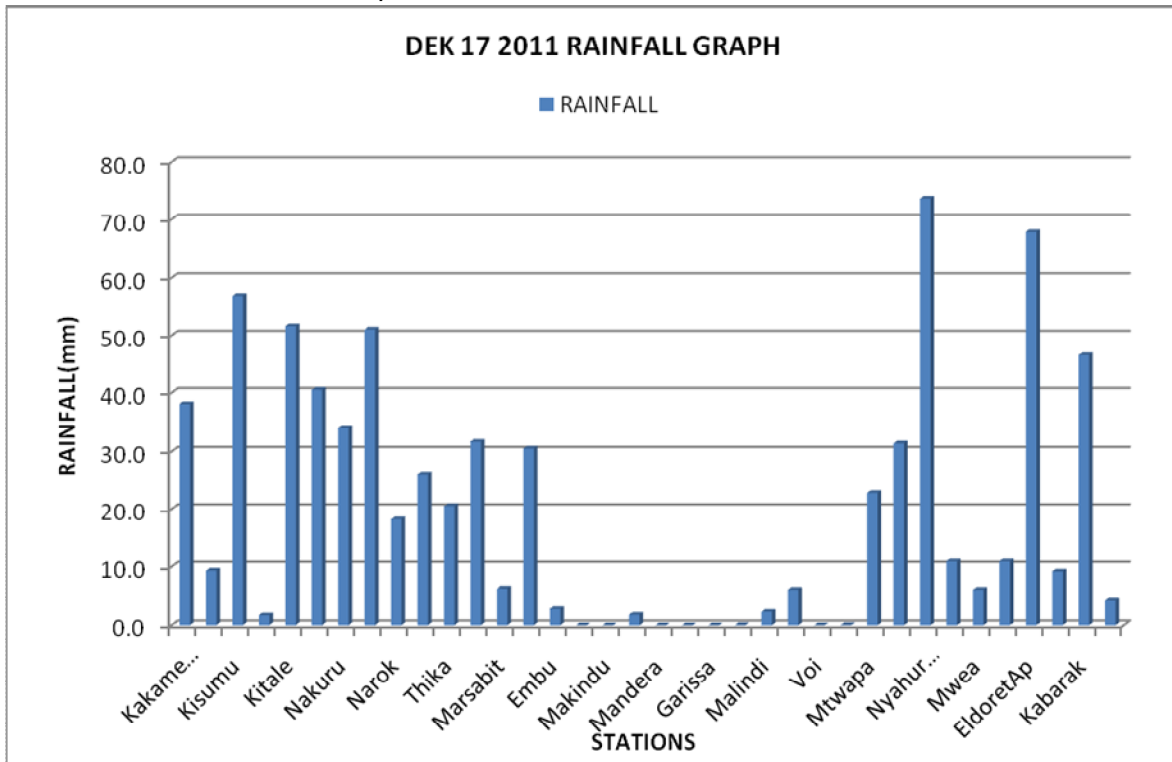


Figure 3.1: Actual Rainfall

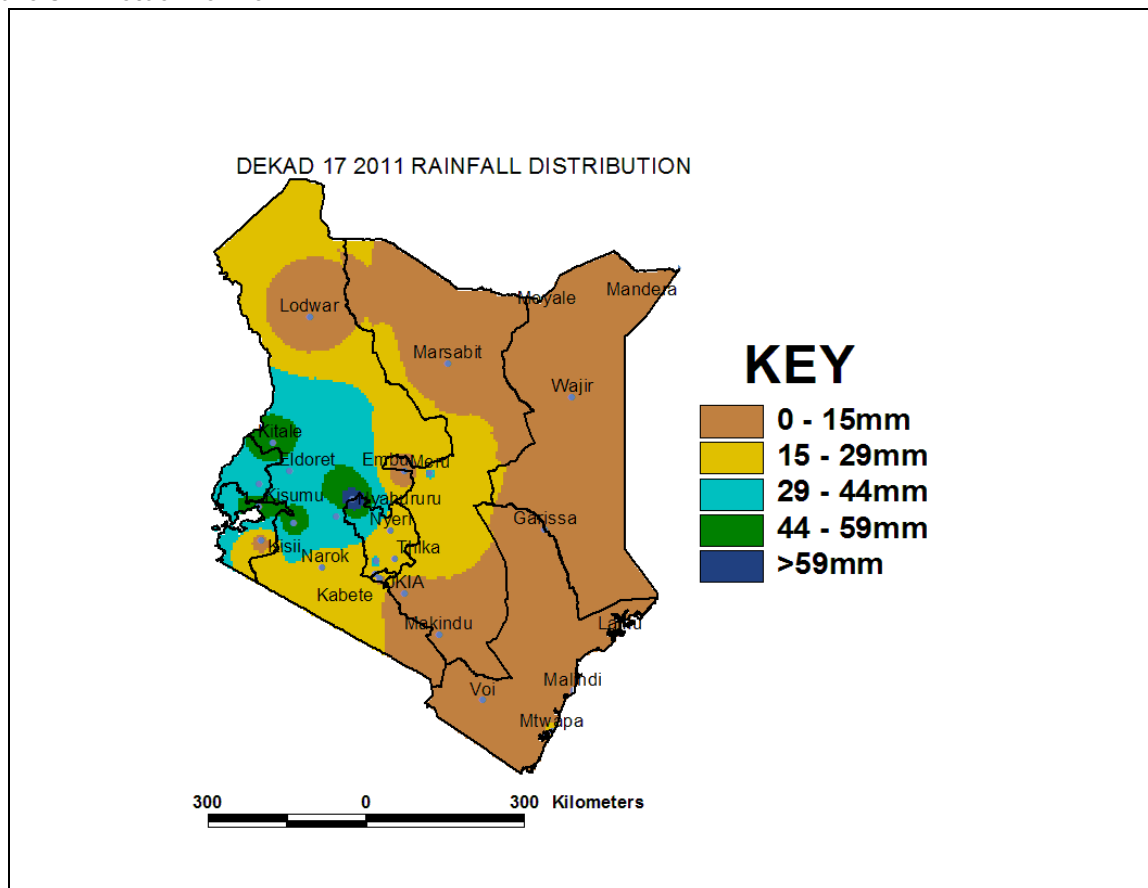


Figure 3.2: Rainfall distribution

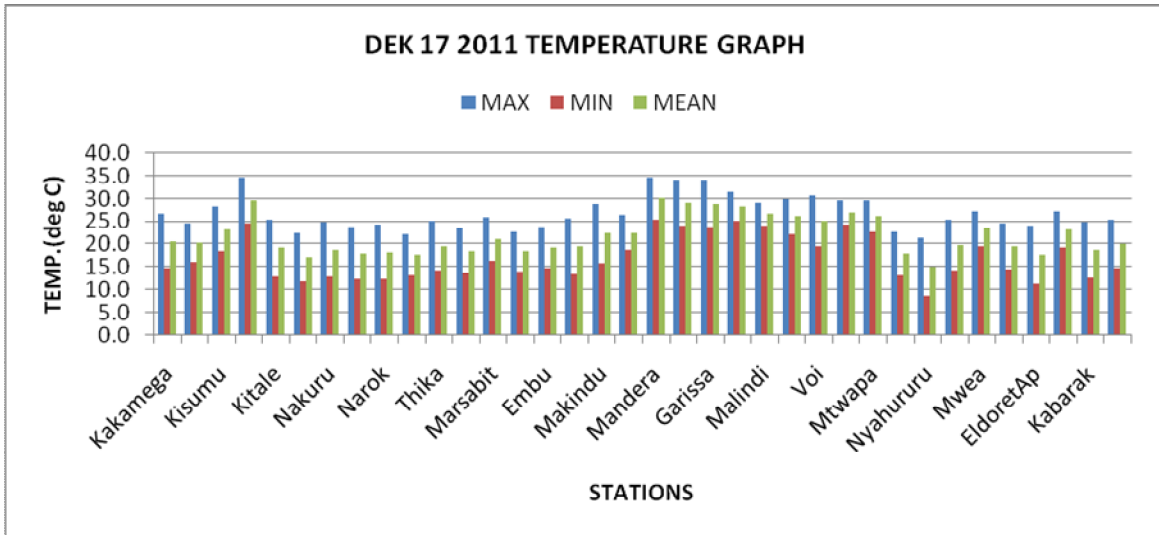


Figure 3.3: Mean Temperature

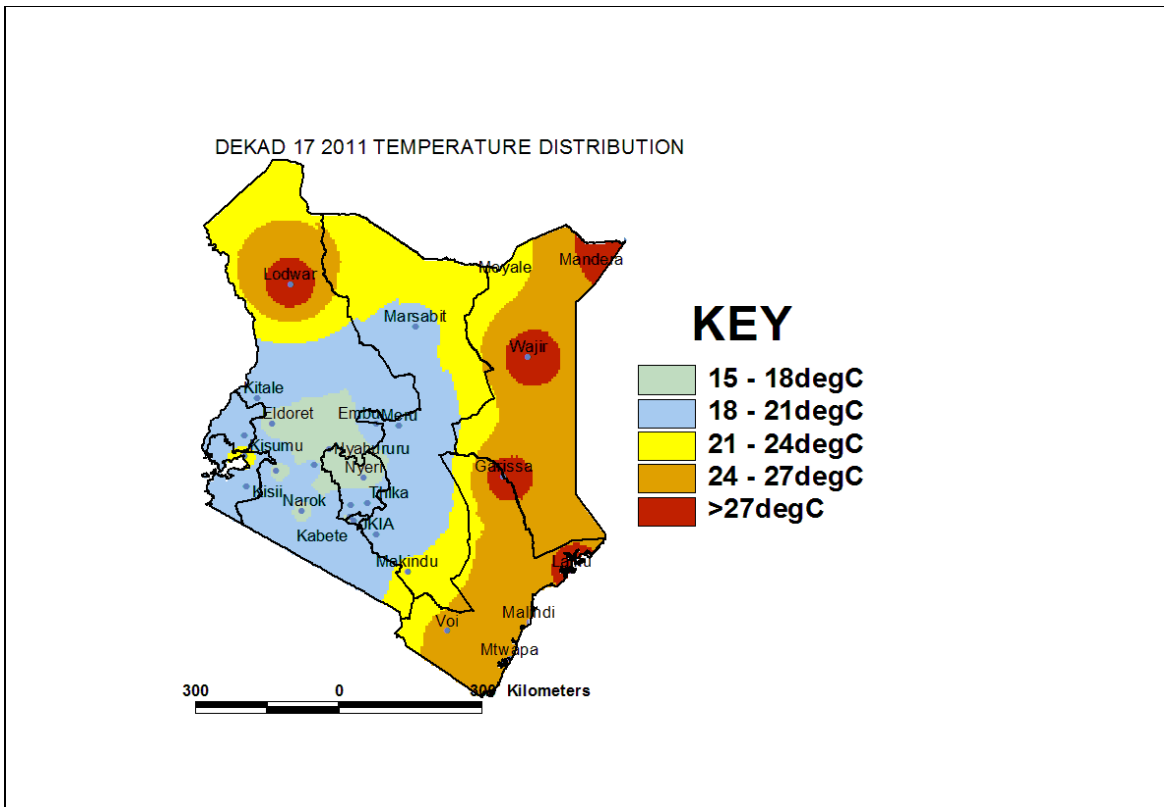


Figure 3.4 Mean Temperature Distributions

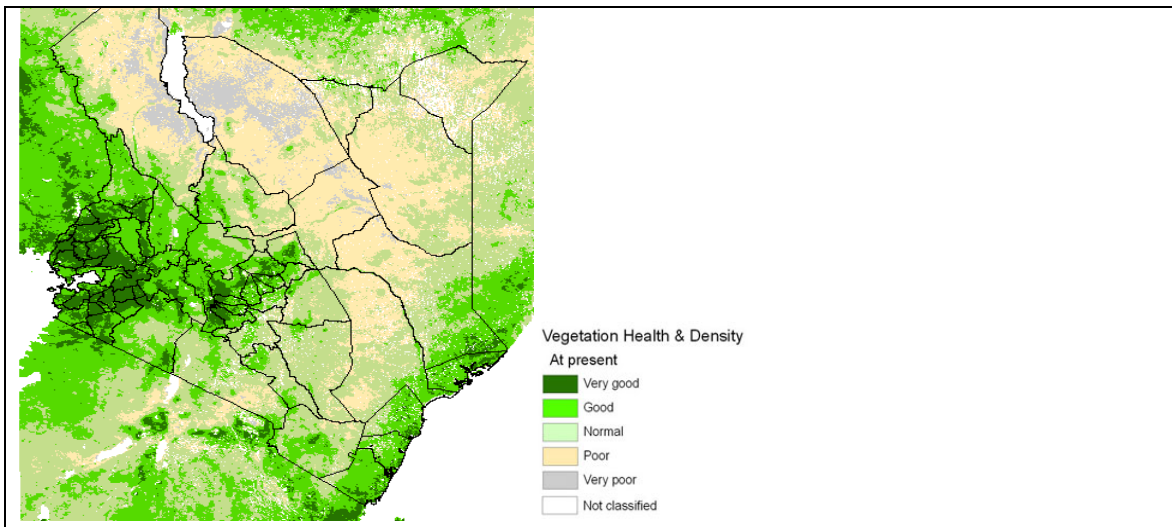


Figure 3.5: Normalized difference vegetation index (NDVI)

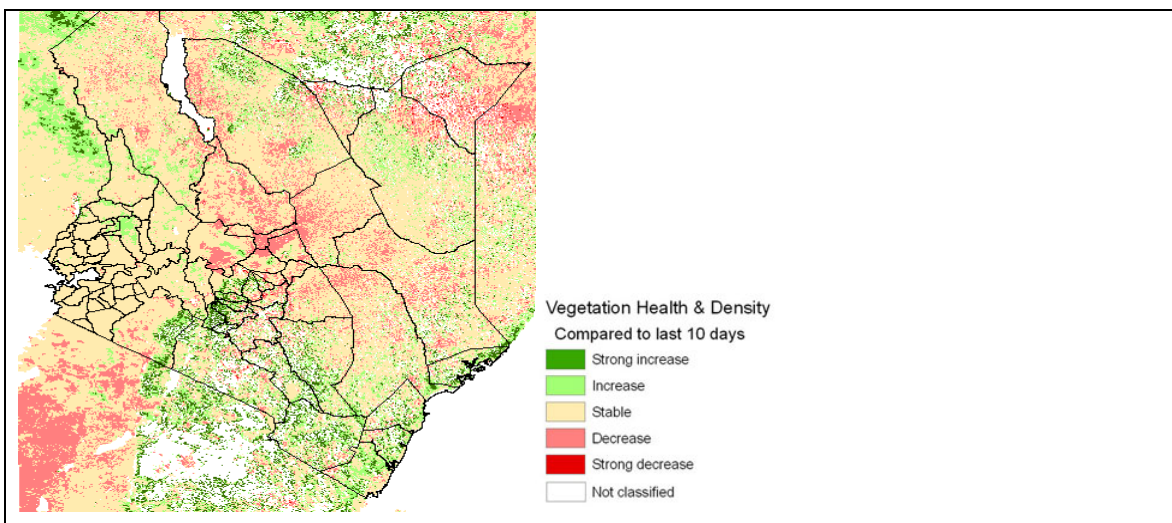


Figure 3.6: Vegetation Health and density comparison to the last 10 days

4. EXPECTED WEATHER AND CROP CONDITIONS DURING THE NEXT 10 DAYS; 21ST TO 30TH JUNE, 2011

- ✚ **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 mainly sunny intervals in the morning and afternoon/ night showers and thunderstorms over several places for much of the forecast period.

This will be a boost to the maize which are in their flowering stages.

- ✚ **The Northwestern counties (Turkana, West Pokot etc),** will experience mainly sunny intervals over most areas for much of the forecast period. Areas bordering Uganda are still expected to receive light to moderate afternoon showers during the forecast period.

The livestock kept in these areas are likely to experience lack of adequate pasture and water.

- ✚ **The Central highlands including Nairobi area (counties of Meru, Murang'a, Kiambu, Nyeri, Nairobi, Embu, etc)** will experience cool cloudy mornings with light rains/drizzle over few places occasionally increasing to several places. Light afternoon/night showers are also expected over few places in the first half of the forecast period.

Therefore, the crops grown in these areas are expected to fare well during the forecast period.

- ✚ **Northeastern counties (counties of Marsabit, Mandera, Wajir, Garissa, etc),** will experience mainly sunny intervals throughout the forecast period.

These weather conditions are expected to diminish water and pasture hence negatively affecting the livestock in the region.

- ✚ **Southeastern lowlands (counties of Taita Taveta, Makueni, Machakos, Kitui, Mwingi, etc)** will experience mainly sunny intervals throughout the forecast period.

This will continue to have a negative impact on the crops which are currently in poor state.

- ✚ **The Coastal strip (counties Mombasa, Malindi, Kilifi, Lamu, Kwale, etc)** will experience light morning showers over several places that will reduce both in intensity and spatial coverage to few places in the second half of the forecast period.

The crops grown in these areas are therefore expected to continue suffering due to moisture stress towards the end of the forecast period.

For feedback or further guidance, Contact:

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