



KENYA METEOROLOGICAL DEPARTMENT

DEKADAL AGROMETEOROLOGICAL BULLETIN

WEATHER AND CROP REVIEW FOR DEKAD 14, 2011 11TH -20TH MAY, 2011

1. WEATHER HIGHLIGHTS

There was drastic reduction in weather activities observed during the dekad unlike in the previous dekad where most stations received heavy amounts of rainfall. Kisii station in Nyanza Province recorded the highest amount of rainfall of 22mm which was a drastic reduction compared to the previous dekad. The second highest amount of rainfall was reported in Coast Province where Mombasa station received 17.3mm. Rift Valley Province had Kericho, Kitale Kabarak and Eldoret stations reporting 11.6mm, 9.9mm, 8.2mm and 5.8mm of rainfall respectively. Dagoretti and Moi Airbase stations in Nairobi Province received 5.4mm and 1mm of rainfall respectively. Central Province had Nyeri station reporting 4.5mm of rainfall. Meru station in Eastern Province reported 3.6mm of rainfall. Western Province had a drastic reduction of rainfall with Kakamega station recording 0.5mm while North Eastern Province reported dry conditions.

There was a general reduction in air temperatures observed in most stations throughout 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 DEKAD 14; 11TH TO 20TH MAY 2011

2.1 NYANZA AND WESTERN PROVINCES

2.1.1 Kakamega

This station recorded rainfall, average air temperature and total pan evaporation of 0.5mm, 21.4⁰c and 46.7mm respectively. Sunshine hours recorded were 8.1 hours per day.

Maize (HBKSK 94) and beans were at 100% ninth leaf and flowering stages respectively and in moderate state.

2.1.2 Kisii

The station recorded rainfall amount, mean average air temperature and total pan evaporation of 22mm, 21.2⁰C and 38.3mm respectively. No sunshine hours were recorded.

Weeding continues for maize and bean crops which were in fair condition.

2.2 RIFT VALLEY PROVINCE

2.2.1 Kitale

Kitale station recorded rainfall, average air temperature and total pan evaporation of 9.9mm, 20.5⁰C and 35.9mm respectively. Sunshine hours recorded were 8.3 hours per day.

Maize (HB628) and beans were at 53% ninth leaf and flowering stages respectively and in good state.

2.2.2 Eldoret-Kapsoya

The station recorded rainfall, average air temperature and total pan evaporation of 5.8 mm, 17.8⁰c and 6.39mm respectively. Sunshine hours reported were 9.2 hours per day.

Maize (HB628) and beans were at 100% emergence and flowering stages respectively and in fair state. Weeding has started.

2.3 CENTRAL AND NAIROBI PROVINCES

2.3.1 Nyeri

The station recorded rainfall, average air temperature and total pan evaporation of 4.5 mm, 18.6⁰c and 31.6 mm respectively. No sunshine hours were recorded.

Maize (HB513) and beans (GLP/92) were at 100% ninth leaf and flowering stages respectively and in moderate state. However, both crops have been adversely affected by insects.

2.3.2 Kabete

The average air temperature, total pan evaporation and rainfall recorded at Kabete were 19.0⁰c, 27.3mm and nil respectively while no sunshine observation was made.

Maize and beans were at emergence and flowering stages respectively and in fair condition. Coffee (SL34) was at 100% berry-soft stage and in moderate state though slightly affected by leaf rust and die bark. Bananas which were at 100% appearance of suckers and in moderate state have been affected by thrips and cigar end rot.

2.3.3 Thika

The dekadal mean air temperature at the station was 20.8⁰c while no reports were received on sunshine hours, rainfall and evaporation.

Maize and beans were at 100% ninth leaf and flowering stages respectively and in fair state.

2.3.4. Nyahururu

Nyahururu reported a dekadal average air temperature of 14.9⁰c, total pan evaporation of 53.0mm, nil rainfall and 8.8 sunshine hours per day.

Maize, Beans and Potatoes were all at the emergence stage and in fair state. However, all the three crops were adversely affected by insufficient rainfall.

2.3.5. Dagoretti

This station reported rainfall, average air temperature and pan evaporation of 5.4mm, 19.4⁰c and 31.1 mm respectively. Sunshine hours recorded were 5 hours per day.

Maize crop was after the 9th leaf stage while beans were at flowering respectively. Both crops were in good state hence normal yield is expected.

2.4 EASTERN PROVINCE

2.4.1 Meru

The station reported rainfall, average air temperature and total pan evaporation of 3.6 mm, 19.4⁰c and 38.1 mm respectively. Sunshine hours recorded were 4.4 hours per day.

Maize and beans were in the emergence and flowering stages respectively and in fair condition.

2.4.2 Embu

The average air temperature and total pan evaporation reported at the station were 20.1⁰c and 30.7mm respectively. Rainfall was nil while sunshine hours were 5.9 hours per day. Maize and beans were at emergence and flowering stages respectively and in fair state.

2.4.3 Katumani (Machakos)

The station reported an average air temperature of 19.8⁰c and nil rainfall. There was no report on evaporation and sunshine parameters.

Maize and beans were at emergence and flowering stages respectively but in poor state. Both crops have been affected by insufficient rainfall.

2.5.1 COAST PROVINCE

2.5.1. Msabaha

The average air temperature and total pan evaporation observed were 27.1⁰c and 40.4mm respectively while rainfall reported was nil.

Mangoes were at 100% fruit setting stage and in good state while maize was at emergence stage and in fair state.

2.5.2 Mtwapa

The station recorded rainfall, average air temperature and pan evaporation of 3.7 mm, 26.4⁰c and 36.7mm respectively. There was no report on sunshine hours.

Maize (DH4) was at 80% ninth leaf stage and in moderate state though affected by birds, animals and stalk borer. Apple mangoes were at 100% fruit setting stage and in moderate state while watermelons were at 90% fifth true leaf stage and also in moderate state. Watermelons were adversely affected by leaf rust, aphids and moths during the dekad.

3.0 ANALYSIS OF RAINFALL, TEMPERATURE AND VEGETATION CONDITIONS

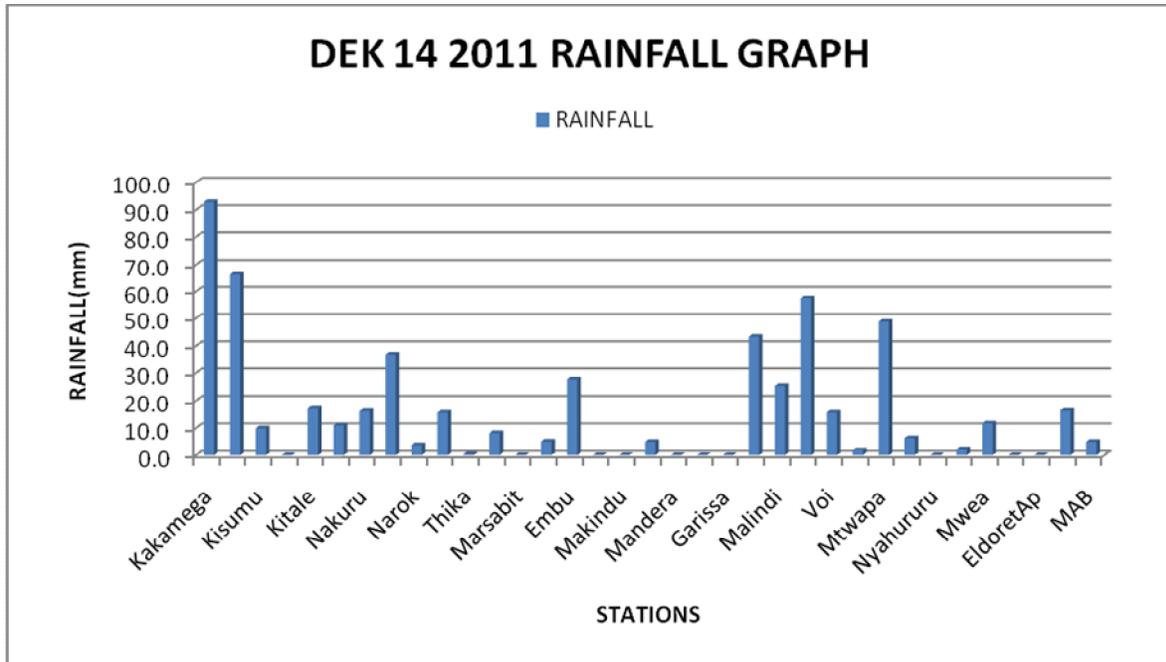


Figure 3.1: Actual Rainfall

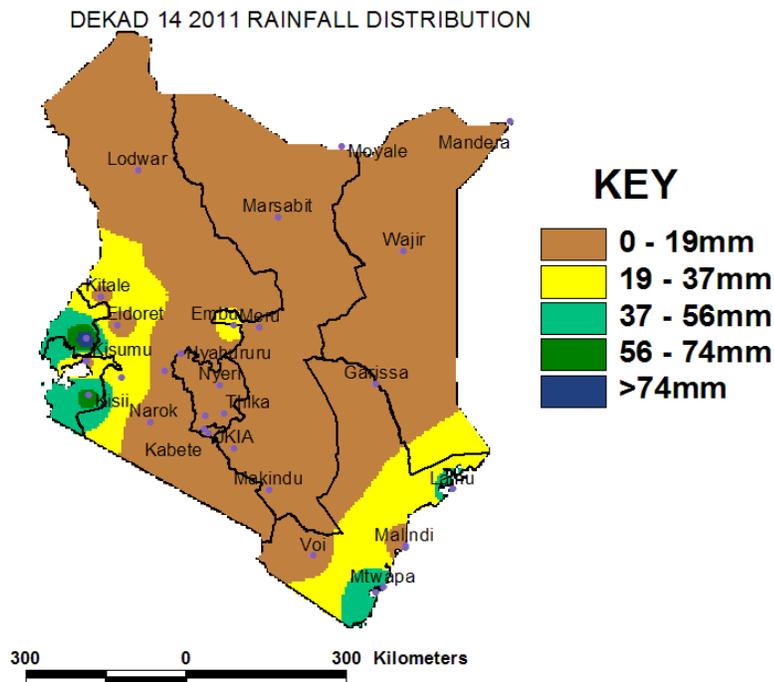


Figure 3.2: Rainfall distribution

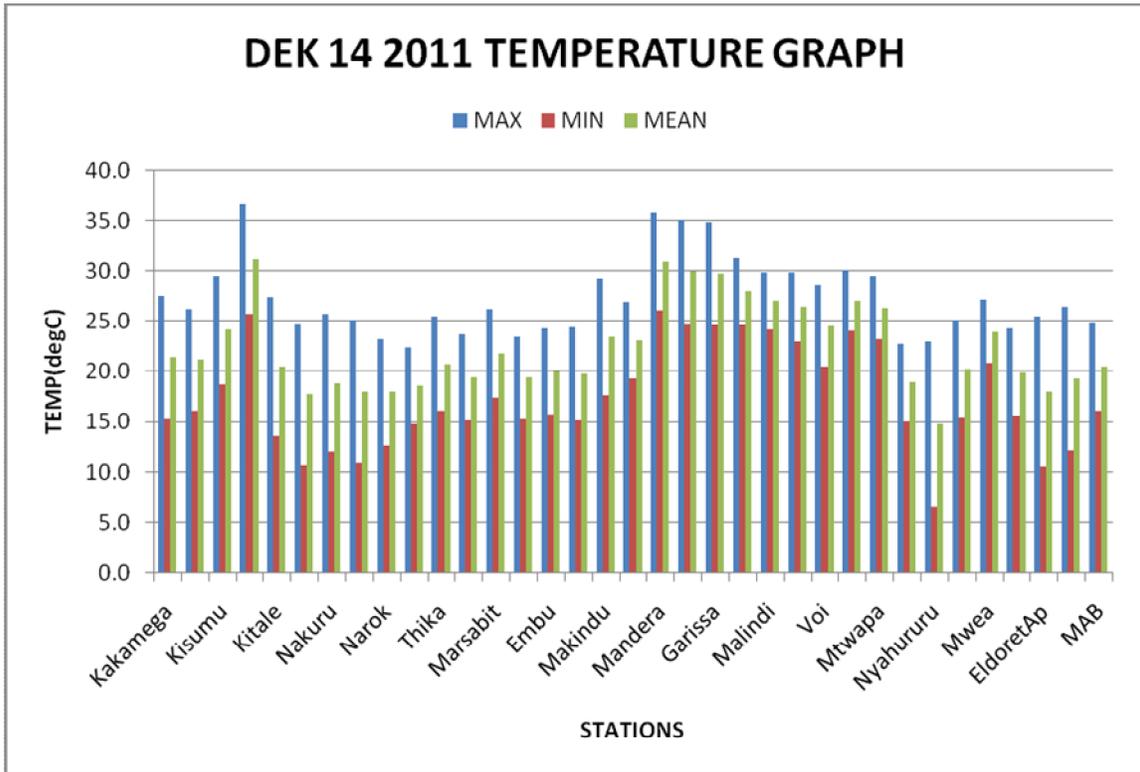


Figure 3.3: Mean Temperature

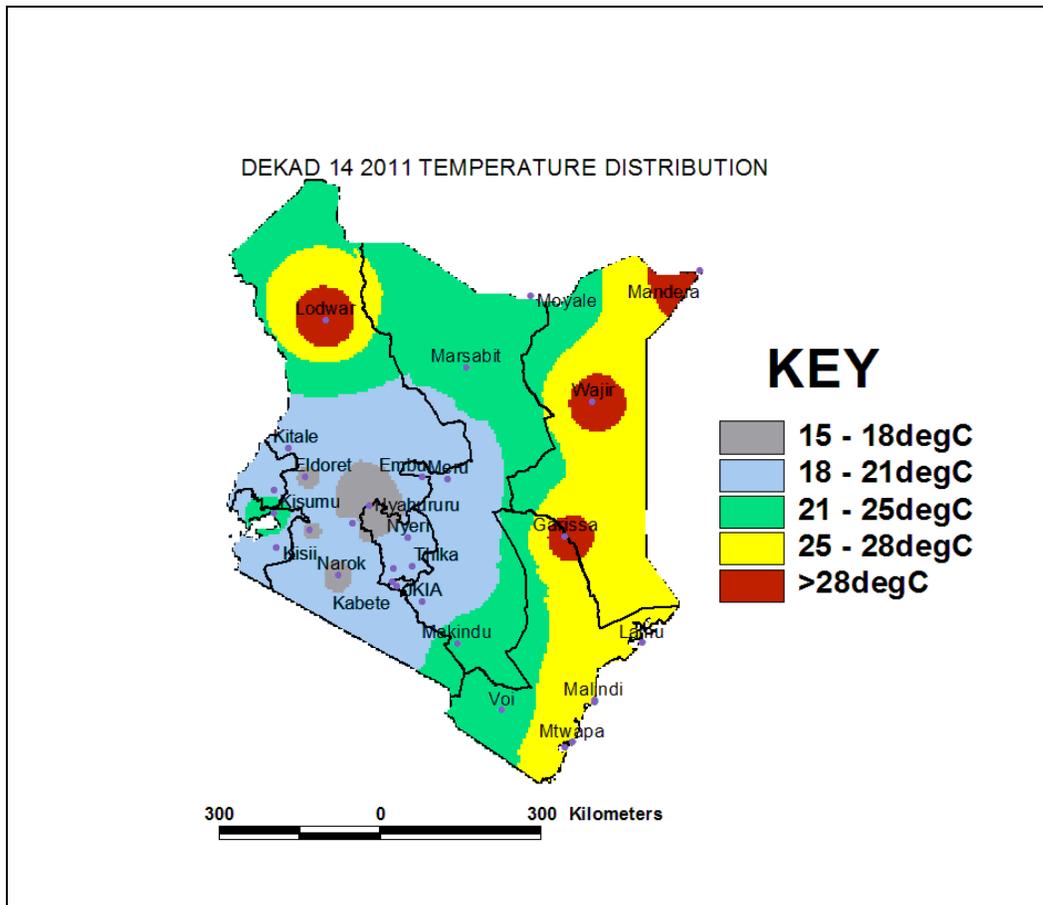


Figure 3.4 Mean Temperature Distribution

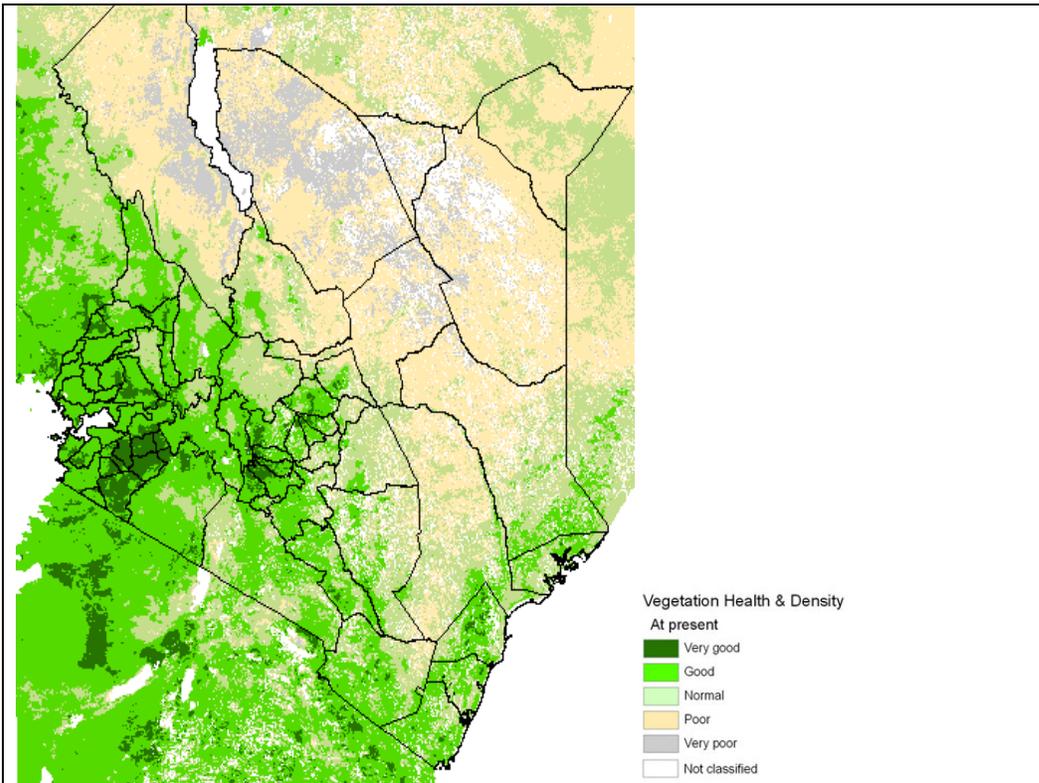


Figure 3.5: Normalized difference vegetation index (NDVI)

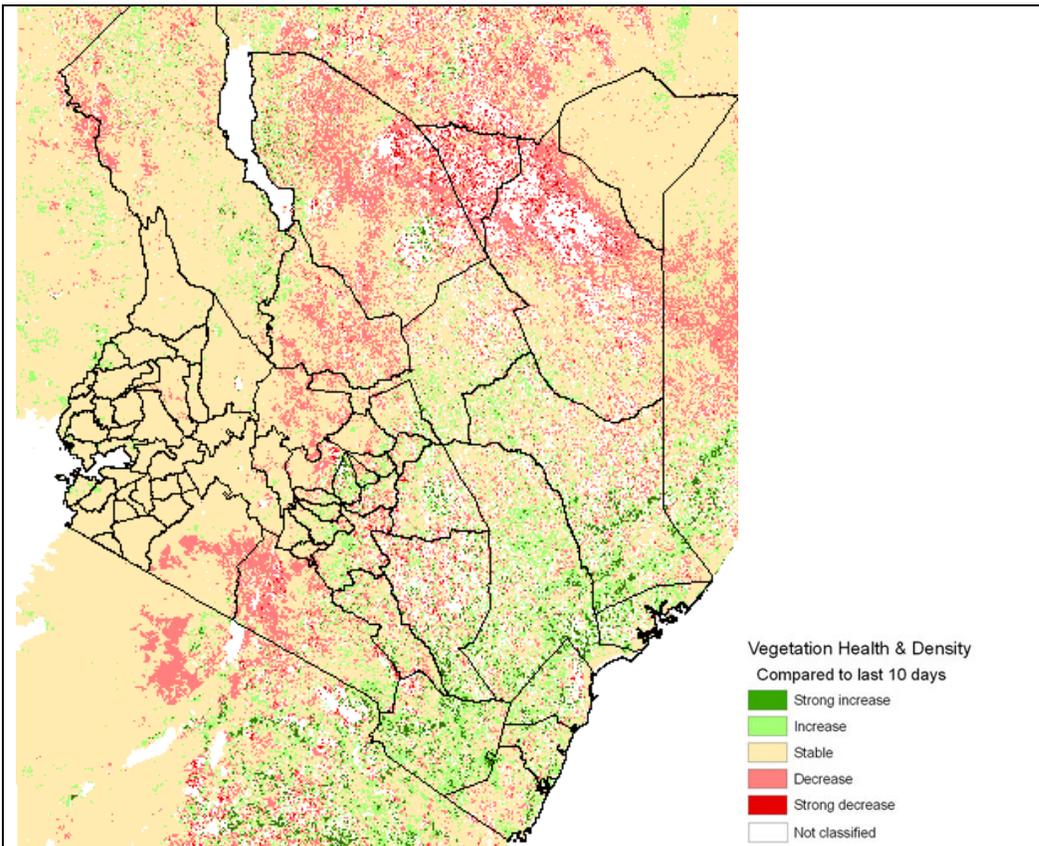


Figure 3.6: Vegetation Health and density comparison to the last 10 days

4. EXPECTED WEATHER AND CROP CONDITIONS DURING THE NEXT 10 DAYS (21ST TO 31ST MAY 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 during much of the forecast period. However, a decline in the spatial coverage is expected towards the end of the forecast period. *This will benefit the maize and bean crops which are at their flowering stages.*
- 🇰🇪 **The Northwestern counties (Turkana, West Pokot etc),** will experience mainly sunny intervals with occasional afternoon/night showers over few places especially those bordering Uganda and Ethiopia. *The livestock kept in this region such as camels and cows are likely to lack adequate water and pasture.*
- 🇰🇪 **The Central highlands including Nairobi area (counties of Meru, Murang'a , Kiambu, Nyeri, Nairobi, Embu, etc)** will experience cool cloudy morning with light rains during the first half of the forecast period and mainly sunny intervals and occasional afternoon/night showers over few places in the second half of the forecast. *Therefore, the crops grown in these regions are expected to do well during the forecast period.*
- 🇰🇪 **Northeastern counties (counties of Marsabit, Mandera, Wajir, Garissa,etc),** will experience morning rains and afternoon showers over few places at the beginning and at the end of the forecast period. Sunny intervals are expected to dominate the rest of the forecast period. *These weather conditions are expected to result in diminishing water and browse hence negatively affecting the livestock.*
- 🇰🇪 **Southeastern lowlands (counties of Taita Taveta, Makueni, Machakos, Kitui, Mwingi, etc),** will experience mainly sunny intervals for much of the forecast period but occasional morning rains are expected over few places near Mt Kilimanjaro area at the beginning of the forecast period. *No major positive impacts are expected on the crops.*
- 🇰🇪 **The Coastal strip (counties Mombasa, Malindi, Kilifi, Lamu, Kwale,etc)** will experience morning showers over several places during the forecast period. Occasional afternoon showers are also expected over few places. *The crops grown in these regions are thus expected to continue growing normally.*

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