



## KENYA METEOROLOGICAL DEPARTMENT

# DEKADAL AGROMETEOROLOGICAL BULLETIN WEATHER AND CROP REVIEW FOR DEKAD 06 2011 21– 28 FEBRUARY, 2011

## 1. WEATHER HIGHLIGHTS

Most parts of the country reported dry conditions unlike in the previous dekad where nearly all the country reported wet conditions, apart from a few stations like Garissa, Lamu, Lodwar, Nakuru and Mandera. In the current dekad, the highest rainfall activities were experienced in Nyanza province with Suba station reporting 27.3 mm of rainfall up from 13.5 mm in the previous dekad. Some significant amount of rainfall was also recorded in Rift Valley, Nairobi area and Central provinces, with Narok, Kabete, Nyeri and Wilson stations reporting 5.9 mm, 4.1 mm, 3.9 mm and 3.0 mm respectively. The dry conditions which prevailed in most parts of the country caused an increment in temperatures.

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 06; 21– 28 FEBRUARY 2011

### 2.1 NYANZA AND WESTERN PROVINCES

#### 2.1.1 Kakamega

This station, like many other stations in western province reported dry conditions unlike in the previous dekad where significant amount of rainfall was received. The average air temperature recorded in the station was 22.9<sup>0</sup>c. Total pan evaporation and sunshine hours recorded were 63 mm and 8.6 hours respectively.

Cassava (MM97/2480) was at 98% maturity stage and in moderate state. Farmers are still preparing their land.

#### 2.1.2 Kisii

The station received reduced rainfall of 0.6 mm unlike in the previous dekad where it received the highest amount of rainfall of 39.4 mm. The average air temperature, total pan evaporation and sunshine hours recorded were 22.2<sup>0</sup>c, 47.1 mm, and 10.4 hours respectively.

Harvesting of maize is over and land preparation is going on.

### 2.2 RIFT VALLEY PROVINCE

#### 2.2.1 Kitale

This station reported dry conditions receiving only 0.3 mm of rainfall down from 12.2 mm received in the previous dekad. The average air temperature and pan evaporation

recorded were 20.7<sup>0</sup>c, and 42.9 mm respectively. There was no report on sunshine hours and phenological observations.

### **2.2.2 Eldoret-Kapsoya**

This station had no active weather activities like in the previous dekad. The average air temperature, total pan evaporation and sunshine hours recorded were 18.4<sup>0</sup>c, 75.5 mm and 11.0 hours respectively.

No phenological observations were made.

## **2.3 CENTRAL AND NAIROBI PROVINCES**

### **2.3.1 Nyeri**

The station had a significant reduction of rainfall from 51.2 mm in the previous dekad to 3.9 mm. The average air temperature total evaporation reported were 18.4<sup>0</sup>c and 46.9 mm respectively. There was no report on sunshine hours.

Maize crop stunted at flowering stage and was reported to be in failure state due to prolonged drought. Nevertheless farmers are using it to feed animals.

### **2.3.2 Kabete**

This station reported only 4.1 mm of rainfall, as compared to the previous dekad where it was among the stations which received high amount of rainfall in the country. The average air temperature, total pan evaporation and sunshine hours recorded were 19.5<sup>0</sup>c, 49.4 mm and 10.9 hours respectively.

Maize crop was at full ripeness stage and reported to be in failure state due to prolonged drought. Coffee was at 100% flowering stage and in moderate state. It suffered less than 10% leaf rust and leaf minor while bananas were at 100% appearance of suckers stage and in unsatisfactory state.

### **2.3.3 Thika**

This station reported minimal amount of rainfall of 1.3 mm as compared to 25.8 mm in the previous dekad. The average air temperature recorded was 20.0<sup>0</sup>c. There was no report on total pan evaporation and sunshine hours.

Maize harvesting is complete and land preparation is ongoing.

### **2.3.4. Nyahururu**

Weather activities in this station were quiet. The average air temperature recorded was 14.8<sup>0</sup>c. There was no report on evaporation and Sunshine hours.

Land preparation is going on.

### **2.3.5. Dagoretti**

The average air temperature, rainfall, total pan evaporation and sunshine hours recorded at the station were 19.6<sup>0</sup>c, 122.5mm, 55.5mm and 10.8 hours per day respectively.

Maize crop stunted at flowering stage due to prolonged drought hence no yield is expected.

## **2.4 EASTERN PROVINCE**

### **2.4.1 Meru**

The station had dry conditions. The average air temperature, total pan evaporation recorded was 18.4<sup>0</sup>c and 41.0mm respectively. No reports were received on sunshine and phenological observations.

### **2.4.2 Embu**

This station reported dry conditions. The average air temperature and total evaporation reported were 20.7<sup>0</sup>c and 55.5 mm respectively. There was no report on sunshine.

Maize crop was at full ripeness stage and in failure state due to insufficient rainfall. As a result, below normal yield is expected.

### **2.4.3 Katumani (Machakos)**

This station remained quiet unlike in the previous dekad where it reported the highest rainfall amount of 71.8 mm in Eastern province. The average air temperature recorded was 19.6<sup>0</sup>c. There was no report on evaporation, sunshine and phenological observations.

## **2.5 COAST PROVINCE**

### **2.5.1. Msabaha**

The station received nil rainfall. The mean air temperature and total pan evaporation recorded were 27.8<sup>0</sup>c and 48.5 mm respectively. There was no report on sunshine.

Mangoes (Ngowe type) were at 40% fruit setting and in good state.

### **2.5.2 Mtwapa**

The station reported dry conditions. The mean air temperature, total pan evaporation and sunshine hours reported were 27.7<sup>0</sup>c, 49.5 mm and 9.9 hours per day respectively.

Mangoes (Apple) were at 50% fruit setting and in good state. However, flowers are dropping due to prolonged drought.

3.0 ANALYSIS OF RAINFALL, TEMPERATURE AND VEGETATION CONDITIONS

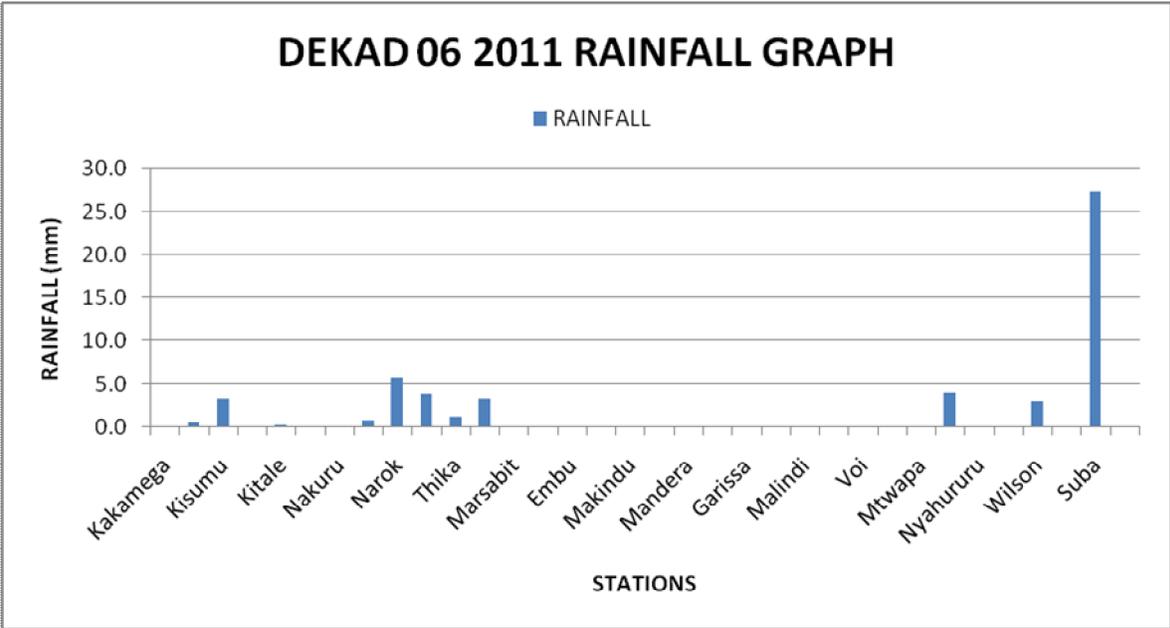


Figure 3.1: Actual Rainfall

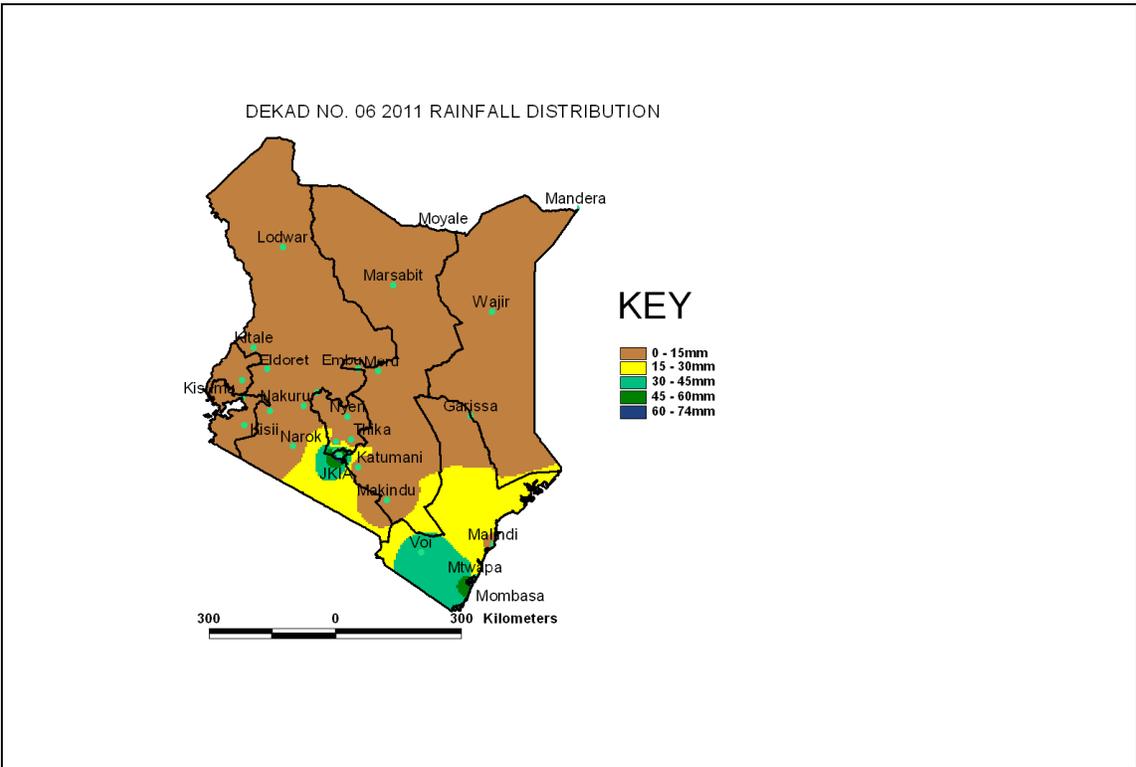


Figure 3.2: Rainfall distribution

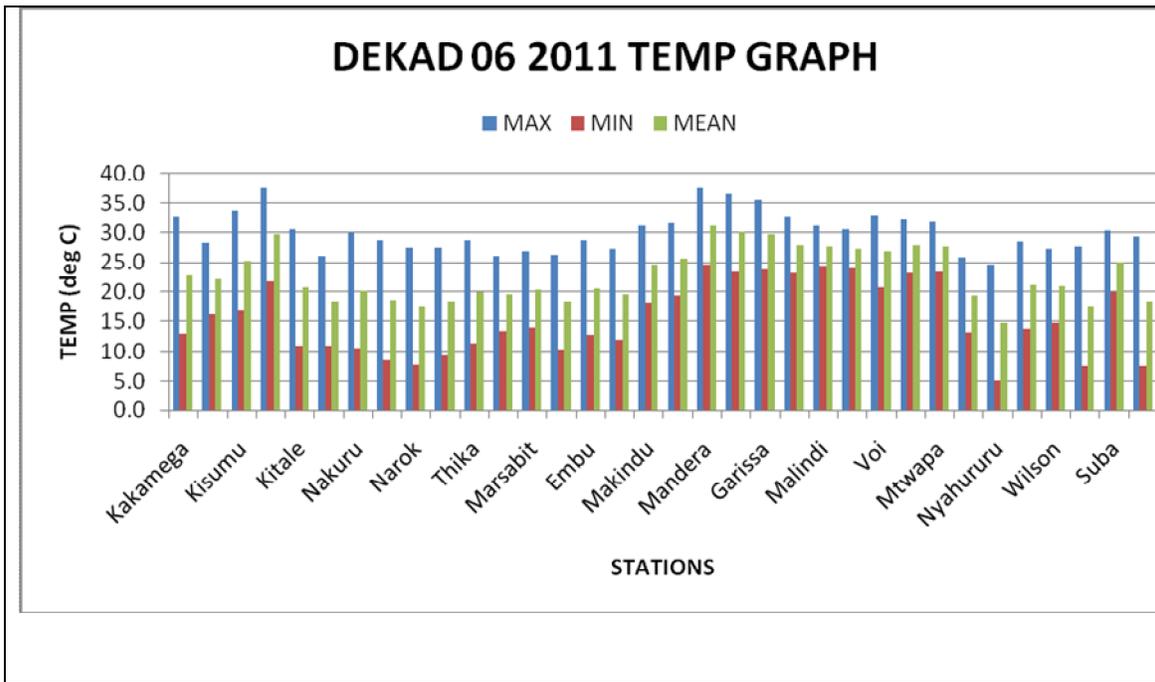


Figure 3.3: Mean Temperature

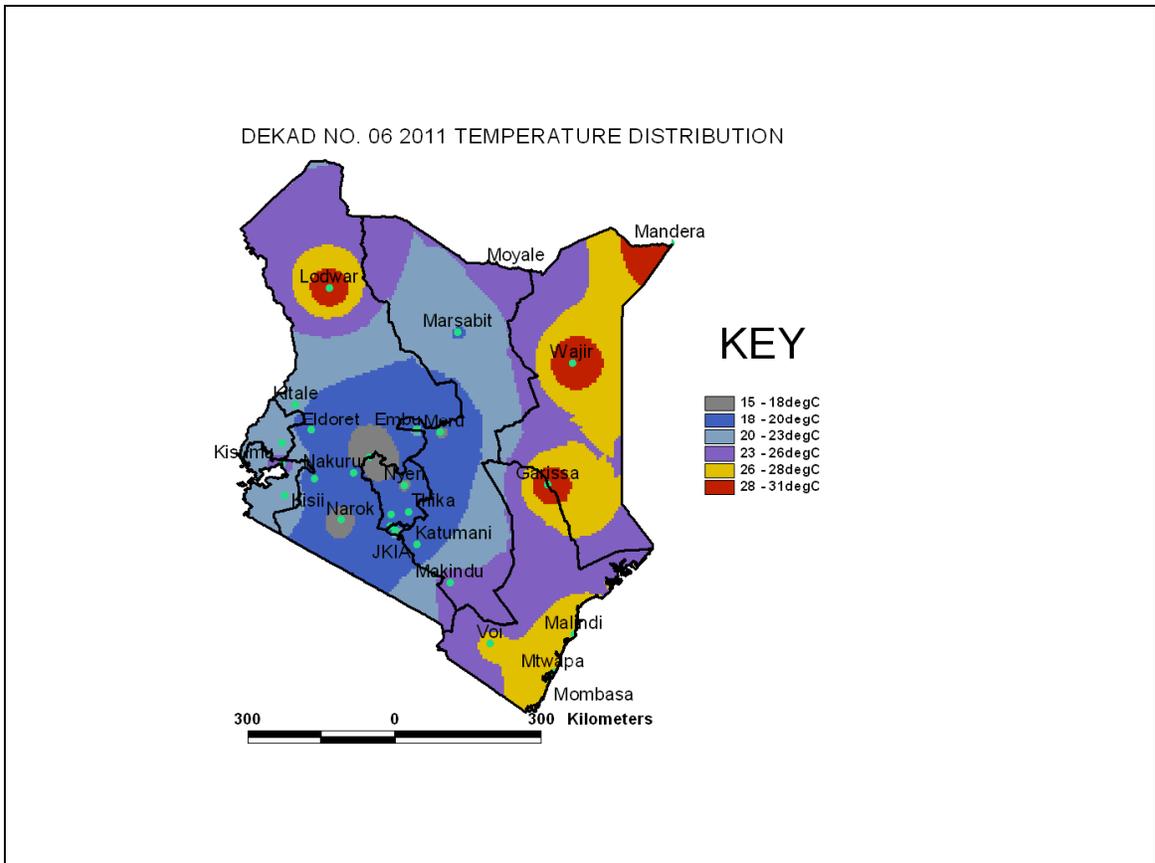
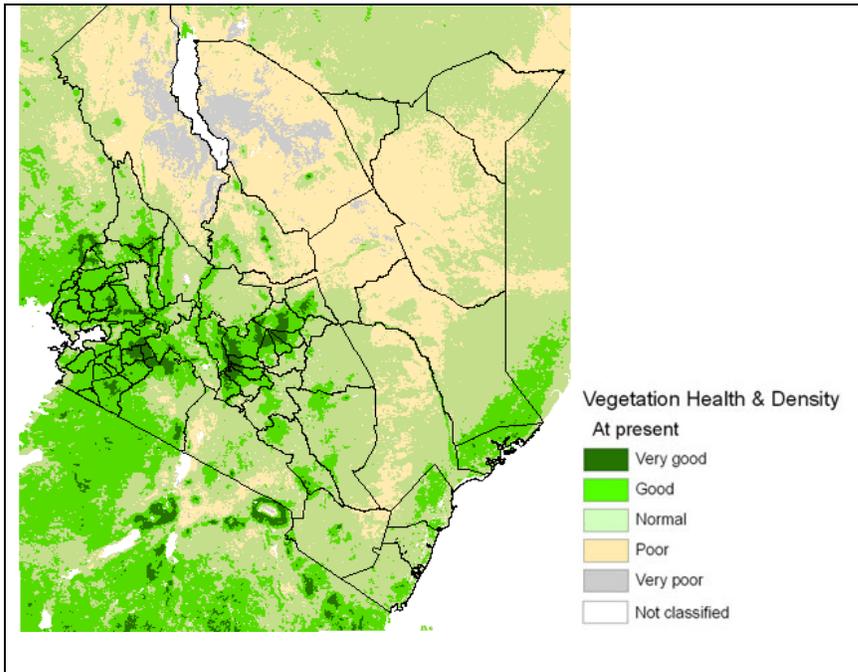
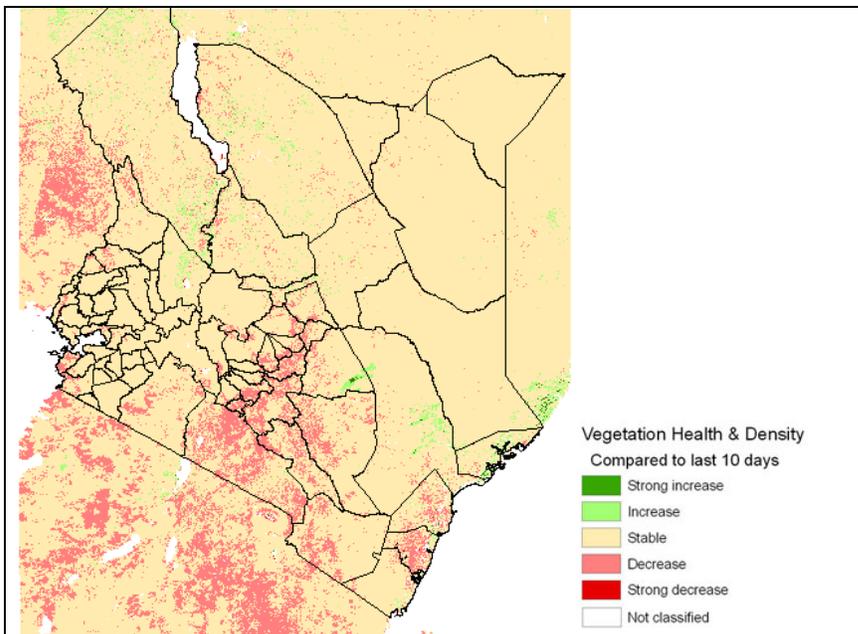


Figure 3.4: Mean Temperature Distribution



**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 10 DAYS (1<sup>ST</sup> TO 10<sup>TH</sup> MARCH 2011)**

- ✚ The Western and North Rift Valley regions are expected to experience mainly sunny conditions with light rains in few places. 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 in readiness for the coming growing season.

- ✚ Nyanza, Central Rift and South Rift areas are expected to experience sunny conditions with light rains in the first few days and sunny interval accompanied with light showers during the last 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 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 to continue over the next ten days. The prolonged drought is expected to exacerbate the already stressed soil moisture conditions.
- ✚ Coastal region is expected to experience sunny intervals throughout the forecast period. This will act as a boost to cashew nut trees in Lamu.
- ✚ Areas in North Western districts of Lodwar, Lokitaung and Lokichoggio will experience sunny conditions. As a result, pasture and vegetation in the region will continue being scarce thereby continuing to increase food shortage.

***For feedback or further guidance, Contact:***

Director,  
Kenya Meteorological Department,  
Agrometeorological Advisory Services Division,  
Dagoretti Corner, Ngong Road, P.O. Box 30259, 00100 GPO, Nairobi  
Tel: +254 (0)20 3867880-7/3876957/3873682 ; Fax: +254 (0)20 3876955  
E-mail: [agromet@meteo.go.ke](mailto:agromet@meteo.go.ke);  
Website: [www.meteo.go.ke](http://www.meteo.go.ke)

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