



## KENYA METEOROLOGICAL DEPARTMENT

# DEKADAL AGROMETEOROLOGICAL BULLETIN WEATHER AND CROP REVIEW FOR DEKAD 03, 2011 21 – 31 JANUARY, 2011

## 1. WEATHER HIGHLIGHTS

Generally, there was a continued decrease in rainfall and an increase in temperature in most parts of the country. However, significant amount of rainfall was reported in parts of Central, Nairobi and Eastern provinces. The highest rainfall recorded during the dekad was 14.2mm in Nairobi at Dagoretti. This was followed by 13.6 mm, 12.9 mm and 12.4 mm at Meru, Makindu and Embu respectively.

Nil rainfall was observed over all stations in Western and Nyanza Provinces apart from Kakamega and Kisii which both received 0.4 mm. This was a drastic reduction compared to the last dekad where Kisii reported the highest rainfall in the country. Compared to the previous dekad, Central province received some significant amount of rainfall with Nyeri and Thika reporting 7.2mm and 6.5 mm respectively. There was an improvement in rainfall received in the coastal province, with Msabaha and Voi reporting 5.0mm and 1.5 mm respectively up from 0.1mm and 0.2mm in the previous dekad. 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 03; 21– 31 JANUARY 2011

### 2.1 NYANZA AND WESTERN PROVINCES

#### 2.1.1 Kakamega

0.4 mm of rainfall was received at this station compared to 4.9 mm received in the previous dekad. The average air temperature rose to 22.4<sup>0</sup>c from 21.8<sup>0</sup>c recorded in the previous dekad. Total pan evaporation and sunshine hours recorded were 42.9mm and 7.8 hours per day respectively.

Cassava was at 100% ripeness of the fruit stage and in good state. Farmers are continuing with land preparation in readiness for the coming long rains season.

#### 2.1.2 Kisii

This station reported 0.4 mm of rainfall, which was a drastic reduction as compared to the first and second dekads where 7.7mm and 92.9mm were observed respectively. The average air temperature, total pan evaporation and sunshine hours recorded were 22.7<sup>0</sup>c, 36.9mm and 8.2 hours per day respectively.

Harvesting of maize continued with normal yield being expected.

## **2.2 RIFT VALLEY PROVINCE**

### **2.2.1 Kitale**

The station remained dry during this dekad recording nil rainfall as compared to the previous dekad where 1.6mm of rainfall was received. The average air temperature and total pan evaporation recorded at this station were 20.6<sup>0</sup>c and 35.6mm respectively.

No phenological observations were made.

### **2.2.2 Eldoret-Kapsoya**

The station remained dry over the dekad, reporting nil rainfall as compared to the previous dekad where 1.0 mm of rainfall was recorded. The average air temperature and sunshine hours recorded at the station were 17.5<sup>0</sup>c and 9.2 hours respectively.

No phenological observations were made.

## **2.3 CENTRAL AND NAIROBI PROVINCES**

### **2.3.1 Nyeri**

The average air temperature, total pan evaporation and rainfall recorded in the station were 17.6<sup>0</sup>c, 52.8 mm and 7.2 mm respectively. This was a notable increase in rainfall compared to 5.9 mm received in the previous dekad.

Maize (H6213) was at 13% tasseling stage and in poor state due to inadequate rainfall. The crop was affected by 10% stalk borer and suffered 75% moisture stress, hence below normal yield is expected. Harvesting of beans continues with the expected yield being below normal.

### **2.3.2 Kabete**

This station reported significant rainfall amount of 4.2 mm as compared to nil rainfall received in the previous dekad. The average air temperature and total pan evaporation and sunshine hours recorded were 18.9<sup>0</sup>c, 63.5mm and 10.5 hours per day respectively.

Maize and beans were at flowering and ripeness stages respectively. Both crops were reported to be in poor state due to insufficient rainfall. Consequently, below normal yields are expected. Coffee (SL34) was at 100% candle stage and in moderate state. It suffered approximately 10% damage from leaf rust, leave minor and DIC diseases. Bananas (Dwarf) were at 100% appearance of suckers stage and in unsatisfactory state due to insufficient rainfall. It suffered 75% Thrips and less than 10% cigar end rot

### **2.3.3 Thika**

The station received a significant amount of rainfall of 6.5 mm as compared to the previous two dekads where nil rainfall was reported. An average air temperature of 19.7<sup>0</sup>c and total pan evaporation of 52.0 mm. was recorded.

Maize was at flowering stage and in poor state due to insufficient rainfall. Below normal yield is expected. Beans were in ripeness stage and in fair state. Harvesting is going on with normal yield expected.

### **2.3.4. Nyahururu**

The station received nil rainfall just as in the previous dekad. The average air temperature and total pan evaporation recorded were 14.3<sup>0</sup>c and 61.0 mm respectively.

Harvesting of maize, potatoes and beans was completed during the last dekad. Consequently, land preparation in readiness for the next growing season is underway.

### **2.3.5. Dagoretti**

This station received the highest rainfall in the country. The average air temperature, total pan evaporation and sunshine hours recorded were 19.1<sup>0</sup>c, 61.7 mm and 10.2 hours per day respectively.

Maize which was in poor state due to insufficient rainfall was at 90% flowering stage and at less than 10% wax ripeness stage. Beans were at 100% ripeness stage and in good state, ready for harvesting.

## **2.4 EASTERN PROVINCE**

### **2.4.1 Meru**

This station received the second highest rainfall in the country of 13.6mm as compared to 3.5 mm received in the last dekad. Total pan evaporation and average air temperature recorded were 44.0mm and 18.1<sup>0</sup>c respectively.

No phenological observations were made.

### **2.4.2 Embu**

The station recorded 12.4 mm of rainfall, which was the fourth highest figure of rainfall received in the country. The average air temperature recorded was 20.2<sup>0</sup>C.

The insufficient rainfall received during the season, adversely affected both the maize and bean crops which were at flowering and ripeness stages respectively. Below normal yields are expected for both crops.

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

This station received 9.1 mm of rainfall as compared to the previous two dekads where nil rainfall was reported. The average air temperature recorded was 20.6<sup>0</sup>c. There was no observation on both evaporation and sunshine parameters.

As a result of insufficient rain, maize plants wilted before reaching grain filling stage. This led to total crop failure hence no harvest is foreseen. Likewise, beans which were at maturity stage also failed due to the drought.

## **2.5 COAST PROVINCE**

### **2.5.1. Msabaha**

5.0mm of rainfall was recorded at Msabaha compared to 0.1mm last dekad. The mean air temperature recorded was 28.0<sup>0</sup>c.

Mangoes (Ngowe type) were at 100% ripeness stage and in good state.

### **2.5.2 Mtwapa**

The station recorded nil rainfall, total pan evaporation of 64mm and an average air temperature of 27.7<sup>0</sup>c.

No phenological observations were made.

### 3.0 ANALYSIS OF RAINFALL, TEMPERATURE AND VEGETATION CONDITIONS

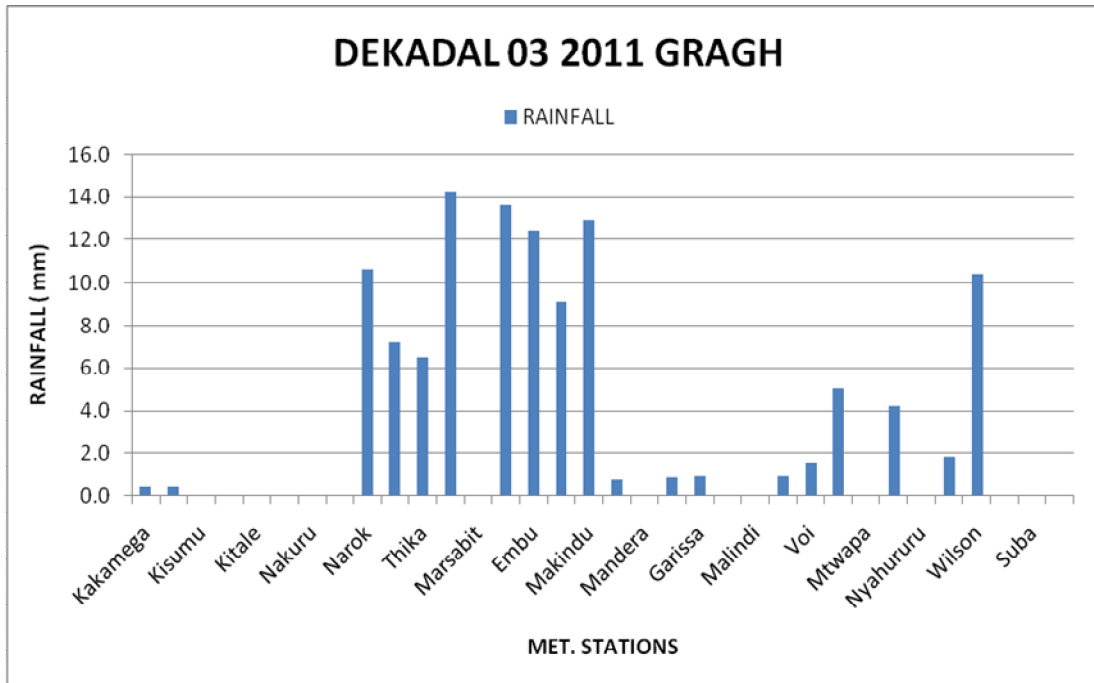


Figure 3.1: Actual Rainfall

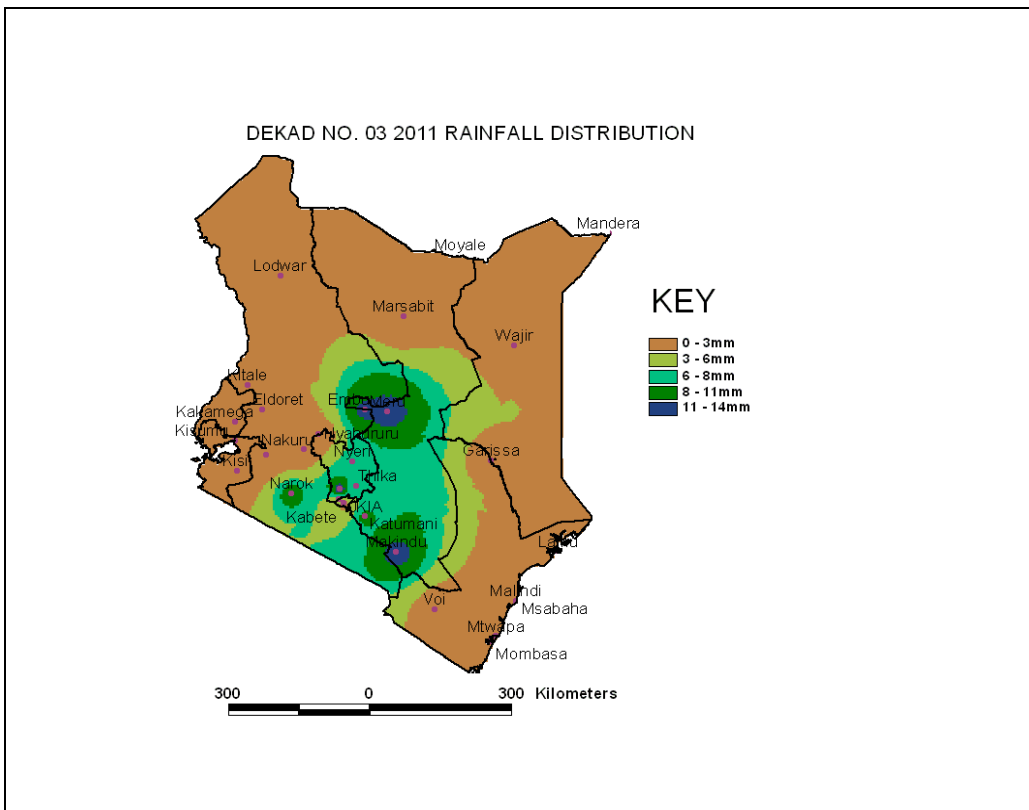


Figure 3.2: Rainfall distribution

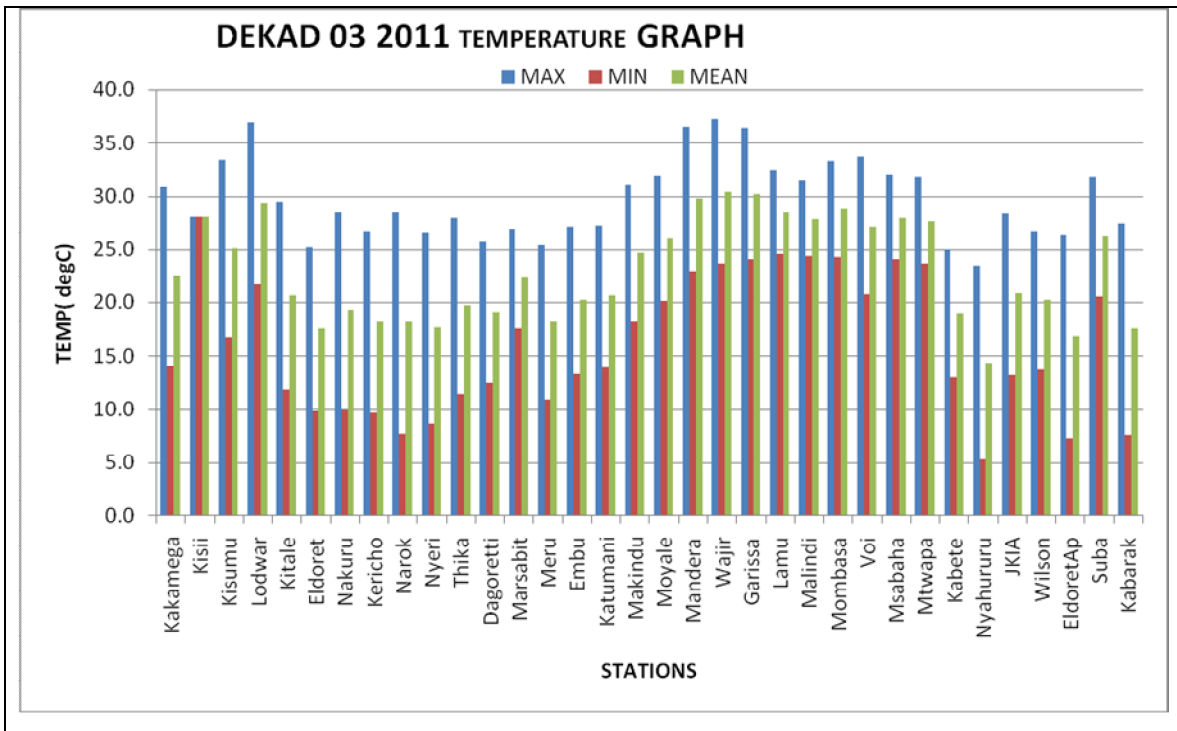


Figure 3.3: Mean Temperature

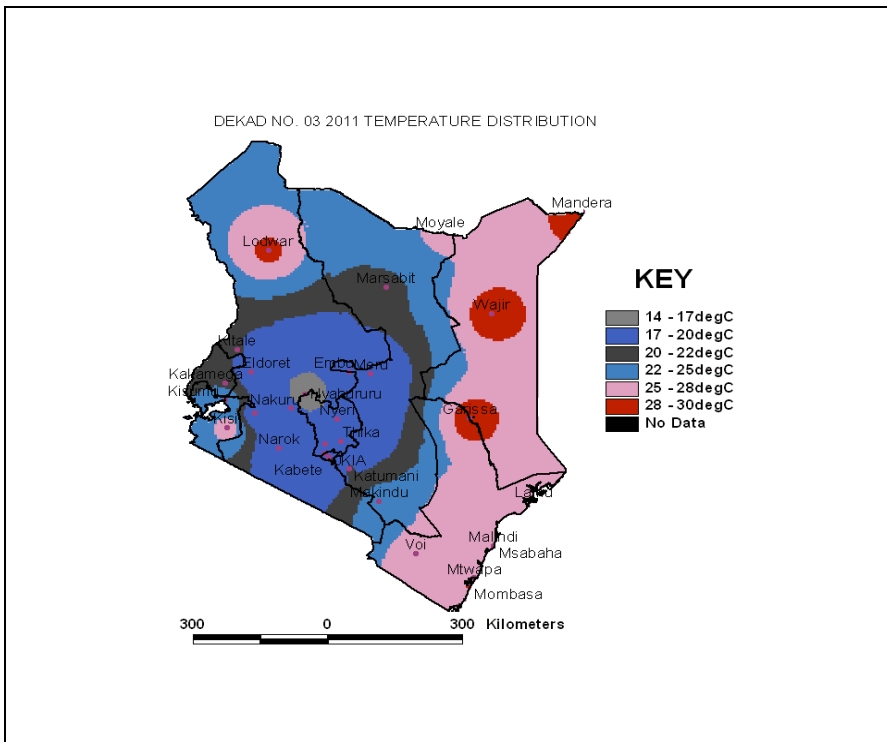


Figure 3.4: Mean Temperature Distribution

#### 4. EXPECTED WEATHER AND CROP CONDITIONS DURING THE NEXT 10 DAYS

- ✚ Western and North Rift Valley regions are expected to experience light rains in few places especially during the first days of the next dekad and sunny intervals with light showers during the last period of the dekad. 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 long rain season.
- ✚ Nyanza, Central Rift and South Rift areas are expected to experience 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 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 with light rains occurring during the last half of the forecasted 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 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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