



**KENYA METEOROLOGICAL DEPARTMENT  
DEKADAL AGROMETEOROLOGICAL BULLETIN  
WEATHER AND CROP REVIEW FOR DEKAD 16, 2011  
01 – 10 JUNE, 2011**

## **1. WEATHER HIGHLIGHTS**

There was a slight pick in weather activities observed during the dekad compared to the previous dekad. Kakamega in Western Province recorded the highest amount of rainfall of 156.0mm which was a great increase compared to the previous dekad. Rift Valley Province had Nakuru, *Kericho* and *Eldoret* stations reporting 57.7mm, 56.6mm, and 54.8mm of rainfall respectively while *Dagoretti*, JKIA and *Kabete* stations in Nairobi area received 3.3mm 5.8mm and 1.4mm respectively. Central Province had Thika, *Nyeri* and *Nyahururu* stations reporting 29.8mm, 1.3mm and 27.8mm of rainfall. All stations in Eastern Province reported less than 1.0mm of rainfall.

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 16; 1<sup>ST</sup> TO 10<sup>TH</sup> 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, 21.8<sup>0</sup>c and 45.7mm respectively. Sunshine hours recorded were 7.3 hours per day.

*Maize was at 100% ninth leaf stage and in moderate state while beans were at maturity stage and in fair state. Farmers have started harvesting their beans with normal yields being expected.*

#### **2.1.2 Kisii**

The station recorded rainfall amount, mean average air temperature and total pan evaporation of 18.1mm, 21.1<sup>0</sup>C and 33.6mm respectively. No sunshine hours were recorded.

*Maize was at flowering stage while beans were at mature stage. Both crops were in poor state and also damaged by excessive rainfall and hailstones. Harvesting of beans started during the dekad in some of the farms.*

### **2.2 RIFT VALLEY PROVINCE**

#### **2.2.1 Kitale**

Kitale station recorded rainfall, average air temperature and total pan evaporation of 13.3mm, 19.6<sup>0</sup>C and 29.3mm respectively. Sunshine hours recorded were 7.2 hours per day.

*Maize (HB628) was after ninth leaf stage and in good state. Beans were at flowering stage and in good state though damaged by hailstone, however normal yield is expected.*

### **2.2.2 Eldoret-Kapsoya**

The station recorded rainfall, average air temperature and total pan evaporation of 54.8 mm, 17.7<sup>0</sup>c and 42.3mm respectively. Sunshine hours reported was not reported.

*Maize (HB628) was at 93% ninth leaf while Beans were at emergence stage and both crops were 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 1.3 mm, 18.4<sup>0</sup>c and 29.3 mm respectively. No sunshine hours were recorded.

*Maize (H513) was at above 100% ninth leaf stage and in moderate state. Beans (GRB/92) were at 97% flowering stage and in unsatisfactory state but were damaged by aphids sucking juices from plants as normal yield is expected.*

### **2.3.2 Kabete**

The rainfall, average air temperature and total pan evaporation recorded were 1.4mm, 19.1<sup>0</sup>c, and 30.5mm respectively while no sunshine observation was made.

*Maize was at after tassling stage and in fair state. Beans were at flowering 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 were damaged by thrips and cigar end rot at less than 10% each.*

### **2.3.3 Thika**

The decadal rainfall and mean air temperature at the station was 29.8mm and 20.3<sup>0</sup>c while evaporation 31.3mm was reported. 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**

Nyahururu reported a decadal rainfall of 27.8mm, average air temperature of 15.1<sup>0</sup>c, total pan evaporation of 39.3mm, 6.0 hours of sunshine hours per day.

*Maize was between emergence the next stage. Beans and Potatoes were at after flowering stage and in fair state. However for Maize and Beans below normal yield is expected while potatoes normal. All the three crops were affected by insufficient rain.*

### **2.3.5. Dagoretti**

This station reported rainfall, average air temperature and pan evaporation of 7.1mm, 19.4<sup>0</sup>c and 37.1 mm respectively. Sunshine hours recorded were 7.1hours per day.

*Maize (DH04) was at after ninth leaf stage and being damaged by stalk borer(10% damaged) and in good state, while Beans were at after flowering stage and in moderate state.*

## **2.4 EASTERN PROVINCE**

### **2.4.1 Meru**

The station reported rainfall, average air temperature and total pan evaporation of trace, 18.1<sup>0</sup>c and 36.0 mm respectively. Sunshine hours recorded were 7.6 hours per day. *No phonological report received.*

### **2.4.2 Embu**

The rainfall recorded was 0.8 mm; average air temperature and total pan evaporation reported at the station were 19.5<sup>0</sup>c and 23.8mm respectively. While sunshine hours were not reported.

*Maize and Beans were at flowering stage and in fair state as normal yield is expected.*

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

The station reported an average air temperature of 19.8<sup>0</sup>c 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 expected.*

## **2.5 COAST PROVINCE**

### **2.5.1. Msabaha**

This station reported rainfall, average air temperature and pan evaporation of 41.8mm, 26.7<sup>0</sup>c and 34.3mm respectively. Sunshine hours were not reported.

*Mangoes (Ngowe type) were at 100% fruit setting stage and in good state Maize was at after emergence stage and in fair state as weeding is on.*

### **2.5.2 Mtwapa**

*The station recorded rainfall, average air temperature and pan evaporation of 28.6 mm, 25.5<sup>0</sup>c and 31.5mm respectively. There was no report on sunshine hours.*

*Maize (DH4) was at 100% ninth leaf stage and in moderate state though was damaged by birds, animals and stalk borer. Mangoes (Apple) were at 100% ripeness stage and in moderate state however were damaged by insects. Watermelon (sugar baby) was 60% flowering and in moderate state though damaged by leaf rust, aphids, moths and excessive rain.*

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

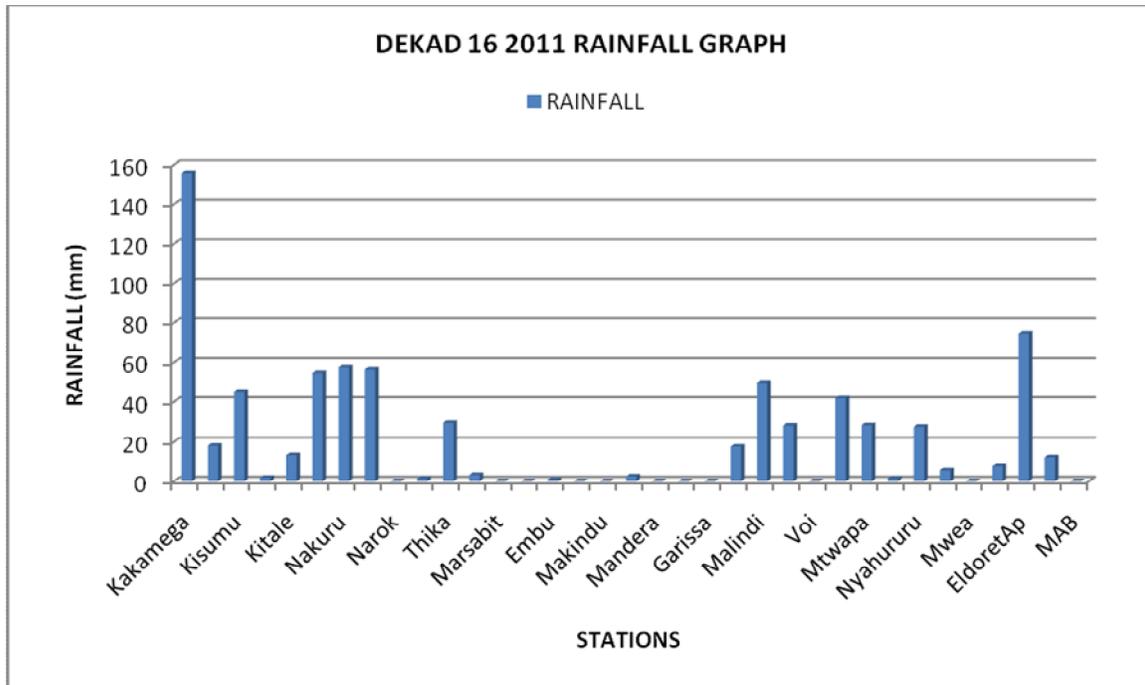


Figure 3.1: Actual Rainfall

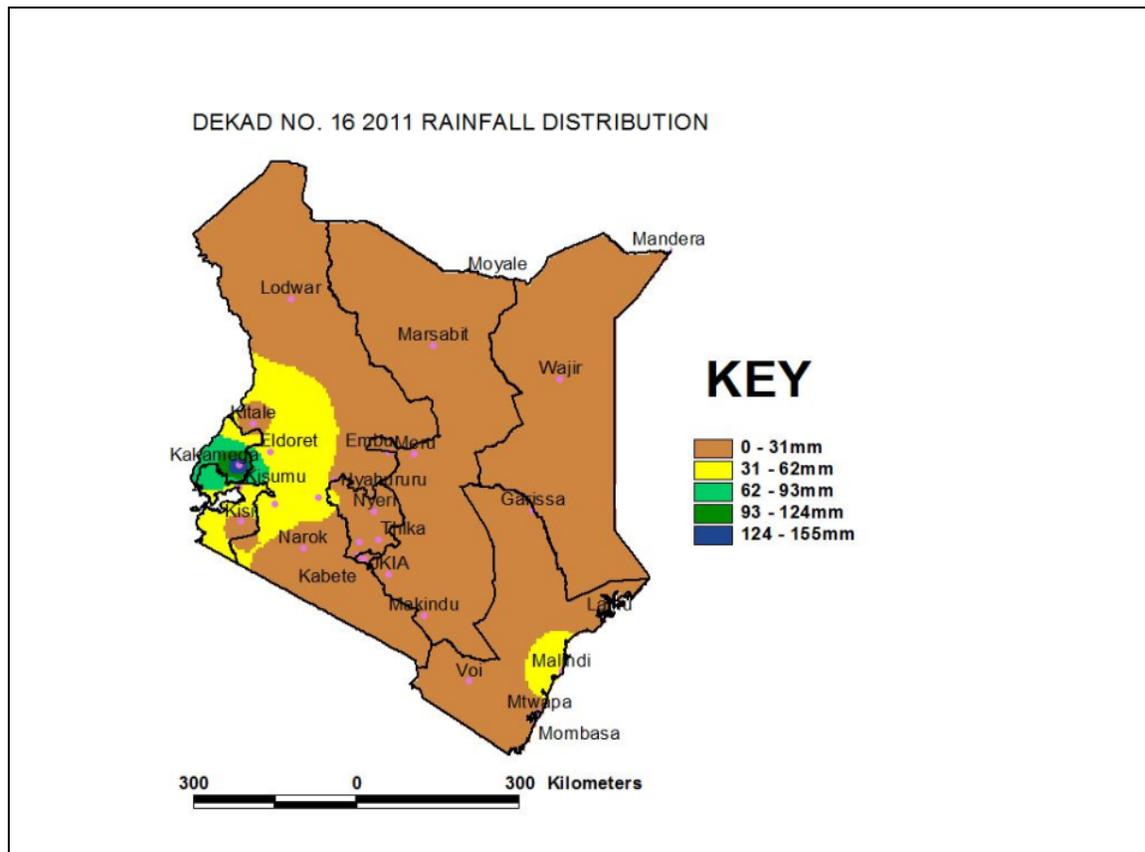


Figure 3.2: Rainfall distribution

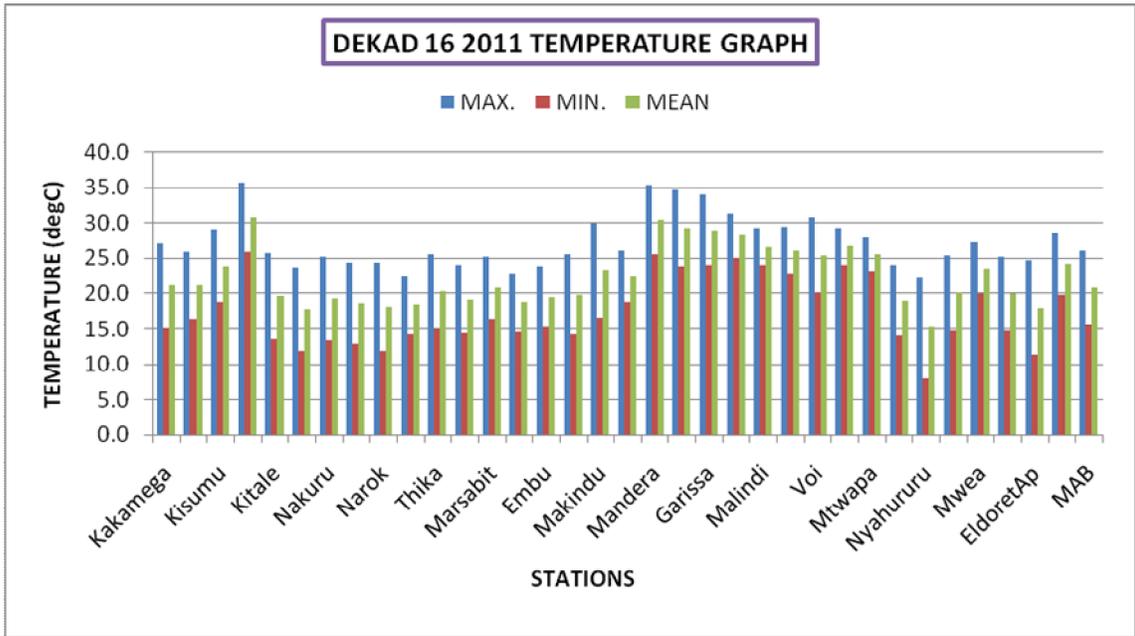


Figure 3.3: Mean Temperature

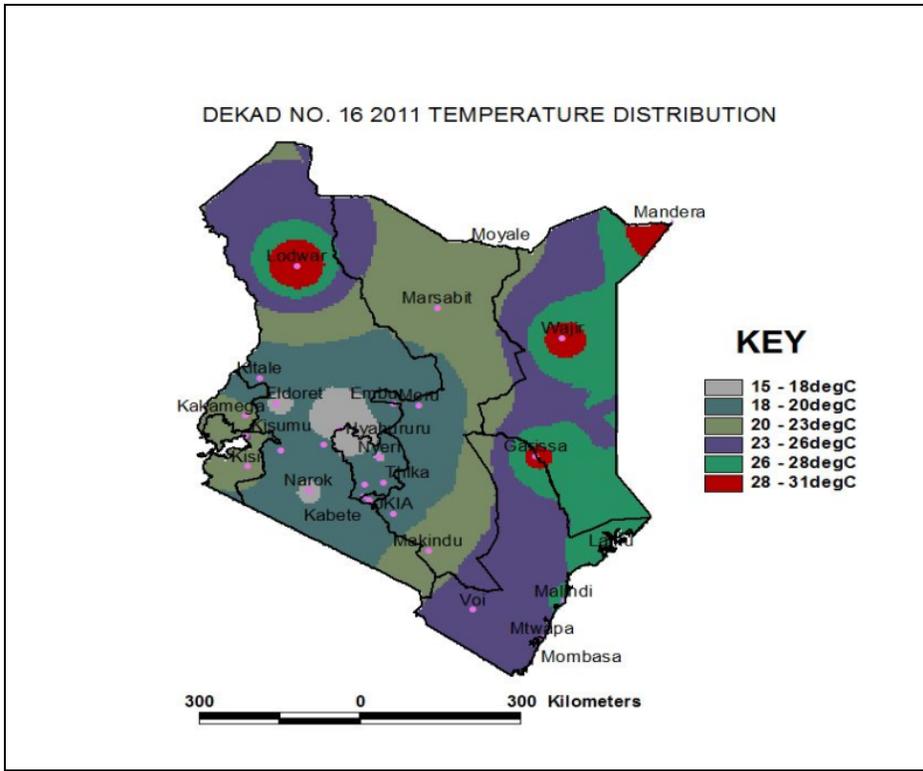
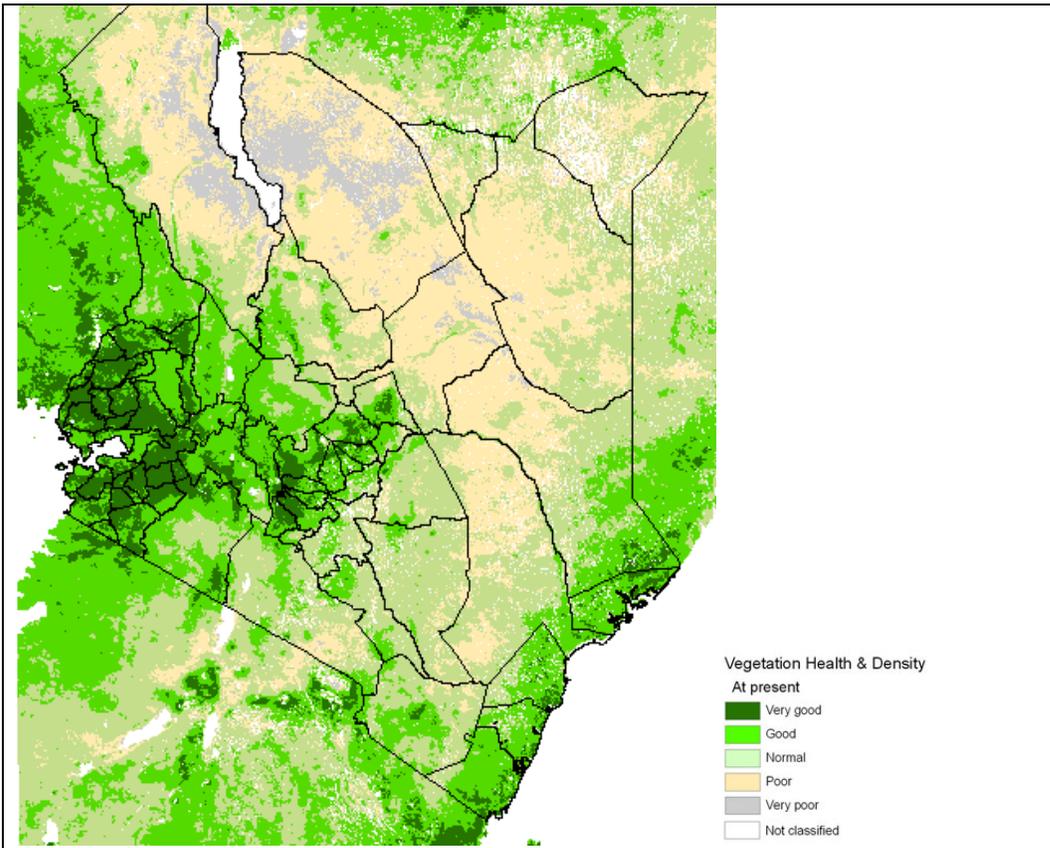
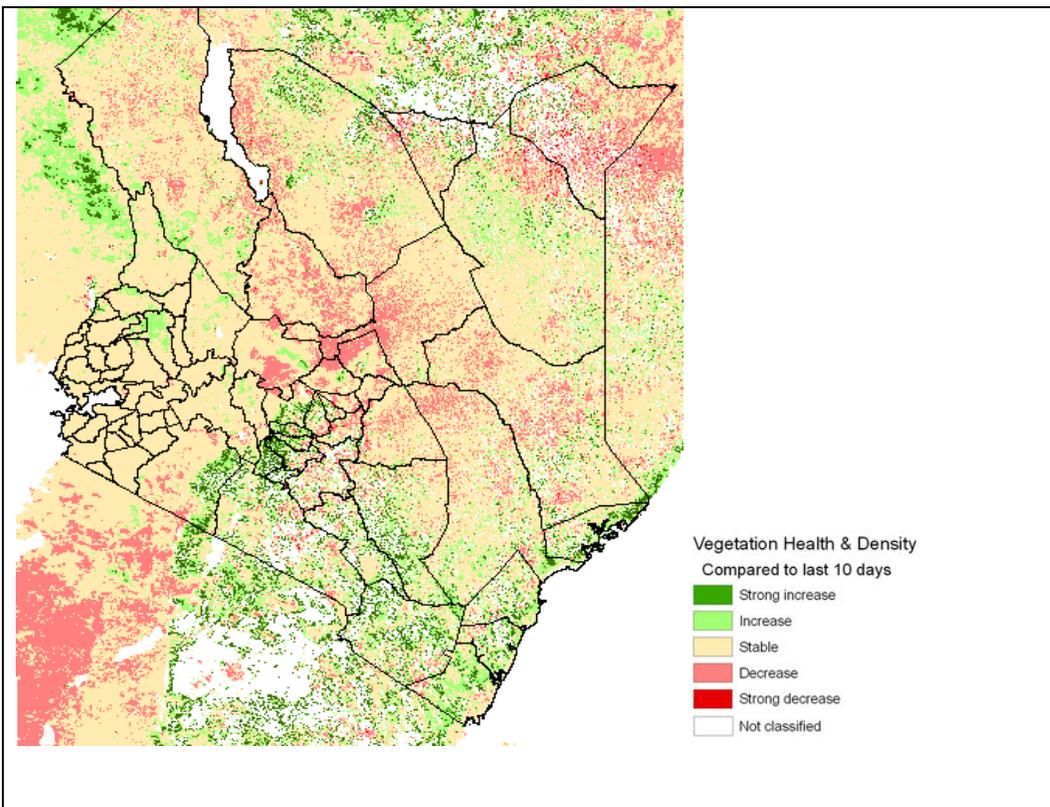


Figure 3.4 Mean Temperature Distributions



**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; 11<sup>TH</sup> TO 20<sup>TH</sup> 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 throughout the forecast period. Occasional morning rains are also likely over few places.  
*This is expected to boost the growth of the beans and maize which are approaching their maturity stage.*
- 🇰🇪 **The Northwestern counties (Turkana, West Pokot etc),** will experience mainly sunny intervals over most areas throughout the forecast period but few areas will experience occasional light to moderate afternoon showers.  
*Livestock 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 morning with light rains/drizzle over few places then sunny intervals and showers over few places in the afternoons during the forecast period. The second half of the forecast period will be characterized by mainly sunny intervals and occasional afternoon/night showers over few places in the afternoon/night.  
*Therefore, the crops grown in these areas are expected to fare well during the next ten days.*
- 🇰🇪 **Northeastern counties (counties of Marsabit, Mandera, Wajir, Garissa, etc),** will experience mainly sunny intervals throughout the forecast period.  
*These weather conditions are expected to reduce water and pasture availability thereby 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.  
*No major positive impact is expected on the crops as the farms do not have major activities during the June, July and August season.*
- 🇰🇪 **The Coastal strip (counties of Mombasa, Malindi, Kilifi, Lamu, Kwale, etc)** will experience light to moderate morning showers over several places during much of the forecast period.  
*The crops grown in these areas are expected to continue doing well.*

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

Director,  
Kenya Meteorological Department,  
Agro meteorological 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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