

**National Drought Management Authority**  
**MAKUENI COUNTY**  
**DROUGHT EARLY WARNING BULLETIN FOR OCTOBER 2017**



A Vision 2030 Flagship Project



**OCTOBER EW PHASE**



**Drought Situation & EW Phase Classification**

**Biophysical Indicators**

- Generally the month of October was dry and Sunny.
- The County recorded an average 3 month VCI of 35.49 implying normal vegetation greenness for the County with the exception of Kilome, Kibwezi East and West where there was moderate vegetation deficit.
- State of pasture and browse was fair in the Mixed farming zone while in the Marginal mixed farming zone it was poor.
- The state of surface water sources was on a decline trend across all the three livelihood zones. Frequent rationing was experienced in major towns due to decline in Volumes at the source.

**Socio Economic Indicators (Impact Indicators)**

- Main agricultural activity was land preparation and Planting.
- Livestock body condition ranged from fair to poor across all the three livelihood zones body score of 3-4
- Compared to the long term, Terms of trade were fair at 80.5
- The percentage of children at risk of malnutrition was 10 percent which is within the normal range.
- The County CSI was 11.7, an indication of high coping mechanisms for most households.

**Early Warning (EW) Phase Classification**

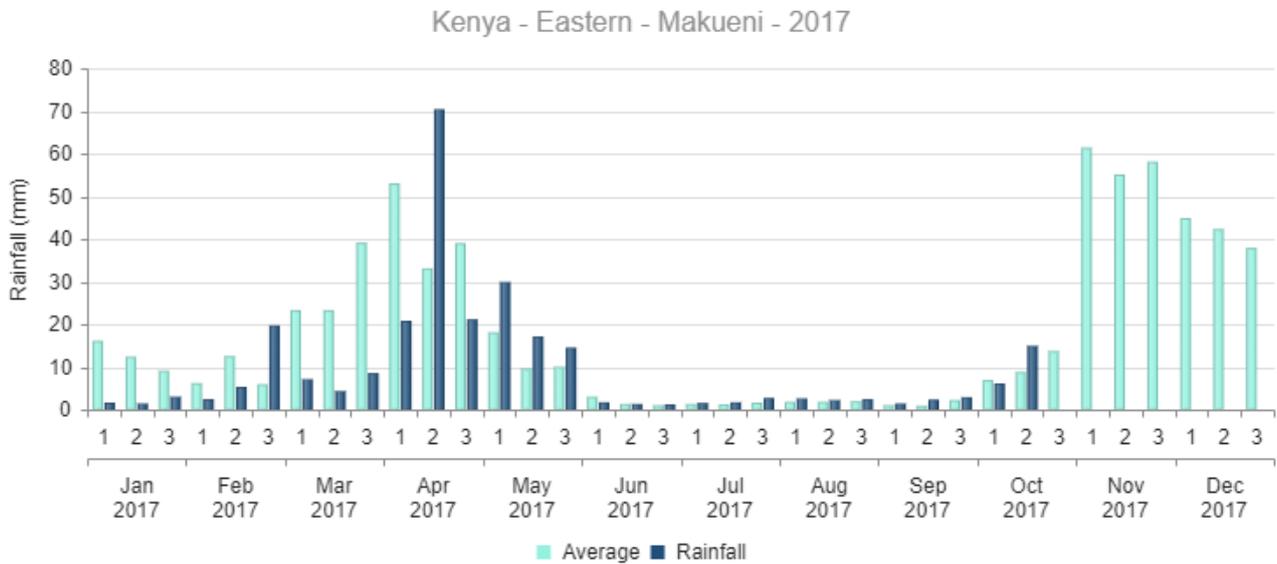
Livelihood Zone	Phase	Trend
Mixed farming coffee/dairy	Alert	Worsening
Mixed farming Food Crop/Livestock	Alert	Worsening
Marginal Mixed Farming	Alert	Worsening
County	Alert	Worsening
Biophysical Indicators	Value	Normal Ranges
VCI-3Month	35.49	>35
State of Water Sources	3-4	5
Production indicators	Value	Normal
Crop Condition	N/A	Fair
Livestock Body Condition	3-4 Alert	6-Normal
Milk Production	1.3L	1.8 Litres
Livestock Migration Pattern	Normal	Normal
Livestock deaths (from drought)	No death	No death
Access Indicators	Value	Normal
Terms of Trade (ToT)	80.5	>80
Milk Consumption	1.3 L	1.2 litres
Return distance to water sources	6.6 Km	3.4 Km
Cost of water at source (20 litres)	Ksh 3-5	Ksh 3
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	10	<12.9
Coping Strategy Index (CSI)	11.75	<10

<ul style="list-style-type: none"> <li>▪ Short rains harvests</li> <li>▪ Short dry spell</li> <li>▪ Reduced milk yields</li> <li>▪ Increased HH Food Stocks</li> <li>▪ Land preparation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Planting/Weeding</li> <li>▪ Long rains</li> <li>▪ High Calving Rate</li> <li>▪ Milk Yields Increase</li> </ul>	<ul style="list-style-type: none"> <li>▪ Long rains harvests</li> <li>▪ A long dry spell</li> <li>▪ Land preparation</li> <li>▪ Increased HH Food Stocks</li> <li>▪ Kidding (Sept)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Short rains</li> <li>▪ Planting/weeding</li> </ul>								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

# 1. CLIMATIC CONDITIONS

## 1.1 RAINFALL PERFORMANCE

- Generally the month was dry apart from light showers which were received towards the end of the month as shown in the graph.

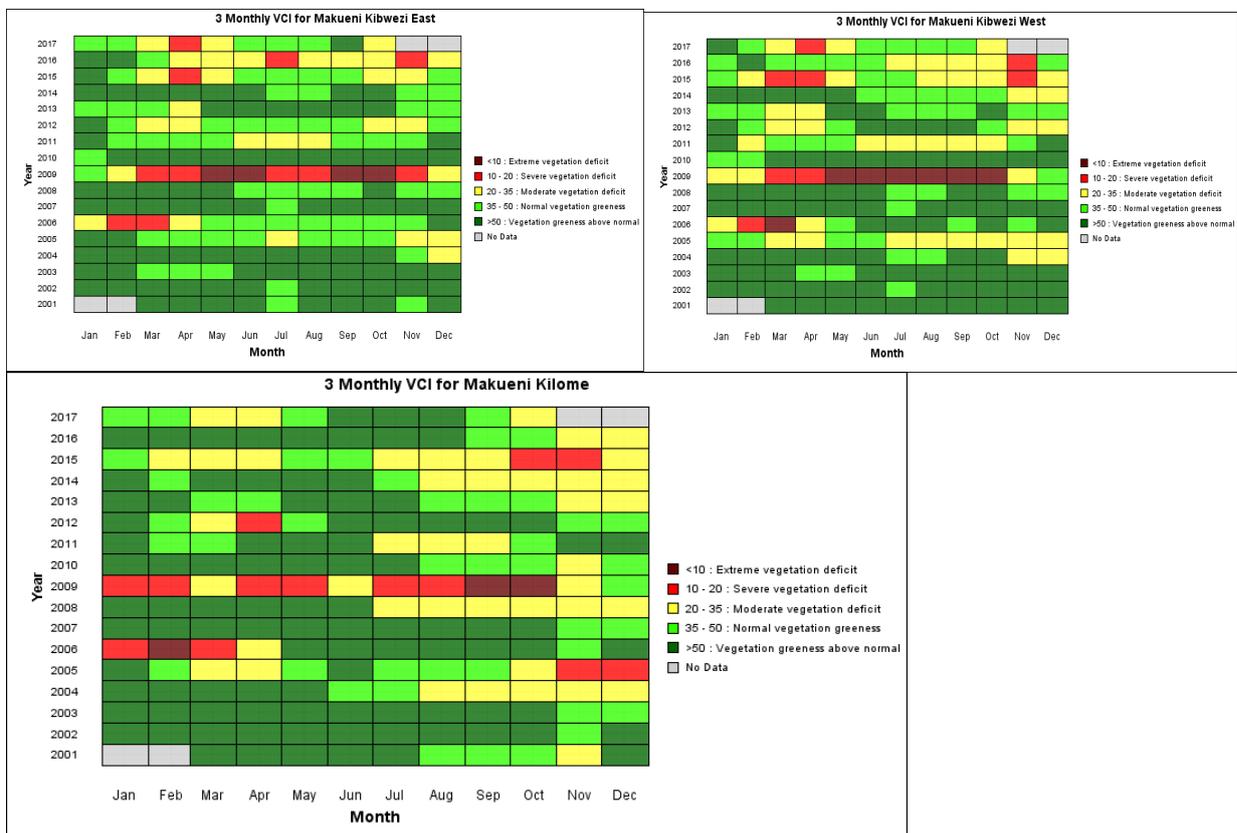


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# 2. IMPACTS ON VEGETATION AND WATER

## 2.1 VEGETATION CONDITION

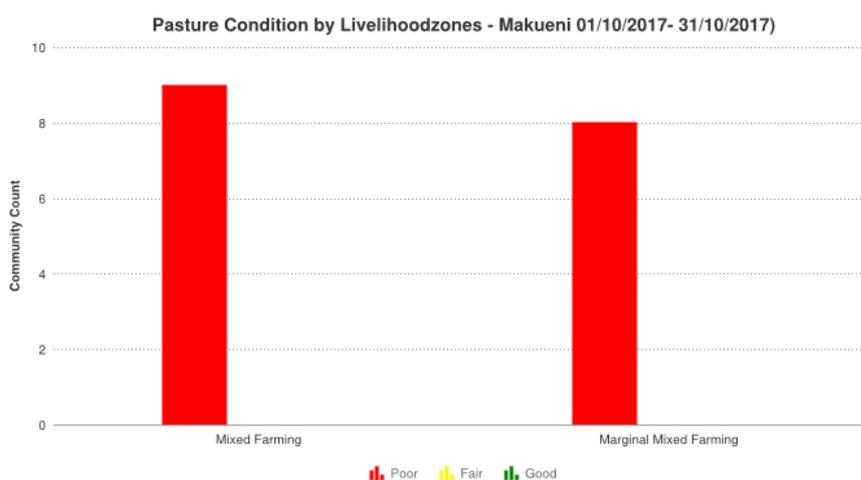
### 2.1.1 Vegetation Condition Index(VCI)



- The average 3-month VCI for the County was 35.49 from 52.54 that of last month an indication of normal vegetation greenness.
- For Kibwezi West, Kibwezi East and Kilome, the respective VCI indices were 26.39, 33.4 and 34.27 respectively implying moderate vegetation deficit.

### 2.1.2 Pasture and Browse

- Generally the pasture condition in all the three livelihood zone was poor.
- Browse condition was fair in both mixed farming (Coffee/Dairy) and mixed farming (Livestock/Food Crop) while in Marginal mixed farming livelihood zone was poor.
- The condition of pasture and browse is expected to improve in the next two to three weeks with the onset of OND rains.



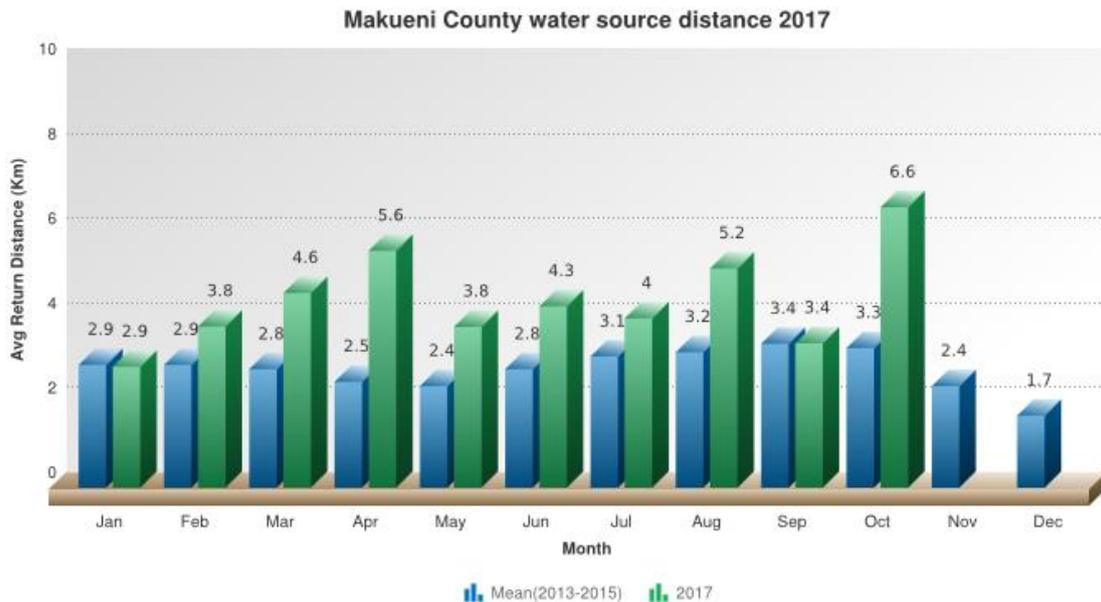
## 2.2 WATER RESOURCE

### 2.2.1 Sources

- Major sources of water during the month of October were: Rivers, shallow wells, pans & dams and piped water schemes (Kilome Sub County).
- Other sources were traditional river wells, springs and boreholes.
- State of water sources ranged from declining to normal in some areas(Index of 4-5) in both the mixed farming (Coffee/Dairy) and mixed farming (Livestock/Food Crop) livelihood zones trend while in the marginal mixed farming livelihood zone the situation ranged from inadequate to declining (index of 3-4).
- Average cost of a 20 litre Jerry can was between Ksh3 to 5 in the water Kiosks.
- Effects of water stress were still being felt even with the showers experienced towards the end of the month. The frequency of rationing reduced from the previous month. This was attributed to the drying up and reduction in levels of the town’s main water supply (Rivers Kaiti and Muani Borehole). A 20 litre jerrycan was being sold at Ksh 25.

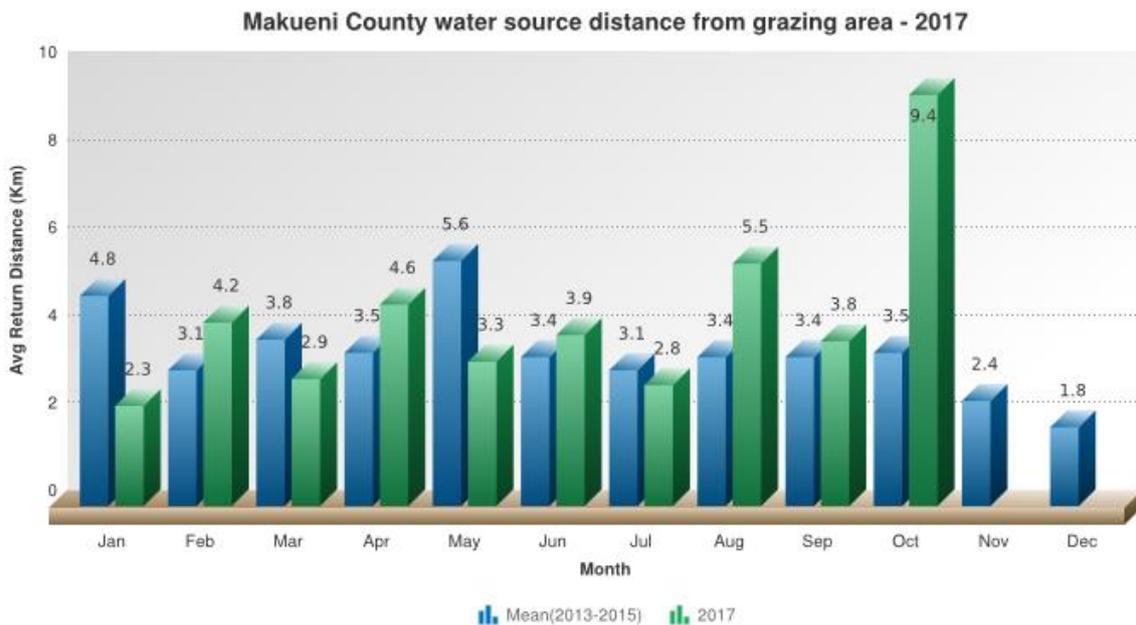
### 2.2.2 Household access and Utilization of water

#### Distances to water sources for household consumption



- The average household return distances was 6.6Km compared to the long term mean of 3.3km.
- This was attributed to the decline in the water levels in major water reservoirs.

### 2.2.3 Livestock access to water



- Average return distances to water sources for livestock in the County was higher than last month mostly in the Marginal mixed farming zone.
- The high distances is attributed to declining water levels in the available water resources.
- The distances are expected to decrease in the next two weeks with the proper onset of OND rains.

## 3.0 PRODUCTION INDICATORS

### 3.1 LIVESTOCK PRODUCTION

#### 3.1.1 Livestock Body Condition

- The current livestock body condition for cattle in most parts of the county was at the borderline (fore-ribs not visible but 13<sup>th</sup> and 14<sup>th</sup> ribs visible) while in some areas in the MMF zone, the thin fore ribs were visible(index 3) while that of shoats was fair to poor across all the three livelihood zones
- However, in the ranching zones such where pasture preservation is done, the body condition for cattle was good.

### **3.1.2 Livestock Diseases**

- No major livestock disease outbreaks reported.

### **3.1.3 Milk Production**

#### **Milk availability**

- Milk availability in all the livelihood zones was low. This is normal during this time of the year.
- The trend in milk availability was on a decline as a result of the poor pasture conditions and longer distances to water sources.

#### **Marginal mixed Farming zone:**

- Households in this zone were more reliant on goat milk whose yield was between 0.1-0.4litres per day. Local Zebu also produced 0.2-0.5litres but the situation is expected to improve within the next 1 to 2 months as the rainfall onset takes place and the pastures regenerate in earnest.

#### **Mixed farming (Food Crop/Livestock):**

- In this zone, Zebu cattle and crossbreeds accounted for most milk produced. Availability was approximately 0.4-0.6 litres compared to a normal of 0.5litres.

#### **Mixed Farming (Coffee/Dairy):**

- The production of milk per day per household ranged from 0.75-1.5 litres per day against a normal of 1litre.

## **3.2 RAIN-FED CROP PRODUCTION**

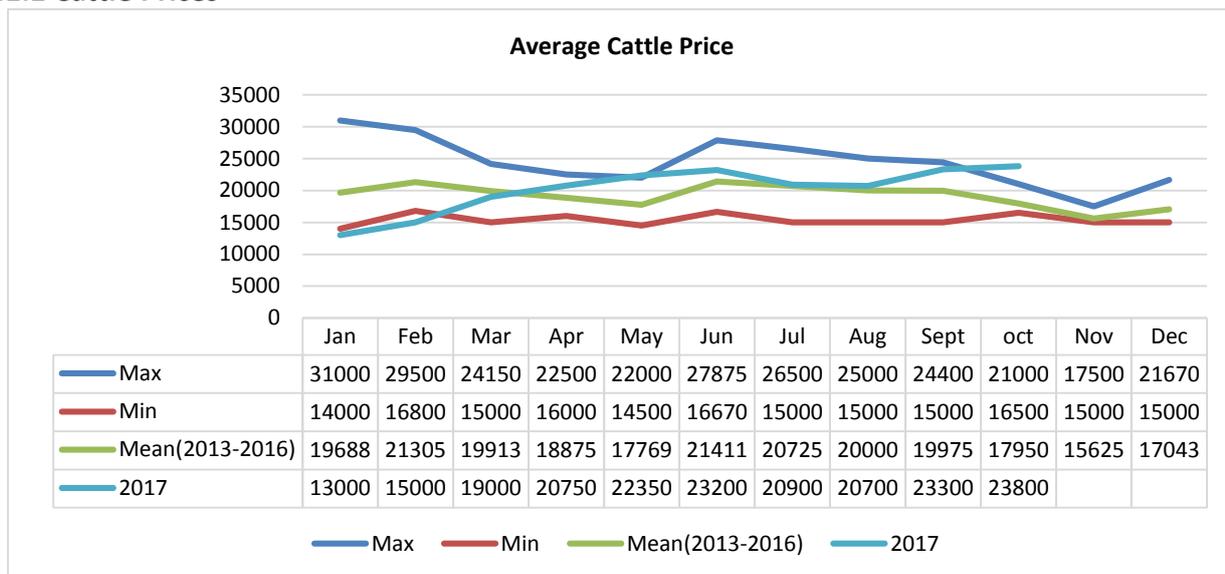
### **3.2.1 Stage and Condition of food Crops**

- Land preparation and planting was the main farm activity taking place throughout the county in anticipation of the OND rains.

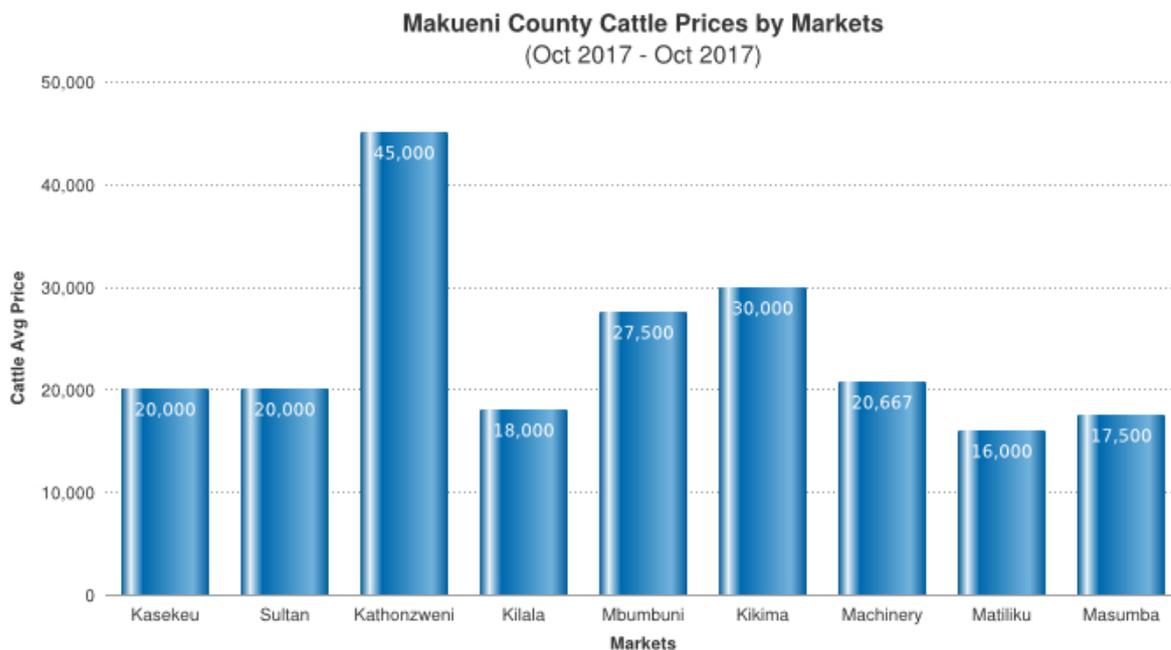
## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

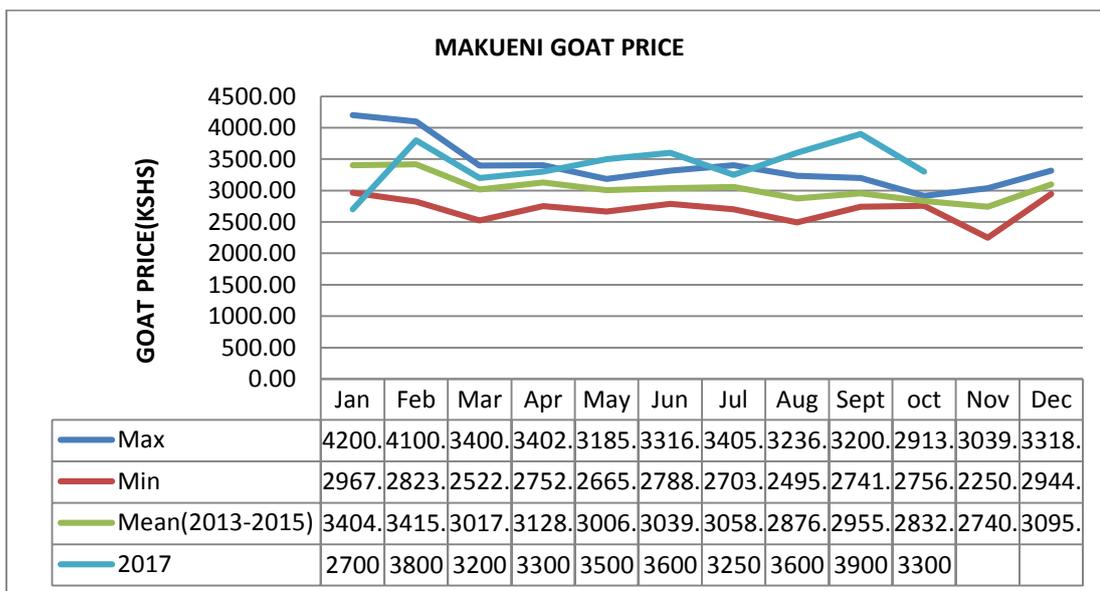
#### 4.1.1 Cattle Prices



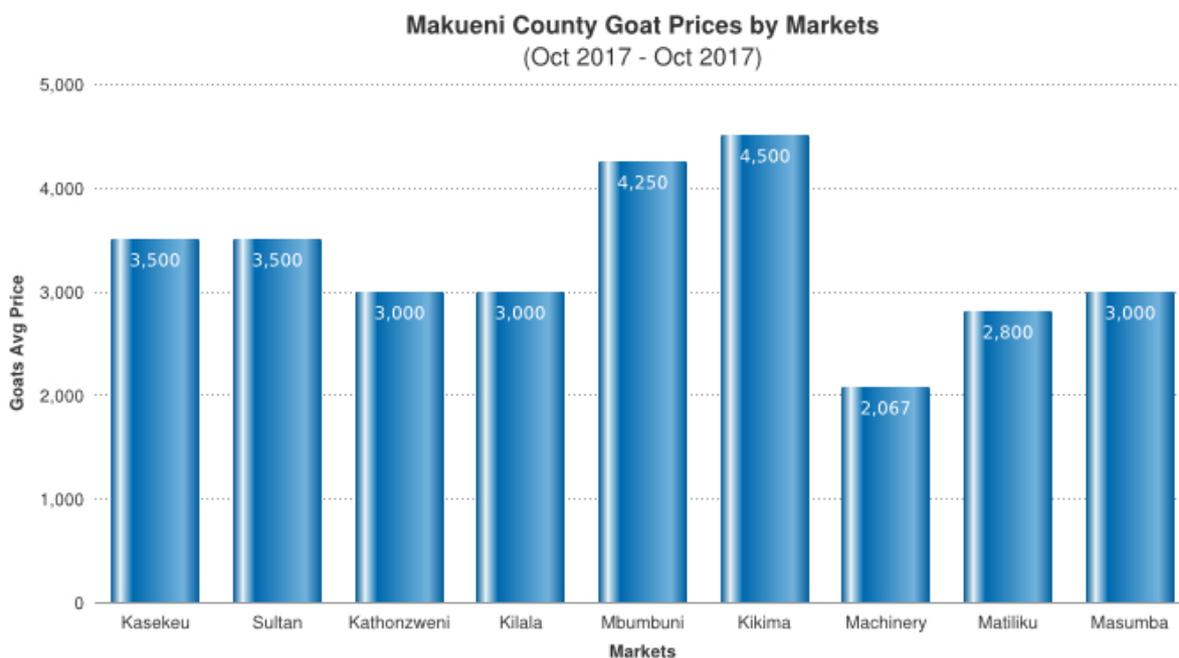
- Average farm gate prices of cattle(2-3 year old bull) increased slightly from KSh23, 300 to Ksh23, 800. Compared to (2013-2016) long term average the current price was above normal.
- The trend could be attributed to the high demand for the cattle.
- The prices of cattle at different markets were as follows:



### 4.1.2 Goat Prices

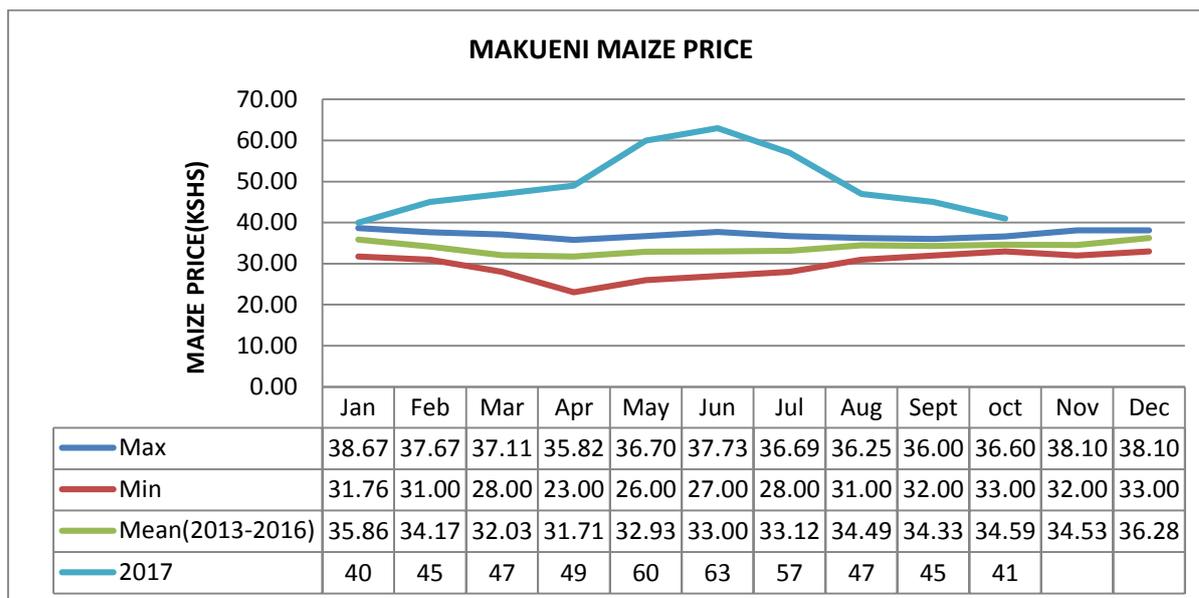


- The average farm-gate price of a goat decreased from Ksh3, 900 to Ksh3, 300. This was still higher than the (2013-2016) long-term mean.
- The decrease in price is attributed to the fair body condition of shoats.
- Average goat market price was as follows in various markets across the county.



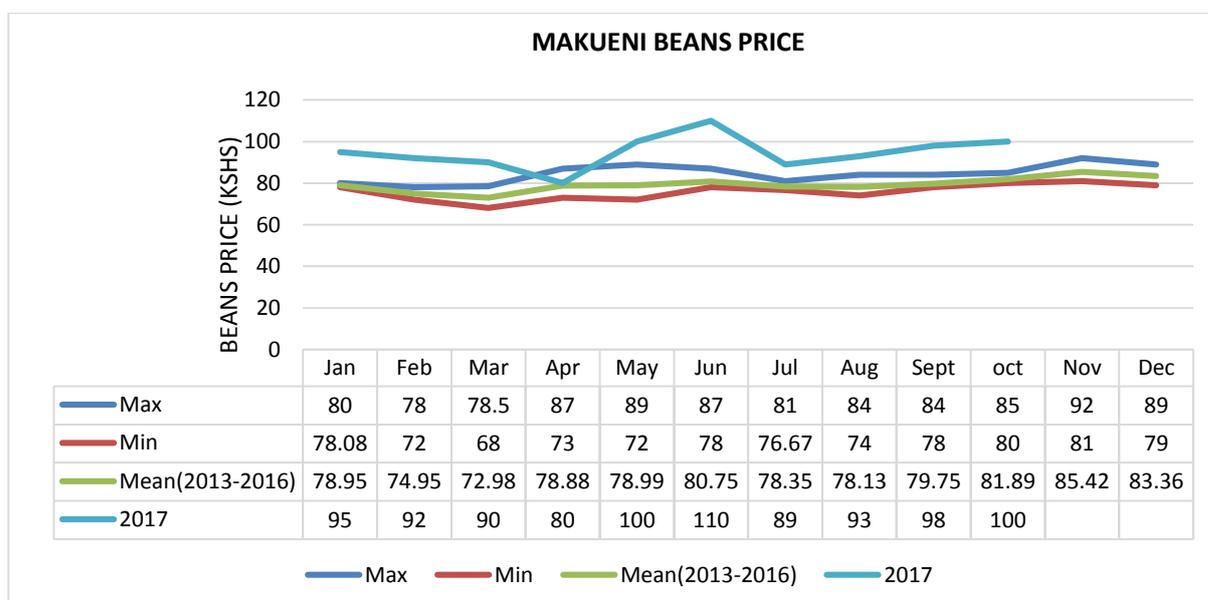
## 4.2 CROP PRICES

### 4.2.1 Maize



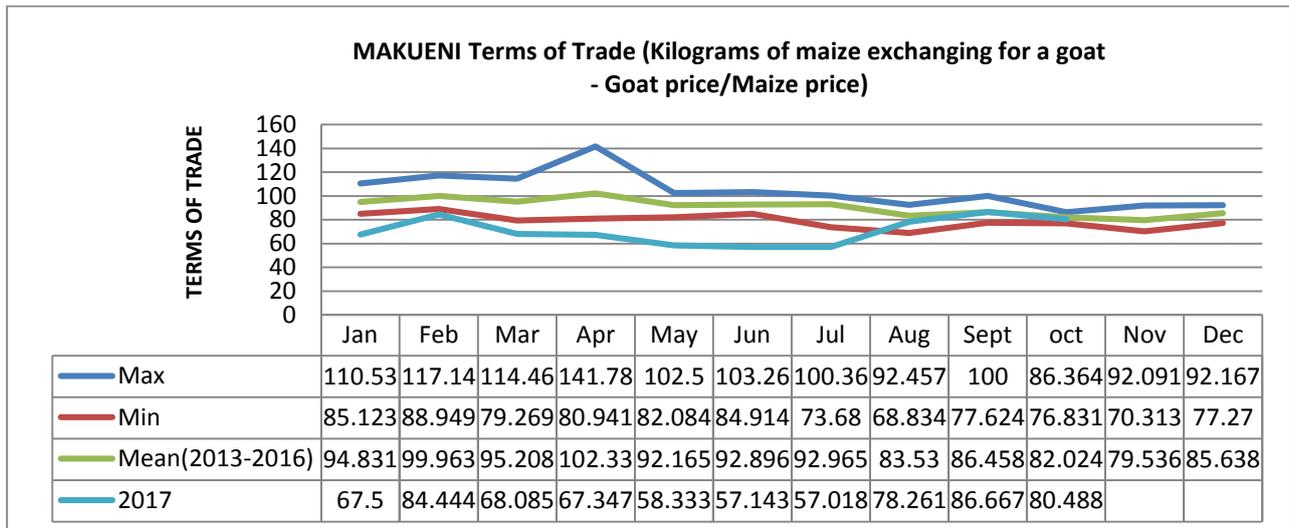
- The average market price of maize decreased from Ksh 45 to Ksh41. This was attributed to increase in imports from other parts of the country that have stabilized the price.
- The price remained relatively higher than the (2013-2016) long-term average and lower than that of last month.
- The prices remain steadily higher than long term price.

### 4.2.3 Beans



- The average price of beans increased from Ksh98 to ksh100.
- Compared to the long term the current prices are above normal and this is attributed to the poor harvests that were realised in most parts of the County in the previous season.

### 4.3 Livestock Price Ratio/Terms of Trade



- Terms of trade (ToT) were fair at 80 implying that from a sale of one goat, a farmer could purchase 80Kg of maize from the earnings of a goat. This was within the normal range when compared to the (2013-2016) long-term average. Compared to last month the TOT had declined.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

#### Marginal mixed Farming zone

- Milk produced was equivalent to milk consumed in this zone, an average of 350-450mls (Which was below normal).
- Current milk price was between Ksh60 to Ksh70 per litre against the normal of Ksh55 and this has limited accessibility to majority of the households.

#### Mixed farming Zone (Food crop/Livestock).

- Milk consumption per day in this zone was between 300mls to 500mls which was below normal.
- The current milk price is between Ksh55 to Ksh60 against the normal of Ksh50.

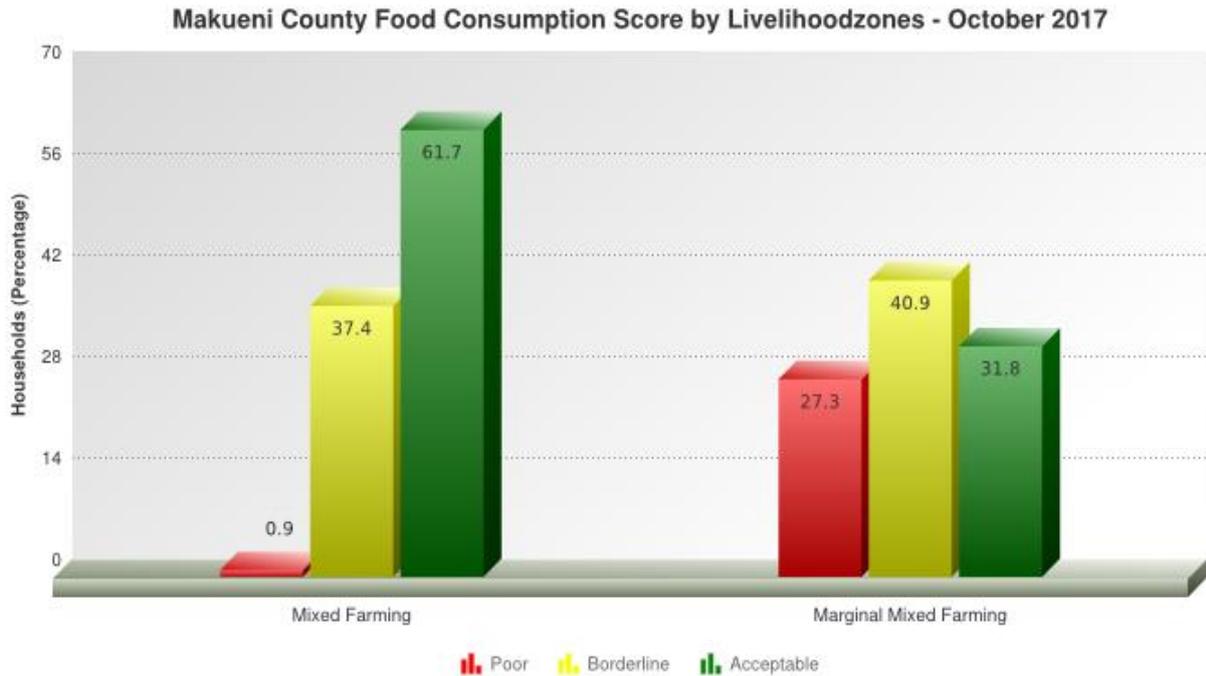
#### Mixed Farming Zone (Coffee/Dairy)

- Milk consumption is about 500mls to 700mls which is below normal. The average milk price was between Ksh48 to Ksh60 against the normal of Ksh45.

### 5.2 FOOD CONSUMPTION SCORE

- In mixed farming zone 61.7% of households had an acceptable food consumption score, 37.4% of households were at the borderline while 0.9% had a poor consumption score while in the marginal mixed farming zone 31.8% of households had an acceptable food consumption score, 40.9% of households were at the borderline while 27.3% had a poor consumption
- This implies that the dietary diversity of most households was fair to good and this is as a result of the outreach interventions by the nutrition department and availability of food stocks in the market.

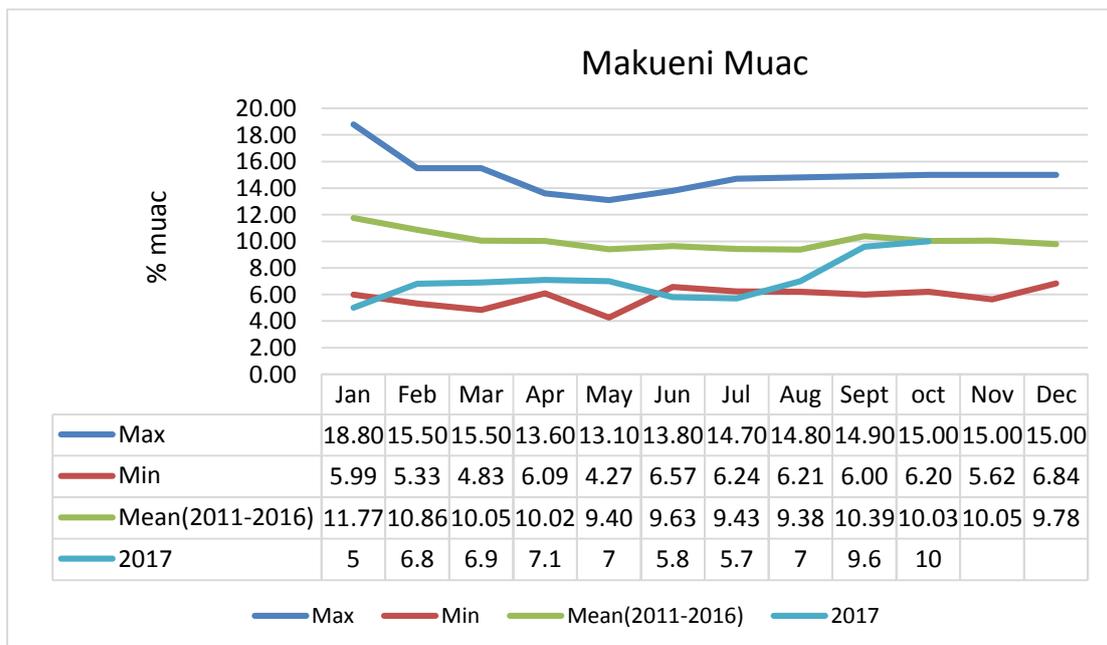
- The bar graph below illustrates the food consumption score in the mixed farming and marginal mixed farming livelihood zones.



### 5.3 HEALTH AND NUTRITION STATUS

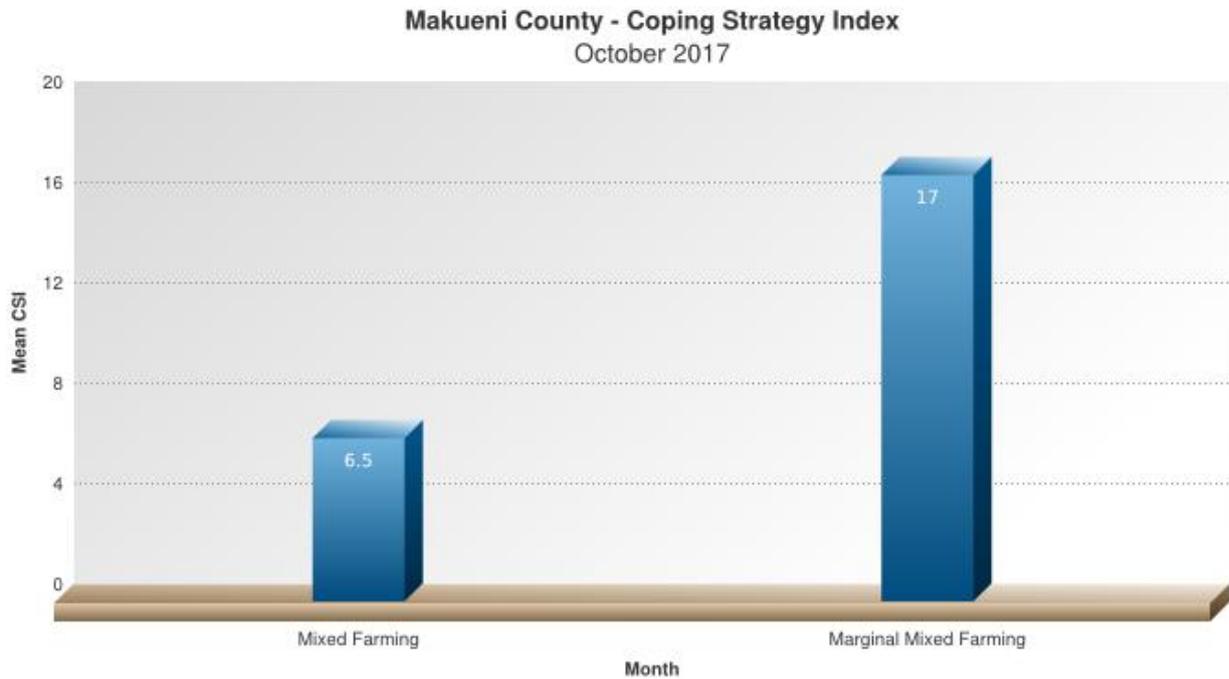
#### 5.3.1 Nutrition Status

- The percentage of children under five years at risk of malnutrition was 10 percent, an increase from the previous month and this can be attributed to reported increased cases of diarrhoea, poor dietary consumption across all the livelihood zones.
- Compared to the long term average the situation was stable.



### 5.3 COPING STRATEGIES

- The CSI in Mixed farming livelihood zone was 6.5 while in the Marginal mixed farming zone it was 17 implying more coping mechanisms were being employed in Marginal Mixed Farming livelihood zone than in the Mixed Farming livelihood zones.
- The average CSI for the county was 11.8



## 6.0 CURRENT INTERVENTION MEASURES (ACTION)

### 6.1 NON-FOOD INTERVENTIONS

- Water trucking by the County government. Water trucking carried out in 145 institutions (Dispensaries, Boarding schools and communal water points)
- Seed distribution by the Department. of agriculture(Green grams N26 10 MT,KS20 13 MT, Cut bean1 and Cut X56 bean 4 MT, DH02 maize 14.7 MT,DH04 maize 12.2 MT and 186,000 cassava cuttings.
- Pasture seed distribution worth KSh 5 Million.
- Chakula Kwa Jamii Cash transfer to 27,567 Households for 3 months commencing on September 2017 to November 2017. Out of this, 26,725 Households were reached.
- Fuel subsidy to 69 water schemes.68 water schemes benefitted from 100lts each. 1 water scheme (Mbooni) benefitted from 2000lts.
- Asset Creation Programme (C/FFA) supported by WFP & GOK (May 2015-April 2018) The programme is supporting 45,669 beneficiaries (7,393 HH) in creating sustainable Rain Water Harvesting Structures (zaipits, terraces, farm ponds, semi-circular bunds), micro irrigation activities, tree nursery establishment & planting, pasture establishment & preservation, market linkages and capacity building of community & staff for resilience building.

### 6.2 FOOD AID

- The September allocation of food aid from Special Programmes for distribution by the County Commissioner’s office was received during the month of October. The rations were

as follows: Maize 3,500(50 Kg) bags, Beans 1,800(90 Kg) bags, Rice 2,700 (90Kg) bags, Oil (0.5×24 litre) cartons.

- No health commodities were received since what was available was adequate to last the county for some time.

## **7. EMERGING ISSUES**

### **7.1 Insecurity/Conflict/Human Displacement/Human Wildlife conflict**

- There were reported cases of human-wildlife conflict along Athi River belt in areas such as Muuani, Wandei, Yikivuthi, Athi Salama, Utini and Muangeni.
- Cases of Elephants crossing from Chyulu and Tsavo in search of water and food was also reported.

### **7.2 Migration.**

- Cases of livestock migration from the neighbouring County of Kajiado were still being reported in Mukaa and areas bordering Kajiado. Large herds of Camels were also spotted in along the highway towards Makindu.

### **7.3 Food security prognosis**

- The terms of trade have remained fair for the month under review. The prices for cattle and goats remained relatively stable while that of the major food staples remained higher than long term, although stable.
- The short rains had a late onset(3<sup>rd</sup> decad of October-1<sup>st</sup> week of November) as compared to a normal onset of mid-October, although some parts in the Marginal Mixed farming zone are yet to receive rainfall. Planting has taken place in at least 60 percent with the number expected to increase to about 80 percent in about a week. The County government of Makueni has also distributed some crop and pasture seed for planting. Reports from the Meteorological Department have indicated that the rains expected will be normal to above normal. This should offer some reprieve to both crop and livestock farmers assuming that the rain is consistent enough to last to the end of the season.
- Water sources are also expected to be replenished within the next few weeks though close monitoring needs to be done. This should reverse the current situation.

## **8. RECOMMENDATIONS**

### **Agriculture Sector**

- Up scaling of current crop production.
- Promotion of water harvesting at household level.
- Provision of subsidized certified seed/cuttings.
- Promotion of Good Agronomic Practices that is smart Agriculture, minimum tillage, crop rotation and zai-pitting.
- Promotion of drought tolerant crops(production, value addition and utilization)

### **Livestock sector**

- Livestock improvement programme for goats, chicken and cattle.
- Enhance provision of subsidized pasture seed.
- Range rehabilitation.
- Disease surveillance along Kajiado border
- Enhance livestock medical camps at sub county level

### **Water Sector**

- Servicing and rehabilitation of broken down boreholes as well as stockpiling with spares.
- Advocate rain water harvesting and use of water treatment chemicals
- Support fuel subsidy and water trucking in drought hit areas

### **Health Sector**

- Improving Vitamin A supplementation for Children Under five years.
- Integrated health outreaches and mass screening of children under the age of 5 years
- Enhance advocacy on exclusive breastfeeding.
- Sensitizing community health volunteers on WASH and HIV
- Upscale supplementary feeding programme

### **Education**

- Upscale HGSMP to cover more schools.