

**National Drought Management Authority**  
**KITUI COUNTY**  
**DROUGHT EARLY WARNING BULLETIN FOR APRIL 2019**



A Vision 2030 Flagship Project



APRIL EW PHASE	Early Warning Phase Classification			
<p><b>Drought Status: ALERT</b></p> <p><b>Maandalizi ya mapema</b></p>	<b>LIVELIHOOD ZONE</b>	<b>EW PHASE</b>	<b>TRENDS</b>	
	Marginal Mixed Farming	Alert	Worsening	
	Mixed Farming	Alert	Worsening	
	<b>County</b>	Alert	Worsening	
<b>Drought Situation &amp; EW Phase Classification</b>				
<b>Biophysical Indicators</b>				
<p>▪ The onset of the long rains was in the third dekad of April compared to second dekad of March normally.</p> <p>▪ The vegetation greenness was below normal</p> <p><b>Socio-Economic Indicators (Impact Indicators)</b></p> <p><b>Production Indicators</b></p> <p>▪ Land preparation and re-planting was ongoing.</p> <p>▪ Livestock body condition was fair for all the species with no abnormal cases of livestock diseases and death reported.</p> <p>▪ Milk production was within the normal range.</p> <p><b>Access Indicators</b></p> <p>▪ Terms of trade were favourable compared to long term mean.</p> <p>▪ Milk consumption was within the normal range.</p> <p>▪ Distances to water sources were above normal range.</p> <p>▪ The cost of water at source was normal.</p> <p><b>Utilization Indicators</b></p> <p>▪ The percentage of children mid at risk of malnutrition was within normal range.</p> <p>▪ Households employed normal coping mechanisms to cope with lack of food or money to buy food.</p>	<b>Biophysical Indicators</b>	<b>Value</b>	<b>Normal ranges</b>	
	Rainfall (% of normal)	91	80-120	
	VCI-3 month	16.27	35-50	
	Forage Condition	Fair to poor	Good	
	<b>Production indicators</b>			
	Maize Crop Condition	Poor	Good	
	Livestock Body Condition	Fair	Good	
	Milk Production (in litres)	1.7	≥ 1.6	
	Livestock Migration Pattern	Not normal	Normal	
	Livestock Deaths (from Drought)	No death	No death	
	<b>Access Indicators</b>			
	Terms of Trade (ToT)	109	≥ 85	
Milk Consumption (in litres)	1.2	≥ 0.7		
Return Distance to Water Sources (in km)	7.6	≤ 5.9		
Cost of Water at Source (20 litres Jerry can)	2-5	≤ 5Ksh		
<b>Utilization indicators</b>				
Nutrition Status, MUAC (% at risk of malnutrition)	5.3	≤ 8.3		
Coping Strategy Index (CSI)	6.9	≤ 8.0		

<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>								
<b>Dry Season</b>	<b>Long Rains</b>	<b>Dry Cool Season</b>	<b>Short Rains Season</b>								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

# 1.0 CLIMATIC CONDITIONS

## 1.1 RAINFALL PERFORMANCE

- The onset of the March April May (MAM) 2019 long rains was late in the third dekad of April compared to second dekad of March normally as shown in figure 1.
- The county received 91 per cent of normal rainfall recorded in April.
- On average, the county recorded 6.7mm 9.6mm and 81.8mm of rainfall in first, second and third dekad of April respectively compared to 49.1mm, 27.9mm and 32.3mm normally.

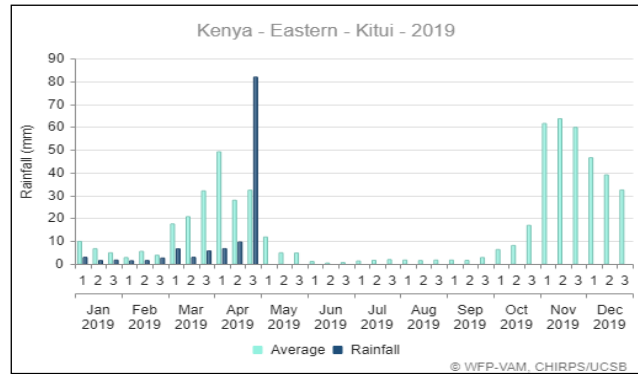


Figure 1: Rainfall Distribution for the Year 2019

## 1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- Temporal distribution was fair while spatial distribution was uneven across the livelihood zone.
- Mutha rainfall station in Marginal Mixed Farming livelihood zone recorded the highest amount of rainfall in April at 204.2mm in 2 wet days while Kauwi station in Mixed Farming livelihood zone recorded 86mm in 2 wet days as shown in figure 2.
- Ikutha station in Marginal Mixed Farming livelihood zone recorded the least amount of rainfall at 21.3 in 3 wet days while Kitui ATC station in Urban livelihood zone recorded 183.3mm in 8 wet days.

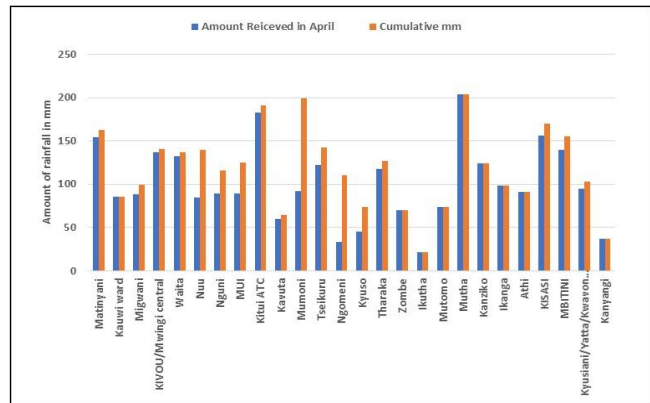


Figure 2: Kitui County Rainfall Performance

# 2.0 IMPACTS ON VEGETATION AND WATER

## 2.1 VEGETATION CONDITION

### 2.1.1 Vegetation Condition Index (VCI)

- The county vegetation greenness reduced by 39 percent to stand at a 3 month VCI of 16.27 in April from 26.61 in March, this is an indication of severe vegetation greenness as shown in figure 3.
- Kitui South sub county had extreme vegetation deficit.
- The current vegetation greenness is below normal as shown in figure 4.

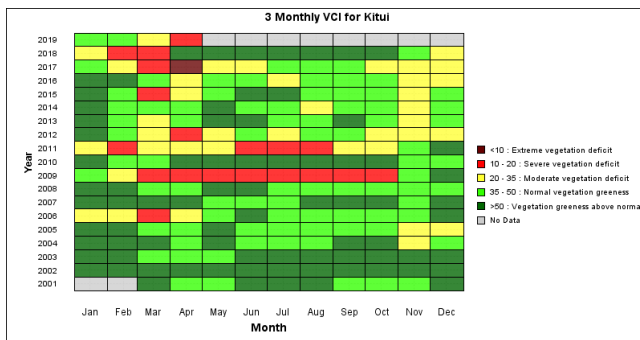


Figure 3: Kitui County 3 Month VCI

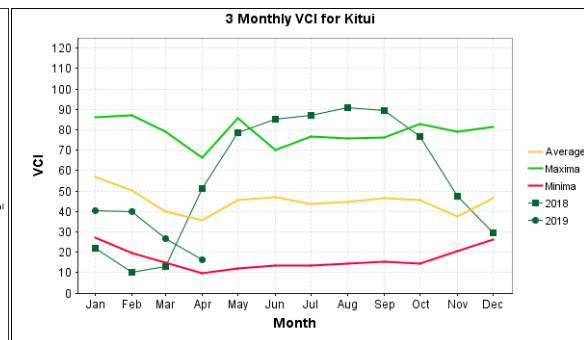


Figure 3: Kitui County 3 Month VCI

### 2.1.2 Pasture

- The condition of pasture declined in April compared to previous month and this was attributed to progression of the dry spell in the first and second dekad of April in most parts of the county.
- Majority (89 percent) of pasture was considered poor in April compared to 32 percent in previous month. The remaining 11 percent of pasture was fair in both quality and quantity.
- The current pasture situation is not normal at this time of the year.

### 2.1.3 Browse

- The browse quality and quantity conditions ranged from fair to poor across the livelihood zones.
- On average, about 67 percent of browse was considered fair while the remaining 33 percent was poor in quality and quantity.
- The current browse condition is not normal at this time of the year.

## 2.2 WATER RESOURCE

### 2.2.1 Sources

- The main water sources for both human and livestock consumption were boreholes, traditional river wells and pans & dams as shown in figure 5.
- Recharge of water sources was observed across the livelihood zone in the third dekad of the month.
- The quality of water was compromised following congestion of households and livestock at main water sources especially in first and second dekad of the month and this is unusual at this time of the year.

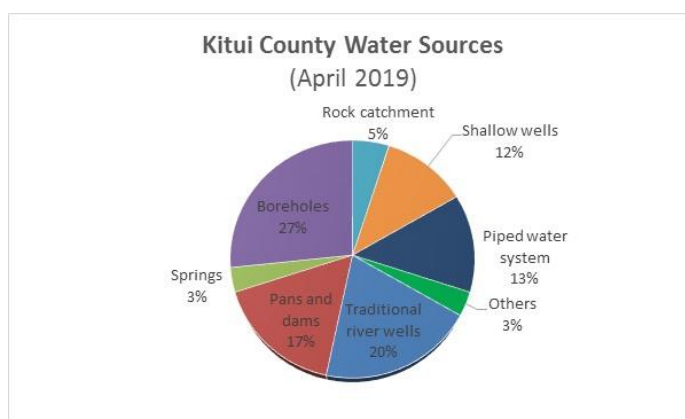


Figure 5: Kitui County Main Water Sources

### 2.2.2 Household Access and Utilization

- The average return distances from the households to water sources increased by 21 percent to stand at 7.6km in April from 6.3km in the previous month.
- Households in the Mixed Farming livelihood zones trekked relatively shorter distances at 6.8km to main water sources compared to 8.2km in the Marginal Mixed Farming livelihood zones.
- The current water distance is 29 percent above the long term mean as shown in figure 6.
- Water consumption per person per day remained stable at 14 litres in April compared to 13 litres in previous month and the proportion of households buying water stood at 23 percent in April compared to 34 percent in previous month.
- The average price of water per 20 litre Jerry can at source was normal at 2 to 5 shillings.

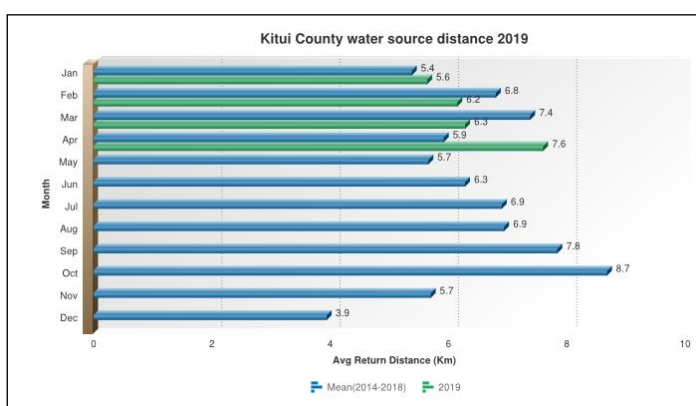


Figure 6: Household Access to Water

### 2.2.3 Livestock Access

- Livestock average return distances from grazing areas to watering points increased by 42 percent to stand at 7.8km in April compared to 5.5km in the previous month.
- This was attributed to the drying up of nearby water sources and diminishing pastures/ browses in the nearby areas thereby prompting farmers to look for water and pastures/ browses elsewhere far from home.
- Livestock in the Marginal Mixed Farming livelihood zones trekked relatively longer distances at 8.2km compared to 7.4km in the Mixed Farming Livelihood zones.
- Livestock were being watered on alternate days across the livelihood zones.
- The current average distance from the livestock grazing areas to watering points is 53 percent above the long term mean as shown in figure 7.

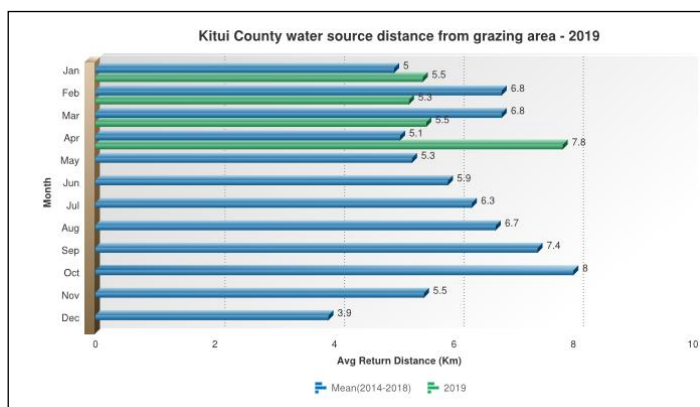


Figure 7: Average Grazing Distances

## 2.3 Implication of the Above Indicators to Food Security

- Water distances and forage condition are expected to improve following the onset of the long rains and this will impact positively on the food security.

## 3.0 PRODUCTION INDICATORS

### 3.1 LIVESTOCK PRODUCTION

#### 3.1.1 Livestock Body Condition

- Livestock body condition ranged from good to fair for all livestock species with a deteriorating trend.
- Majority (78 percent) of livestock had moderate neither fat nor thin body condition and 11 percent of livestock had borderline, fore ribs not visible, 12<sup>th</sup> and 13<sup>th</sup> ribs visible. Only 11 percent of livestock had good smooth appearance body condition.
- These conditions were attributed to the diminishing forage and increased trekking distance to water sources.
- This trend is not normal at this particular time of the year.

#### 3.1.2 Livestock Diseases

- No alarming livestock disease outbreaks were reported during the month under review.

#### 3.1.3 Milk Production

- The average daily milk production per household remained stable at 1.7 litres in April compared to 1.6 litres in previous month.
- Households in Marginal Mixed Farming livelihood zones produced an average of 1.9 litres per day compared to 1.1 litres in the Mixed Farming livelihood zones.
- The current milk production per household per day is 6 percent above the long term mean as shown in figure 8.

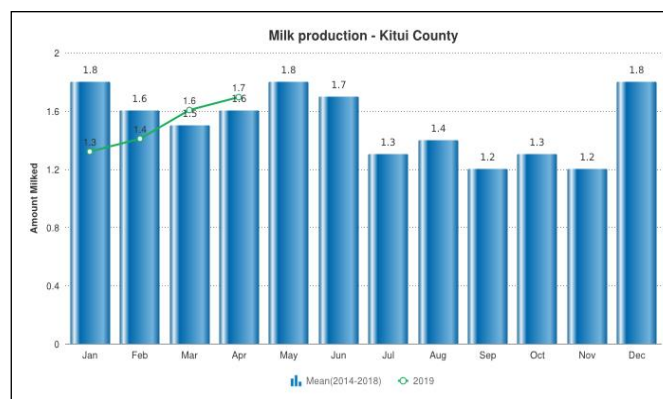


Figure 8: Milk Production

## 3.2 RAIN-FED CROP PRODUCTION

### 3.2.1 Stage and Condition of Food Crops

- Land preparation and planting of maize, beans, cow peas, green grams, pigeon peas, sorghum and millet was ongoing across the livelihood zones.
- Some of the farmers who had already planted their crop and realized poor germination were considering re-planting/ gapping with the ongoing rains.

### 3.3 Implication of the above indicators to food security

- Livestock productivity is expected to improve due to regeneration of fodder and improving water situation.
- Early maturing crops are expected to germinate following the on-going rain season.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

- The average market price of cattle remained stable at Ksh.27,833 in April from Ksh.29,611 in the previous month.
- Cattle prices were higher in Mixed Farming livelihood zone at Ksh.28,875 compared to Ksh.26,967 in Marginal Mixed Farming livelihood zone.
- The current market price of cattle is normal compared to the long-term mean as shown in figure 9.

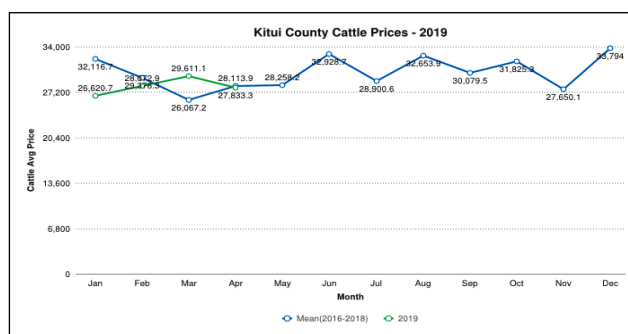


Figure 9: Cattle Prices

#### 4.1.2 Small Ruminants Prices (Goat price)

- The average market price of goat remained stable at Ksh.3,698 in April from Ksh.3,967 in the previous month.
- Mixed Farming livelihood zone recorded a higher price of Ksh.4,179 compared to Ksh.3,313 in Marginal Mixed Farming livelihood zone.
- The current market price of goat is 22 percent higher than the long term mean as shown in figure 10.

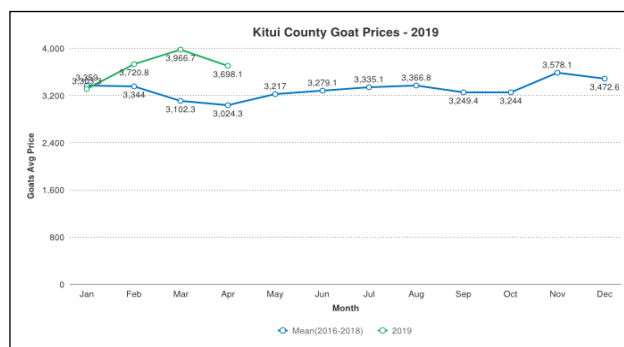


Figure 10: Goat Prices

## 4.2 CROP PRICES

### 4.2.1 Maize

- The average market price of maize per kilogram increased by 17 percent to stand at Ksh.34 in April from Ksh.29 in the previous month. The increase in price could be attributed to the decrease in supply of the commodity from neighbouring counties.
- No major variation across the livelihood zone was reported.
- The current market price of maize is 11 percent lower the long term mean as shown in figure 11.

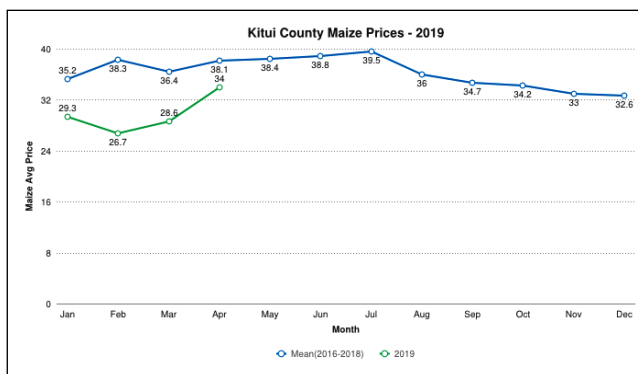


Figure 11: Maize Prices

### 4.2.2 Beans

- The average market price of beans increased by 10 per cent to stand at Ksh.77 in April from Ksh.70 in the previous month.
- No major variation across the livelihood zone was reported.
- The current beans price is 5 percent lower than the long-term mean as shown in figure 12.

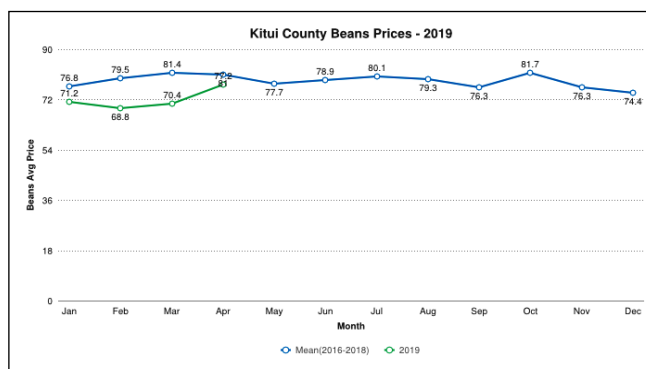


Figure 12: Beans Price

## 4.3 Livestock Price Ratio/Terms of Trade

- Terms of trade were unfavourable at 109 in April compared to 139 in the previous month. This implies that, households were able to purchase 109 kilos of maize from earnings of a goat in April compared to 139 kilos in previous month.
- The sale of one goat would enable a household in Mixed Farming livelihood zone to purchase 125 kilos of maize compared to 96 kilos in Marginal Mixed Farming livelihood zone.
- The current terms of trade is 28 percent above the long term mean as shown in figure 13.

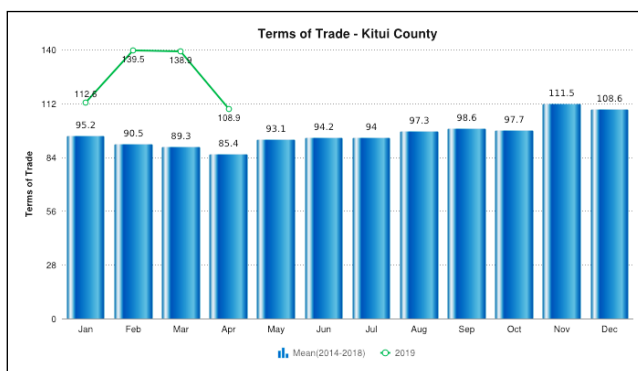


Figure 13: Terms of Trade

## 4.4 Implication of the above indicators to food security

- Prices of food commodities is likely to increase due to low food supply in the market and this might impact negatively on household purchasing power.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

- The average daily milk consumption per household remained stable at 1.2 litres in April as it was last month.
- Households in the Mixed Farming livelihood zone consumed an average 1.1 litres of milk compared to 1.2 litres of milk consumed in the Marginal Mixed Farming livelihood zone.
- The current milk consumption is 71 percent higher than the long term mean as shown in figure 14.

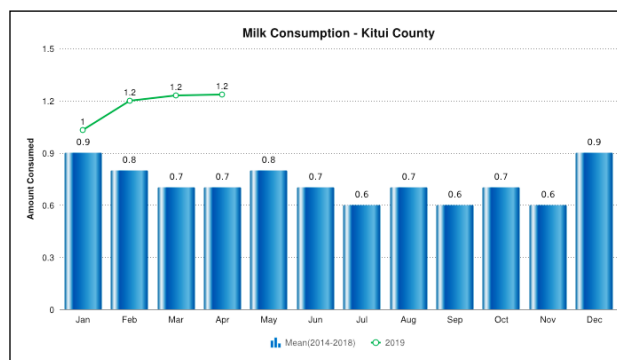


Figure 14: Milk Consumption

### 5.2 FOOD CONSUMPTION SCORE

- The proportion of households in acceptable food consumption category was 77.9 percent in April compared to 77.4 percent in previous month.
- The remaining 21.4 and 0.8 percent of households were in borderline and poor food consumption category respectively as shown in figure 15.
- Majority (91.7 percent) of households in Mixed farming livelihood zone were in acceptable food consumption category compared to 66.2 percent in Marginal Mixed Farming livelihood zone.

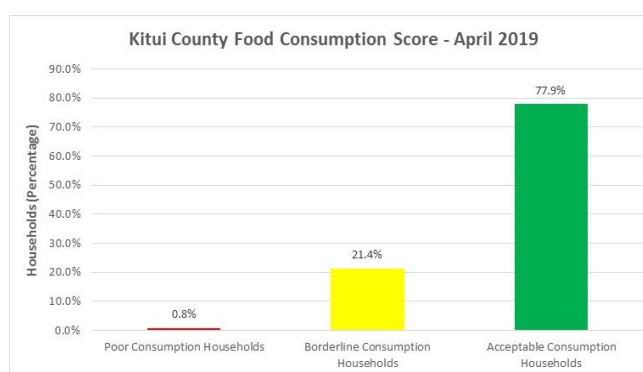


Figure 15: Food Consumption Score

## 5.3 HEALTH AND NUTRITION STATUS

### 5.3.1 Nutrition Status

- The proportion of children mid at risk of malnutrition (MUAC 125-134mm) reduced to 5.3 percent in April from 6.2 percent in previous month.
- No cases of moderately (MUAC 115-124mm) malnourished children were reported and only 0.2 percent of children were severely (MUAC <115mm) malnourished.
- The current level of children mid at risk of malnutrition is 3 percent below the long term mean as shown in figure 16 and this is attributed to improvement in household eating habits.

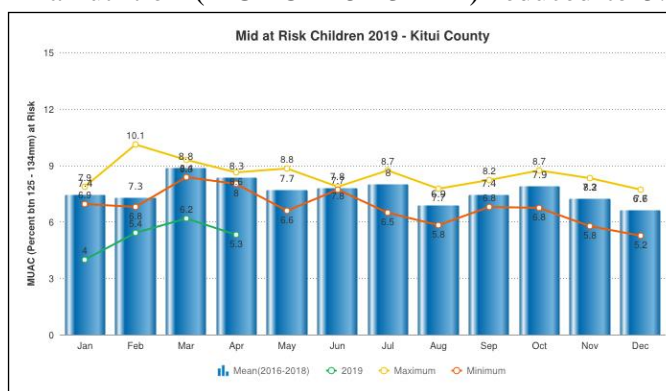


Figure 16: Proportion of Children at Risk of Malnutrition

### 5.3.2 HEALTH

- The proportion of children suspected to have fever with chills like malaria, fever with breathing difficulties and diarrhoea stood at 1.8, 2.4 and 0.9 percent in April compared to 2.5, 0.7 and 0.7 percent in previous month respectively.

## 5.4 COPING STRATEGIES

- The mean coping strategy index (CSI) increased significantly by 44 percent to 6.9 in April from 4.8 in previous month. This implies that, households employed consumption based coping strategies more frequently in April compared to previous month to cope with lack of food or money to buy food.
- Households in Marginal Mixed Farming livelihood zones had a high CSI of 11.0 compared to 2.8 in Mixed Farming livelihood zones.
- The current CSI is 14 percent lower than the long term mean as shown in figure 17.

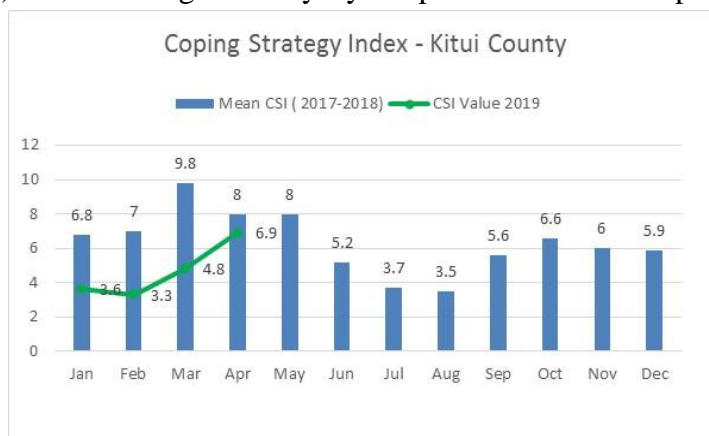


Figure 17: Coping Strategy Index

## 6.0 CURRENT INTERVENTION MEASURES

### 6.1 NON-FOOD INTERVENTIONS

- **Vaccination against PPR and rabies** by County Government of Kitui in collaboration with FAO. The activity targeted all livestock species and dogs across the county.

### 6.2 FOOD AID

- Therapeutic Integrated Management of Acute Malnutrition for the Under-fives, Pregnant and Lactating Mothers (Supplementary Feeding Program (SFP), Out Patient Therapeutic Program (OTP) & Stabilization Centres by Ministry of Health supported by several partners.

## 7.0 EMERGING ISSUES

### 7.1 Insecurity/Conflict/Human Displacement

- Unconfirmed cases of resource-based conflicts were reported in Ngomeni ward – Mwingi North Sub County.

### 7.2 FOOD SECURITY PROGNOSIS

- The outlook for the on-going long rains season is that Kitui County is likely to receive near normal rainfall with a tendency to below normal. The spatial and temporal distribution of rainfall is expected to be poor with early cessation dates. Therefore, food security situation is expected to continue deteriorating until the harvesting of the MAM long rains season.
- Livestock productivity is expected to stabilize following regeneration of forage and improving water situation.
- Rising prices of food commodities is expected to impact negatively on household purchasing power.



## **8.0 RECOMMENDATIONS**

### **Immediate/Short term**

- Intensify livestock disease control measures.
- Promote home based water treatment and conservation measures such as storage facilities.
- Integrated health outreach programs.
- Repair and maintenance of strategic water points.
- Community sensitization on the importance of fodder preservation and controlled grazing.

### **Medium and Long term**

#### **Water Sector**

- Promotion of water harvesting, storage and management.
- Create awareness on the importance of protecting water sources.

#### **Agriculture Sector**

- Capacity building on safe use of chemicals by National Government, County Government and development partners.
- Enhance asset creation for households especially Farm ponds and water pans for food production by National Government, County Government and development partners.
- Enhance irrigated Agriculture by conducting Soil analysis and crops suitability surveys in all by National Government, County Government and development partners.

#### **Livestock Sector**

- Community sensitization on the importance of fodder preservation and controlled grazing.
- Pasture establishment and seed bulking.
- Livestock development programs to improve production (goats, chicken, cattle).

#### **Health and Sanitation Sector**

- Support to Mobile outreach immunization.
- Formation of mother to mother support groups.
- Sensitization on hygiene and sanitation at household level.
- Carry out routine disease surveillance.
- Improve Vitamin A supplementation to children under five years and de-worming
- Improve vector control activities.

#### **Education Sector**

- Promotion of water harvesting, storage and management in schools.
- Enhance HGSMP in all public institutions.

#### **Peace Building Initiatives**

- Peace building and conflict management initiatives.