

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



A Vision 2030 Flagship Project



AUGUST EW PHASE			Early Warning Phase Classification								
	<b>LIVELIHOOD ZONE</b>		<b>EW PHASE</b>	<b>TRENDS</b>							
	Marginal Mixed Farming		Alarm	Worsening							
	Mixed Farming		Alert	Worsening							
	<b>County</b>		Alarm	Worsening							
<b>Drought Situation &amp; EW Phase Classification</b>											
<b>Biophysical Indicators</b>			<b>Biophysical Indicators</b>	<b>Value</b>	<b>Normal ranges</b>						
<ul style="list-style-type: none"> <li>▪ No rains were received in the month of August and this situation is normal.</li> <li>▪ The vegetation greenness was below normal.</li> </ul>			Rainfall (% of normal)		80-120						
			VCI-3 month	32.15	35-50						
			Forage Condition	Fair to poor	Good to fair						
			<b>Production Indicators</b>			<b>Production indicators</b>	<b>Value</b>	<b>Normal ranges</b>			
<ul style="list-style-type: none"> <li>▪ Few farmers in Mixed Farming livelihood zone were harvesting pigeon peas.</li> <li>▪ Livestock body condition was fair to poor for cattle with suspected cases of FMD, LSD and CCPP reported.</li> <li>▪ Unconfirmed cases of livestock deaths were reported in Nuu and Athi ward.</li> <li>▪ Milk production was below normal.</li> </ul>			Livestock Body Condition	Fair to poor	Good to fair						
			Milk Production (in litres)	1.3	≥ 1.4						
			Livestock Migration Pattern	Not normal	Normal						
			Livestock Deaths (from Drought)	2 Death	No death						
<b>Access Indicators</b>			<b>Access Indicators</b>	<b>Value</b>	<b>Normal ranges</b>						
<ul style="list-style-type: none"> <li>▪ Terms of trade were unfavourable compared to long term mean.</li> <li>▪ Milk consumption was within the normal range.</li> <li>▪ Domestic water distances were within normal range while livestock grazing distances were above the long-term mean.</li> <li>▪ The cost of water at source was normal.</li> </ul>			Terms of Trade (ToT)	85	≥ 97						
			Milk Consumption (in litres)	1.1	≥ 0.7						
			Return Distance to Water Sources (in km)	7.8	≤ 7.8						
			Cost of Water at Source (20 litres Jerry can)	2-5	≤ 5Ksh						
<b>Utilization Indicators</b>			<b>Utilization indicators</b>	<b>Value</b>	<b>Normal ranges</b>						
<ul style="list-style-type: none"> <li>▪ The percentage of children mid at risk of malnutrition was within normal range.</li> <li>▪ Households employed normal coping mechanisms to cope with lack of food or money to buy food.</li> </ul>			Nutrition Status, MUAC (% at risk of malnutrition)	6.7	≤ 6.9						
			Coping Strategy Index (rCSI)	8.7	≤ 3.5						
<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 month of August was dry across the livelihood zones. However, light drizzles were experienced in some parts of Mixed Farming livelihood zone.
- On average, the county recorded 4mm of rainfall in first dekad of August compared to 1.7mm normally. This was 126 percent of normal rainfall recorded in first dekad of August as shown in figure 1.

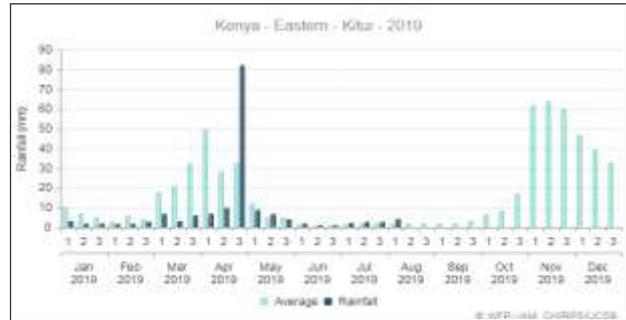


Figure 1: Rainfall Distribution for the Year 2019

# 2.0 IMPACTS ON VEGETATION AND WATER

## 2.1 VEGETATION CONDITION

### 2.1.1 Vegetation Condition Index (VCI)

- The county vegetation greenness improved by 17 percent to stand at a 3 month VCI of 32.15 in August from 27.51 in July, this is an indication of moderate vegetation greenness as shown in figure 2.
- Mwingi Central, Mwingi North, Kitui South and Kitui East sub counties had a moderate vegetation deficit represented by a 3 month VCI of 25.74, 26.99, 30.92 and 34.05 respectively compared to Kitui West, Mwingi West and Kitui Central which had normal vegetation greenness. Nevertheless, Kitui Rural sub county had vegetation greenness above normal as represented by a 3 month VCI of 54.04.
- The current vegetation greenness is below normal as shown in figure 3.



Figure 2: Kitui County 3 Month VCI

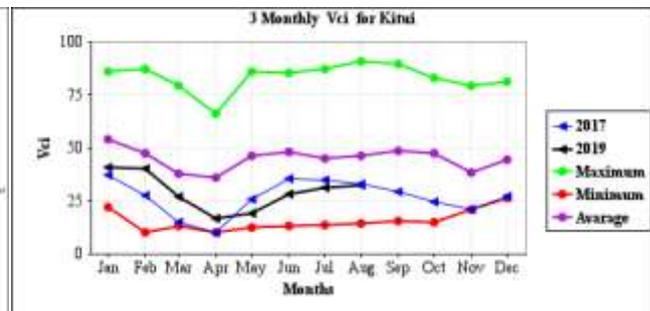


Figure 3: Kitui County 3 Month VCI

### 2.1.2 Pasture

- Pasture condition deteriorated in August compared to previous month and this was mainly attributed to progression of the dry spell.
- About 89 percent of pasture was considered poor in August compared to 75 percent in previous month. The remaining 11 percent of pasture was fair in both quality and quantity.
- The most affected areas included Ngomeni, Nguni, Kivou, Nuu, Endau/Malalani, Mutha, Kanziku, Ikutha, Athi and Voo/Kyamatu wards.
- The available pasture is expected to last for less than a month across the livelihood zones compared to 2-3 months normally.

### 2.1.3 Browse

- The quality and quantity of browse ranged from fair to poor across the livelihood zones compared to fair normally.
- On average, about 59 percent of browse was considered fair in August compared 92 percent in previous month. The remaining 41 percent of browse was poor in both quality and quantity.
- The current browse condition is below 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, piped water system and shallow wells as shown in figure 4.
- Most of open water sources depleted earlier than normal leading to congestion of human and livestock in the remaining water points.
- Water level at open water sources remained low and is expected to last for 1-2 months compared to 2-3 months normally.

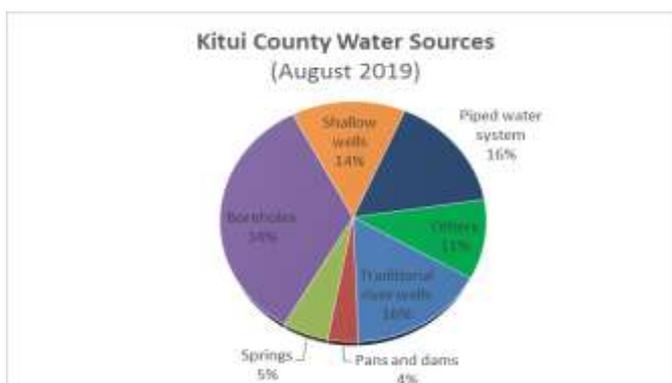


Figure 4: Kitui County Main Water Sources

### 2.2.2 Household Access and Utilization

- The average return distances from the households to water sources remained stable at 7.8km in August compared to previous month.
- Households in the Marginal Mixed Farming livelihood zone trekked a higher distance of 10.2km to main water sources compared to 4.9km in the Mixed Farming livelihood zone.
- The current water distance is normal as shown in figure 5.
- Water consumption per person per day remained stable at 13 litres in August as it was in previous month.
- The proportion of households buying water stood at 36 percent in August compared to 24 percent in previous month while the average price of water per 20 litre Jerry can at source was normal at 2 to 5 shillings.
- However, the price of water was higher from vendors at 20 to 30 shillings compared to 10-20 shillings normally.

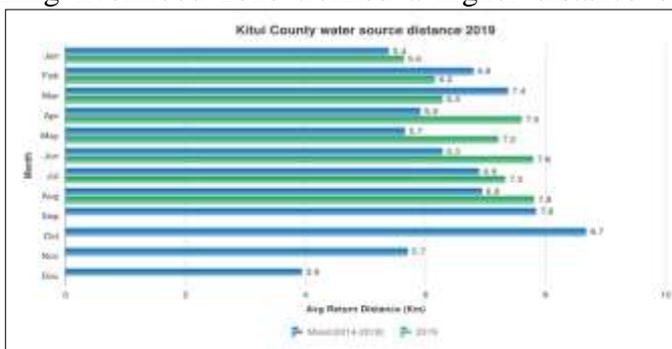


Figure 5: Household Access to Water

### 2.2.3 Livestock Access

- Livestock average return distances from grazing areas to watering points increased by 19 percent to stand at 8.9km in August from 7.5km in previous month.
- This was attributed to the drying up of nearby water sources and diminishing pastures.
- Livestock in the Marginal Mixed Farming livelihood zones trekked longer distances at 11.7km compared to 5.4km in the Mixed Farming livelihood zone.
- Livestock were being watered on alternate days across the livelihood zones compared to daily normally.
- The current average distance from the livestock grazing areas to watering points is 33 percent above the long term mean as shown in figure 6.

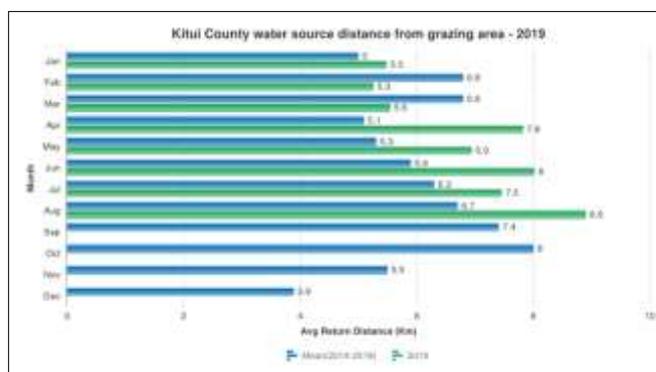


Figure 6: Average Grazing Distances

### 2.3 Implication of the Above Indicators to Food Security

- Declining forage condition and increasing trekking distances to water sources is likely to impact negatively of livestock productivity hence diminish household purchasing power.

## 3.0 PRODUCTION INDICATORS

### 3.1 LIVESTOCK PRODUCTION

#### 3.1.1 Livestock Body Condition

- Livestock body condition ranged from fair to poor for cattle and good to fair for small species with a deteriorating trend.
- On average, 59 percent of cattle had borderline (fore ribs not visible, 12<sup>th</sup> and 13<sup>th</sup> ribs visible) body condition in August compared to 45 percent in previous month. The remaining 30 and 11 percent of cattle had moderate (neither fat nor thin) and thin fore ribs visible body condition respectively.
- This trend is not normal at this particular time of the year.

#### 3.1.2 Livestock Diseases

- Suspected cases of foot and mouth disease (FMD), lumpy skin disease (LSD) and Contagious Caprine Pleuro-Pneumonia (CCPP) were reported in Marginal Mixed farming livelihood zones of Mwingi North, Mwingi Central, Kitui East and Kitui South sub counties.
- It is suspected that about two livestock in Nguni and Athi wards died as a result of starvation.

#### 3.1.3 Milk Production

- The average daily milk production per household remained stable at 1.3 litres in August from 1.2 litres in previous month.
- Households in Marginal Mixed Farming livelihood zone produced an average of 1.5 litres per day compared to 1.0 litres in the Mixed Farming livelihood zone.
- The current milk production per household per day is seven percent lower than the long term mean as shown in figure 7.

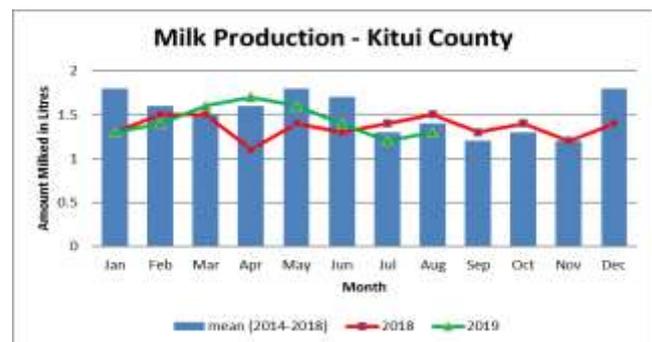


Figure 7: Milk Production per Household per Day

## 3.2 RAIN-FED CROP PRODUCTION

#### 3.2.1 Stage and Condition of Food Crops

- Main crops grown in the county included maize, beans, cow peas, green grams, pigeon peas, sorghum and millet.
- Rain-fed crops failed for the season across the livelihood zones due to moisture stress. However, few farmers were still harvesting pigeon peas majorly in Mixed Farming livelihood zone.
- In addition to rain-fed cropping, farmers along main rivers (Athi, Tana, Tiva and Thua) had horticultural crops which were at various stages of development.

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

- Household purchasing power is expected to diminish further following below normal crop harvests and declining livestock productivity.
- Outbreak of livestock diseases may trigger a reduction in livestock prices in the market.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

- The average market price of cattle declined by five percent to stand at Ksh.22,870 in August from Ksh.24,152 in previous month. This could have been attributed to deteriorating livestock body condition.
- Cattle prices were higher in Mixed Farming livelihood zone at Ksh.26,767 compared to Ksh.19,400 in Marginal Mixed Farming livelihood zone.
- The current market price of cattle is 30 percent lower than the long-term mean as shown in figure 8.

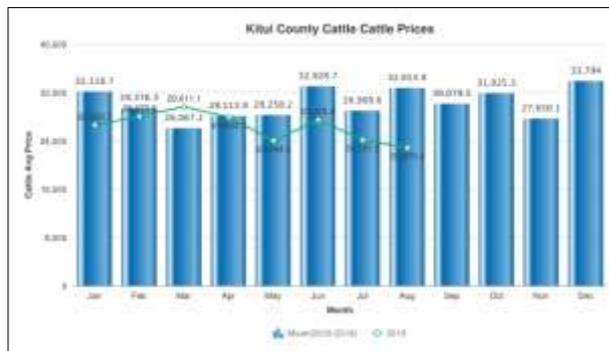


Figure 8: Cattle Prices

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

- The average market price of goat increased by 13 percent to stand at Ksh.3,826 in August from Ksh.3,391 in previous month.
- Mixed Farming livelihood zone recorded a higher price of Ksh.4,130 compared to Ksh.3,467 in Marginal Mixed Farming livelihood zone.
- The current market price of goat is 14 percent higher than the long term mean as shown in figure 9.

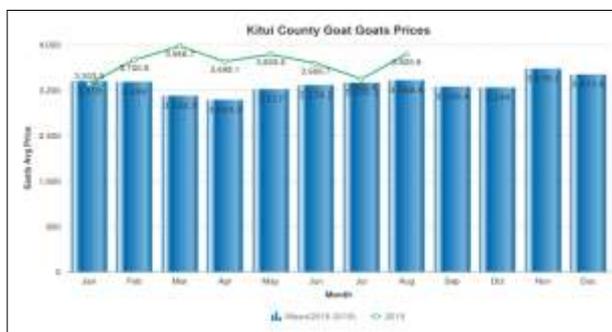


Figure 9: Goat Prices

## 4.2 CROP PRICES

#### 4.2.1 Maize

- The average market price of maize per kilogram remained stable at Ksh.45 in August from Ksh.44 in previous month. This was attributed to availability of the commodity in the market from traders sourcing from other counties.
- Maize price was higher in the Marginal Mixed Farming livelihood zone at Ksh.46 compared to Ksh.44 in the Mixed Farming livelihood zone.
- The current market price of maize is 25 percent higher than the long term mean as shown in figure 10.

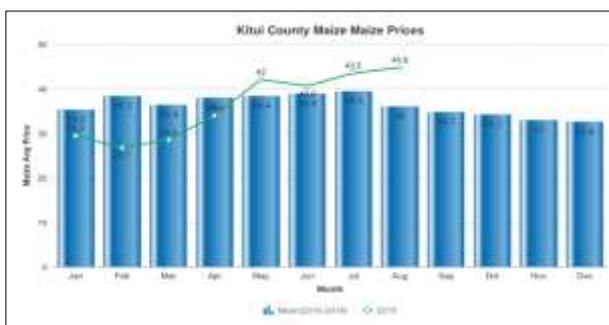


Figure 10: Maize Prices

#### 4.2.2 Beans

- The average market price of beans increased by six percent to stand at Ksh.93 in August from Ksh.88 in previous month.
- Beans price was higher in the Marginal Mixed Farming livelihood zone at Ksh.98 compared to Ksh.88 in the Mixed Farming livelihood zone.
- The current beans price is 18 percent higher than the long-term mean as shown in figure 11.

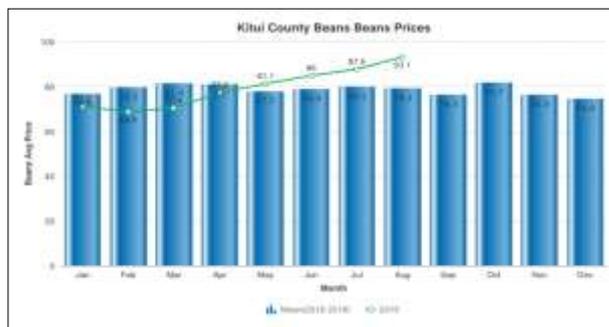


Figure 11: Beans Prices

#### 4.3 Livestock Price Ratio/Terms of Trade

- Terms of trade was favourable in August at 85 compared to 78 in previous month. This implies that, households were able to purchase 85 kilos of maize from earnings of a goat in August compared to 78 kilos in previous month.
- Favourable terms of trade is attributed to stability in both goat and maize prices.
- The sale of one goat would enable a household in Mixed Farming livelihood zone to purchase 94 kilos of maize compared to 76 kilos in Marginal Mixed Farming livelihood zone.
- The current terms of trade is 12 percent below the long term mean as shown in figure 12.

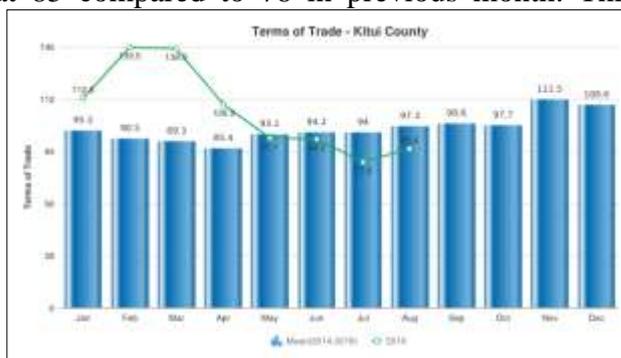


Figure 12: Terms of Trade

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

- Price of food commodities is likely to increase due to overreliance of market on food supplies 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 1.1 litres in August as it was in previous month.
- Households in the Mixed Farming livelihood zone consumed an average of 1.2 litres of milk compared to 1.0 litres in Marginal Mixed Farming livelihood zone.
- The current milk consumption is 57 percent higher than the long term mean as shown in figure 13.

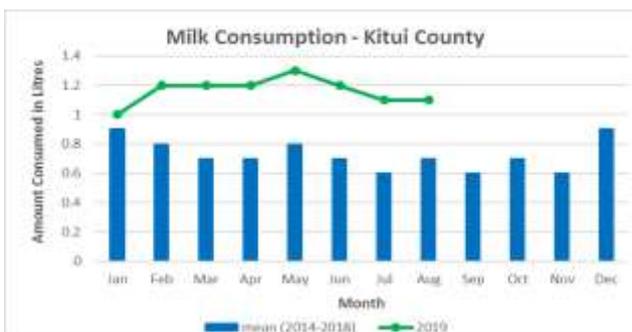


Figure 13: Milk Consumption per Household per Month

## 5.2 FOOD CONSUMPTION SCORE

- The proportion of households in acceptable food consumption category increased to 78.5 percent in August from 74.1 percent in previous month. This was attributed to minimal harvest experienced in parts of Mixed Farming livelihood zone which impacted positively on household dietary diversity.
- The remaining 20.7 and 0.7 percent of households were in borderline and poor food consumption category respectively as shown in figure 14.
- Majority (88.2 percent) of households in Mixed farming livelihood zone were in acceptable food consumption category compared to 70.7 percent in Marginal Mixed Farming livelihood zone.

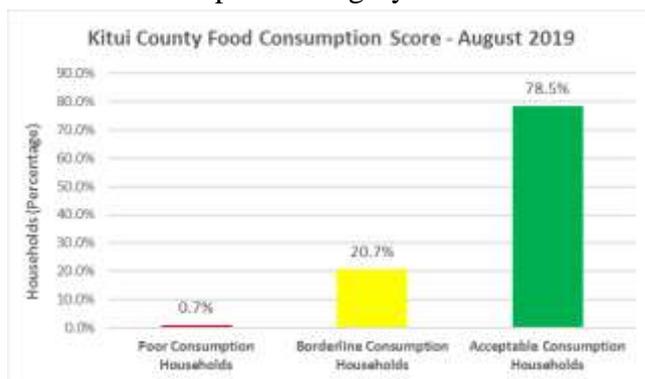


Figure 14: Food Consumption Score

## 5.3 HEALTH AND NUTRITION STATUS

### 5.3.1 Nutrition Status

- The proportion of children mid at risk of malnutrition (MUAC 125-134mm) remained stable at 6.7 percent in August as it was in previous month.
- No cases of moderately (MUAC 115-124mm) and severely (MUAC <115mm) malnourished children were reported.
- The current level of children mid at risk of malnutrition is normal compared to the long term mean as shown in figure 15 and this is attributed to improvement in household eating habits.

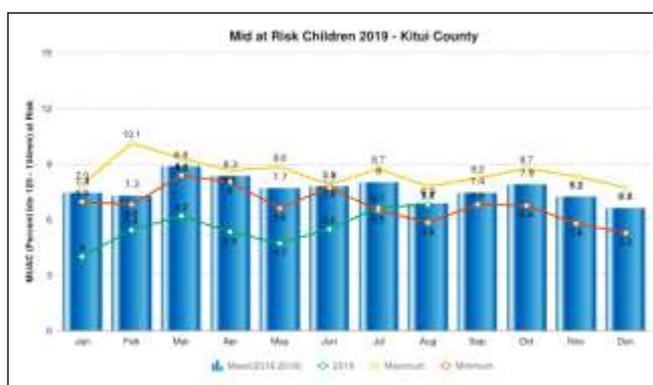


Figure 15: Proportion of Children at Risk of Malnutrition

### 5.3.2 HEALTH

- The proportion of children suspected to have fever with chills like malaria, fever with breathing difficulties and diarrhoea stood at 2.0, 1.8 and 1.1 percent in August compared to 3.0, 1.2 and 1.2 percent in previous month respectively.

## 5.4 COPING STRATEGIES

- The mean of reduced coping strategy index (rCSI) increased to 8.7 in August from 8.4 in previous month. This implies that, households employed consumption based coping strategies more frequently in August compared to previous month to cope with lack of food or money to buy food.
- Households in Marginal Mixed Farming livelihood zone had a high rCSI of 11.2 compared to 6.1 in Mixed Farming livelihood zone.
- The current rCSI is 149 percent higher than the long term mean as shown in figure 16.

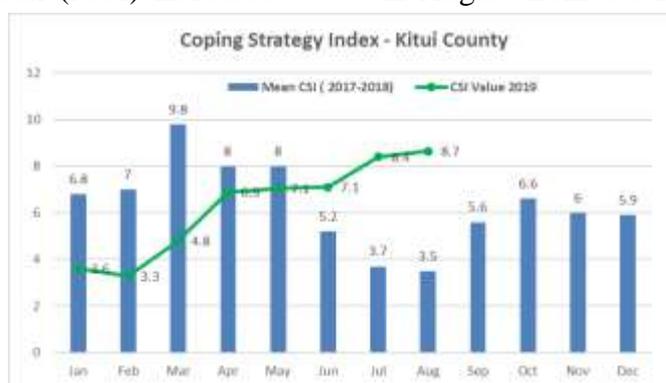


Figure 16: Reduced Coping Strategy Index (rCSI)

## **6.0 CURRENT INTERVENTION MEASURES**

### **6.1 NON-FOOD INTERVENTIONS**

- **Emergency water trucking** by County Government of Kitui and Tana Athi Water Service Board.

### **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**

- No major incidences of resource-based conflicts were reported. However, there is tension along the border of Kitui and Tana River counties following high influx of livestock and herders from Tana River county in search of water and pasture.

### **7.2 FOOD SECURITY PROGNOSIS**

- Household purchasing power is expected to diminish following deterioration of livestock body condition and disease outbreaks. This will impact negatively on household food security.
- Households are expected to rely on the market for staple food supplies following depletion of stocks at household level and poor harvest from the 2019 long rain season. This will lead to a rise in food prices.
- Competition over limited resources is likely to result to resource-based conflicts which will lead to displacement of households and disruption of markets.

## **8.0 RECOMMENDATIONS**

### **Immediate/Short term**

- Upscale emergency water trucking in hotspot areas
- Intensify livestock disease control measures.
- Promote home-based water treatment and conservation measures such as storage facilities.
- Promote integrated health outreach programs.
- Repair and maintenance of strategic water points.
- Community sensitization on the importance of fodder preservation and controlled grazing.
- Range cube and hay sourcing for distribution in affected areas
- Joint peace meeting initiatives

### **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.