




A Vision 2030 Flagship Project



**National Drought Management Authority**  
**KITUI COUNTY**  
**DROUGHT EARLY WARNING BULLETIN FOR JANUARY 2021**

JANUARY EW PHASE	Early Warning Phase Classification		
<p><b>Drought Status: NORMAL</b></p>  <p><b>Shughull za kawaida</b></p>	LIVELIHOOD ZONE	EW PHASE	TRENDS
	Marginal Mixed Farming	Normal	Worsening
	Mixed Farming	Normal	Stable
	<b>County</b>	Normal	Worsening

Drought Situation & EW Phase Classification

Biophysical Indicators

- Light showers of rains were reported in few areas of the county. The rains were below normal
- The vegetation greenness was normal.

Socio-Economic Indicators (Impact Indicators)

Production Indicators

- Crops were mainly at grain filling/harvesting stage with fair condition due to moisture stress.
- Livestock body condition was fair to good with normal cases of livestock migration and no deaths because of drought reported.
- Lumpy Skin Disease, Foot and Mouth disease, Contagious Caprine Pleuropneumonia, Trypanosomiasis and Peste des Petits Ruminants were reported across the county. With deaths being reported due to diseases
- Cases of desert locust and quelea quelea bird's invasion were reported.
- Milk production was above normal.

Access Indicators

- Terms of trade were favourable.
- Milk consumption was below normal.
- Water distances were within normal range.
- The cost of water at source was normal.

Utilization Indicators

- Malnutrition cases were within normal range.
- About 87 percent of households were in acceptable food consumption category.
- Households employed normal consumption-based coping mechanisms.

Biophysical Indicators	Value	Normal ranges
Rainfall (% of normal)	119	80-120
VCI-3 month	52.16	35-50
VCI-3 month forecast 01st April 2021	58.06	35-50
Forage Condition	Fair to good	Good
Production indicators	Value	Normal ranges
Maize Crop Condition	Fair	Good
Livestock Body Condition	Fair to good	Fair to good
Milk Production (in litres)	1.3	≥ 1.2
Livestock Migration Pattern	Normal	Normal
Livestock Deaths (from Drought)	No death	No death
Access Indicators	Value	Normal ranges
Terms of Trade (ToT)	127	≥ 98
Milk Consumption (in litres)	0.7	≥ 1.0
Return Distance to Water Sources (in km)	4.4	≤ 4.1
Cost of Water at Source (20 litres Jerry can)	2-5	≤ 5Ksh
Utilization indicators	Value	Normal ranges
Nutrition Status, MUAC (% at risk of malnutrition)	2.7	≤ 6.4
Coping Strategy Index (rCSI)	3.9	≤ 5.3
Food Consumption Score (% at Acceptable)	87	≥ 80

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

# 1.0 CLIMATIC CONDITIONS

## 1.1 RAINFALL PERFORMANCE

- During the month of January, few areas of the county experienced light showers characterized with sunny days being spread across the livelihoods. More cloudy cover was experienced in few mixed farming livelihood zones
- On average, the county recorded 6.2 and 4 milimetres of rainfall for the first and second dekad of January compared to 9.9 and 6.7 milimetres normally as shown in the figure 1 .This was 119 percent of normal rainfall recorded in January.

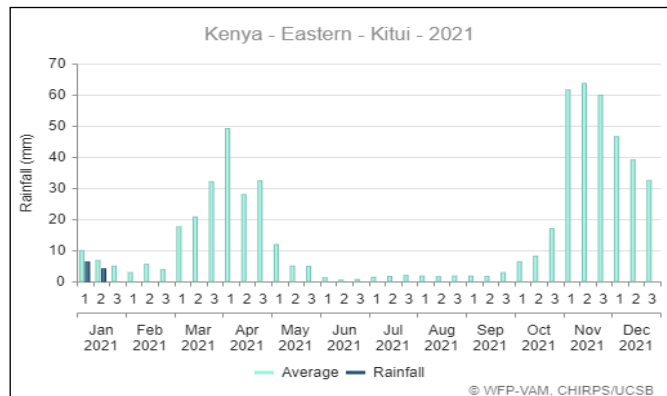


Figure 1: Rainfall Distribution for the Year 2020

## 1.2 OTHER EVENTS

- Desert locust and quelea quelea bird’s invasion destroyed rangeland resources and assorted crops mainly in Mwingi North, Kitui East, Kitui Central, Kitui South and Kitui Rural sub counties.

# 2.0 IMPACTS ON VEGETATION AND WATER

## 2.1 VEGETATION CONDITION

### 2.1.1 Vegetation Condition Index (VCI)

- The county vegetation greenness increased to stand at a 3 month VCI of 52.16 in January from 44.04 in previous month. This is an indication of above normal vegetation greenness as shown in figure 3.
- Kitui Central, Kitui Rural, Kitui West and Mwingi West sub counties recorded the highest 3 month VCI at 70.41, 65.52, 65.15 and 61.49 respectively Compared to Mwingi North, Mwingi Central, Kitui East and Kitui South sub counties which recorded the lowest vegetation greenness at a 3 month VCI of 42.33, 44.07,52.22 and 54.63 respectively.
- The county vegetation greenness is below the long term average and the maximum recorded value as shown in figure 2.

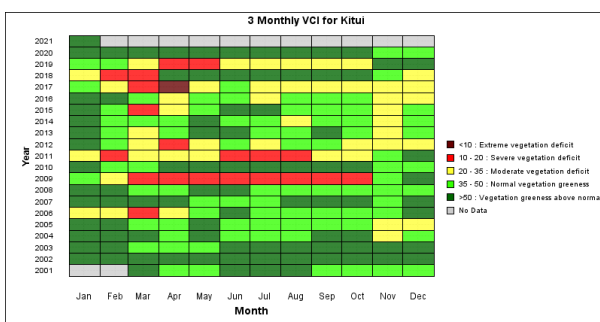


Figure 3: Kitui County 3 Month VCI Matrix

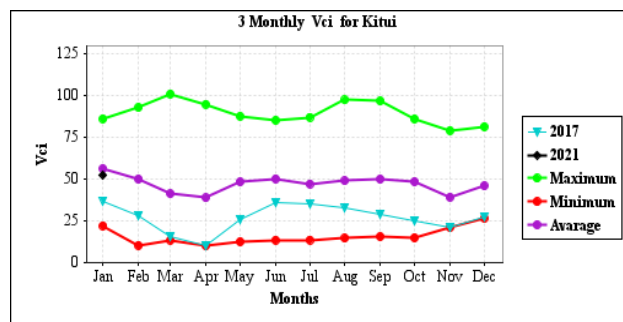


Figure 2: Kitui County 3 Month VCI Trend

### 2.1.2 Vegetation Condition Index Forecast

- Based on Sussex Vegetation Outlook for the month of February and March 2021, the 3-month VCI forecast indicates that, the county vegetation greenness is likely to remain above normal in exception of Mwingi North and Mwingi Central sub counties which will experience normal vegetation greenness as shown in figure 4. This will boost availability of livestock feeds.

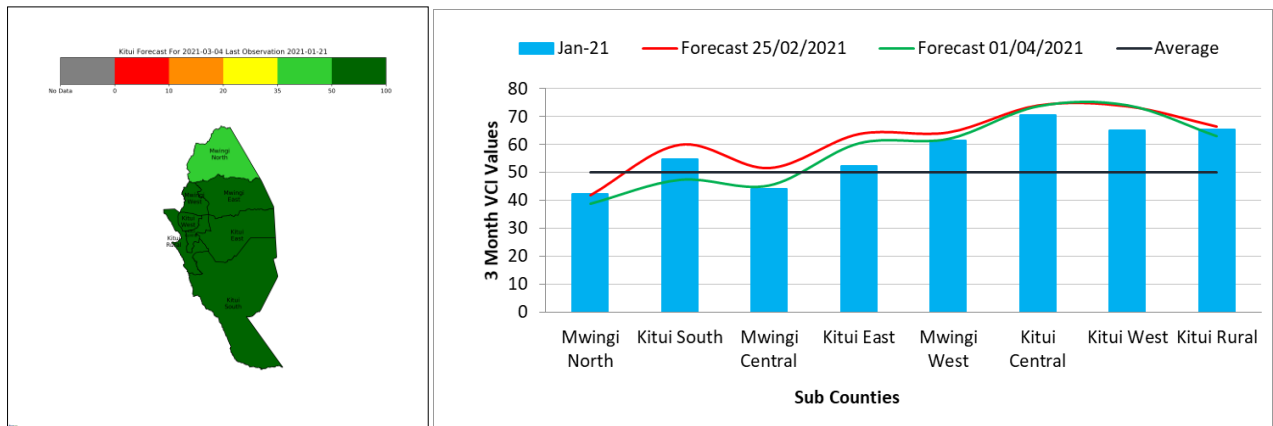


Figure 5: Kitui County 3 Month VCI Forecast

### 2.1.3 Pasture

- Pasture condition ranged from fair to good across the livelihood zones with an improving trend as shown in the figure 5.
- On average, about 41.4 and 58.6 percent of pasture was observed to be good and fair respectively in both quality and quantity in January compared to good conditions at 30 percent and fair conditions at 70 percent in previous month
- Pasture is expected to last for 1-2 month is in marginal mixed farming and 2-3 months in mixed farming livelihood zones compared to 2-3 months normally.

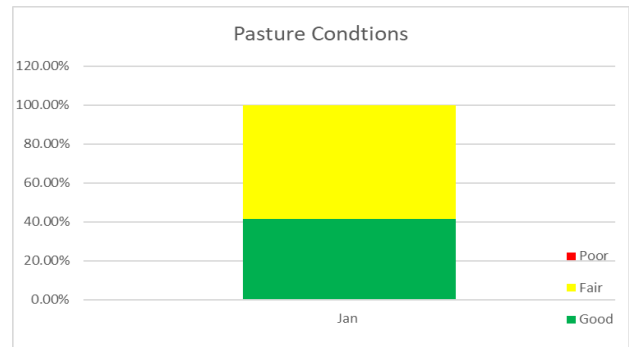


Figure 4: Kitui County Pasture Condition

### 2.1.4 Browse

- Browse condition ranged from fair to good across the county with an improving trend as shown in the figure 6.
- In January, fair conditions were at 55 percent and good conditions at 45 percent compared to the previous month of 37 and 63 percent for good and fair conditions respectively.
- This can be attributed to the off-season rains received during the month.
- The current browse is expected to last for 3-4 months which is normal.

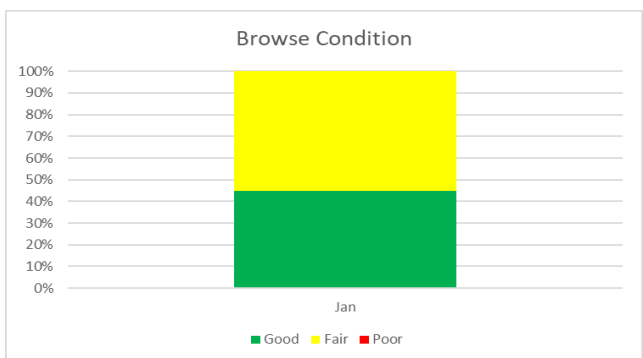


Figure 6: Kitui County Browse Condition

## 2.2 WATER RESOURCE

### 2.2.1 Sources

- The main water sources for both human and livestock consumption in January were pans and dams, traditional river wells, shallow wells, springs and piped water systems as shown in the figure 7.
- This situation is normal at this time of the year.
- The current water levels of open water sources in Marginal Mixed Farming livelihood zones are below 30 percent of their capacity and this is attributed to depressed 2020 short rains leading to poor recharge.
- Water at open water facilities is likely to last for 1-3 months across the livelihood zones compared to 2-3 months normally.

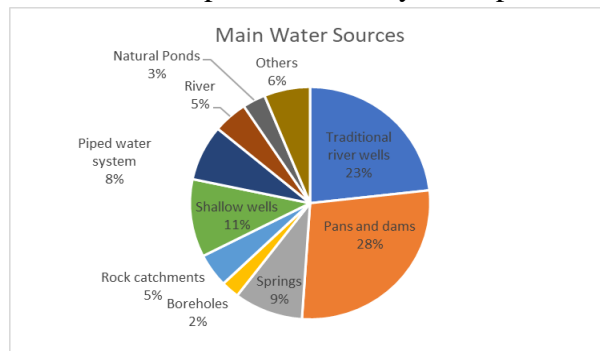


Figure 7: Major Water Sources in Kitui

### 2.2.2 Household Access and Utilization

- The average return distances from the households to water sources increased by 10 percent to 4.4 km in January from 4 km in previous month.
- Households in Marginal Mixed Farming livelihood zone trekked an average of 4.6 km compared to 4 km in Mixed Farming livelihood zone.
- The current water distance is 7 percent higher than the long-term mean as shown in the figure 8.
- Water consumption per person per day remained stable at 18 litres in January as it was in previous month.
- About twelve percent of the households were treating their water before consuming in January as it was in the previous month. Water treatment chemicals was the most preferable treatment method.
- The proportion of households buying water increased to 33 percent in January from 29 percent in December.
- The price of water per 20-litre Jerry can at source was normal at 2-5 shillings. In some areas, the price of water was one shilling. However, water retailed at 10-30 shillings from vendors.

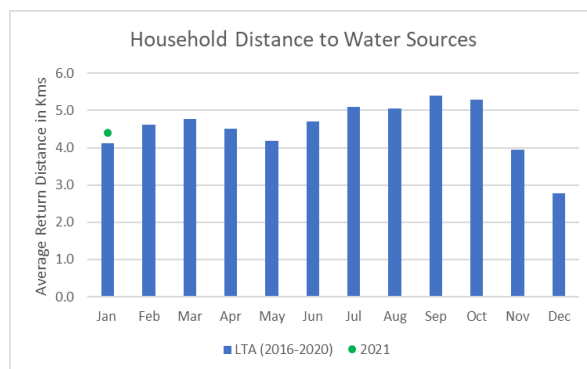


Figure 8: Household Access to Water

### 2.2.3 Livestock Access

- The average return distances from livestock grazing areas to watering points increased to 4.1 in January from 4 Km in December.
- Livestock in Marginal Mixed Farming livelihood zones trekked a higher distance at 4.4km compared to 3.8km in Mixed farming livelihood zone.
- On average, livestock watering frequency was after every other day in Marginal Mixed Farming and daily in Mixed Farming livelihood zones.
- The current average distance from livestock grazing areas to watering points is normal as shown in the figure 9.

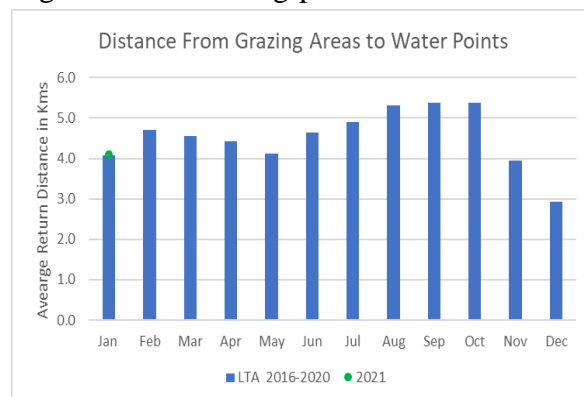


Figure 9: Average Grazing Distances

## 2.3 Implication of the Above Indicators to Food Security

- Forage access and availability is likely to remain stable following the off-season rains experienced during the month. However, households in Marginal Mixed Farming might experience some water stress due to breakdowns and drying up of nearby sources.

## 3.0 PRODUCTION INDICATORS

### 3.1 LIVESTOCK PRODUCTION

#### 3.1.1 Livestock Body Condition

- Livestock body condition ranged from good to fair for all species across the livelihood zones with a deteriorating trend.
- On average, 42 percent of cattle had good smooth appearance body condition in January compared to 59 percent in previous month. The remaining 58 percent of the livestock had moderate, neither thin or fat, body condition as shown in the figure 10.
- The current livestock body condition is normal and this could be attributed to availability of forage and water.

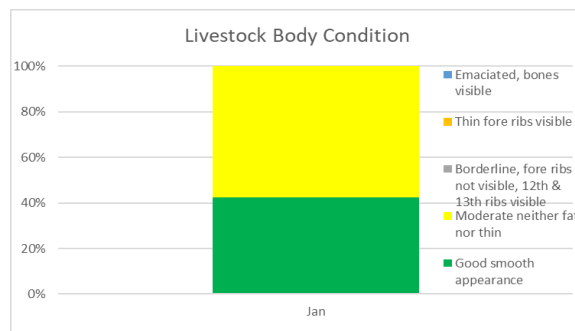


Figure 10: Cattle Body Condition

#### 3.1.2 Livestock Diseases

- Lumpy Skin Disease (LSD) was reported across the county. The disease affected livestock productivity with a permanent skin destruction. Unconfirmed deaths were also reported in Mutha ward.
- Foot and mouth disease (FMD) was reported in Yatta/Kwavonza and Mulango wards in Kitui Rural and Kitui Central sub counties respectively. A total of 11 cases were reported.
- Contagious Caprine Pleuropneumonia (CCPP) was also reported in Mwingi Central (Kivou ward) and Kitui Rural sub counties with a total of 52 cases and 12 deaths.
- Trypanosomiasis was reported in Mutha ward, Kitui South sub county with 20 cases reported and five (5) deaths in 15 households.
- Peste des Petits Ruminants (PPR) was also confirmed in Imale, Kitui East, Kitui South and Mwingi Central (Kanziko and Ukasi Wards) sub counties.

#### 3.1.3 Milk Production

- The average daily milk production per household per day increased to 1.3 litres from 0.9 litres in the previous month. This could be attributed to availability of forage and good livestock body conditions.
- Households in Marginal Mixed Farming livelihood zone produced an average of 1.5 litres per day compared to 1.1 litres in Mixed Farming livelihood zone.
- The current milk production is above than the long-term mean by 15 percent as shown in the figure 11.

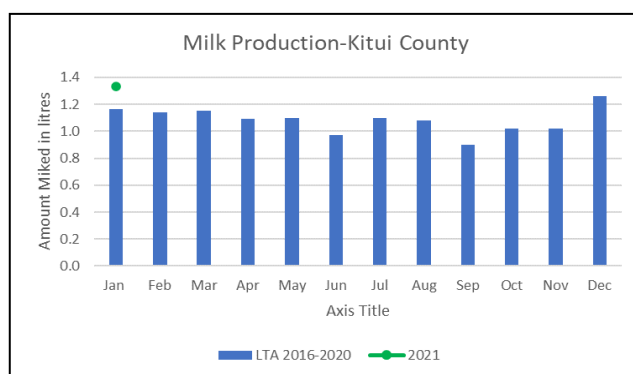


Figure 11: Milk Production per Household per Day

## 3.2 RAIN-FED CROP PRODUCTION

### 3.2.1 Stage and Condition of Food Crops

- The major crops planted in Marginal Mixed Farming livelihood zone were green grams, cow peas, maize, millet and sorghum while maize, beans, pigeon peas, green grams and cow peas were planted in Mixed Farming livelihood zone.
- The crops in few parts of the county were mainly at grain filling stage and in fair condition due to lack of enough moisture.
- Harvesting of pulses like green grams, beans and cowpeas was ongoing across the livelihood zones and this is normal at this time of the year.
- In addition to rain-fed cropping, farmers along main rivers (Athi, Tana, Tiva and Thua) had horticultural crops that were at various stages of development.

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

- Regeneration of livestock feeds and improvement in water availability and accessibility is likely to impact positively on livestock productivity.
- Crop productivity might be low due to poor performance of the short rain season, destruction from quelea quelea birds and desert locust. This will impact negatively on household food security.

## 4.0 MARKET PERFORMANCE

### 4.1 LIVESTOCK MARKETING

#### 4.1.1 Cattle Prices

- The average market price of cattle in January decreased to Kshs 26,912 compared to Ksh. 30,452 in December. This was attributed to high supply of cattle in the market in search of school fees.
- Markets in Mixed farming livelihood zones sold cattle at a higher price of Kshs 29,380 compared to Kshs 25,100 in Marginal Mixed Farming livelihood zone.
- The current market price of cattle is ten and seven percent higher than the long-term mean and the price in previous year as shown in the figure 12.

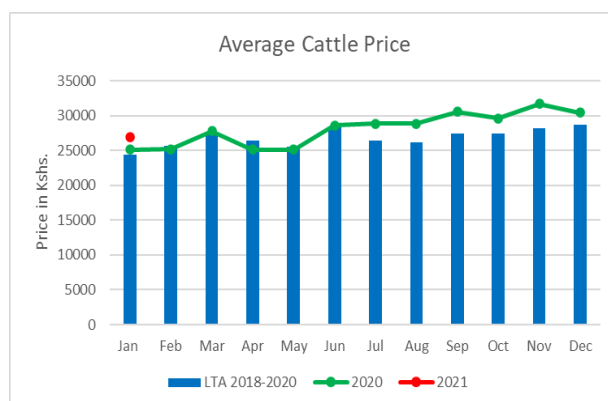


Figure 12: Cattle Prices

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

- There was an increase in average market price of a goat from Ksh. 4,217 in December to Kshs 4252 in January. This was due to stability in goat body condition.
- Mixed Farming livelihood zone recorded a higher price of Ksh.4,297 compared to Ksh.4,067 in Marginal Mixed Farming livelihood zone.
- The current market price of goat is 27 and 20 percent higher than the long-term mean and the price in previous year as shown in the figure 13.

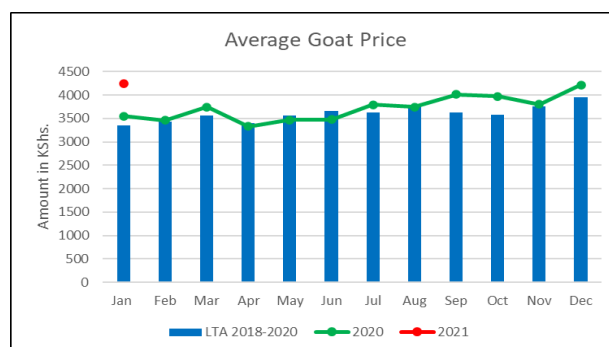


Figure 13: Goat Prices

## 4.2 CROP PRICES

### 4.2.1 Maize

- The average market price of maize per kilogram remained stable at Ksh.34 in January compared to Kshs 33 in previous month.
- There was no major price variance across the livelihood zones.
- The current market price of maize is three and 12 percent lower than the long-term average and the price in previous year respectively as shown in the figure 14.
- This is due to availability of the commodity in the market.

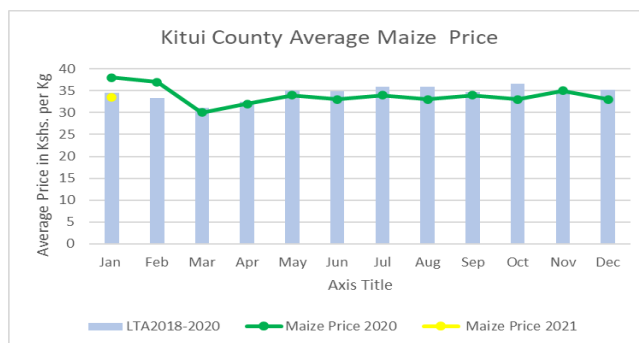


Figure 14: Maize Prices

### 4.2.2 Beans

- The average market price of beans remained stable at Ksh.92 in January compared to Ksh. 94 in previous month. This was attributed to the availability of the commodity in markets from outside the county.
- Beans price was higher in Marginal Mixed Farming livelihood zone at Ksh.94 compared to Ksh.90 in Mixed Farming livelihood zone.
- The current beans price is 21 percent higher than the long-term mean as shown in the figure 15.

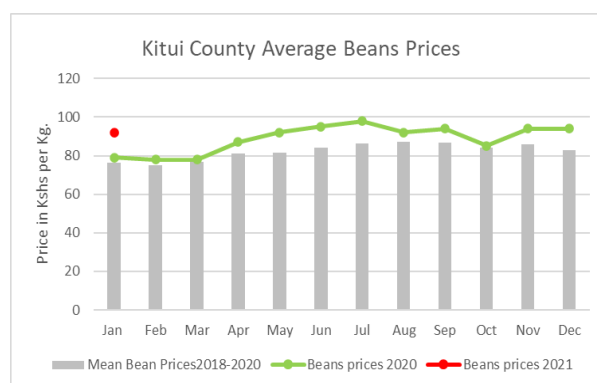


Figure 15: Beans Prices

## 4.3 Livestock Price Ratio/Terms of Trade

- Terms of trade, remained stable at 127 in January compared to 128 in December. This implies that, households were able to purchase 127 kilograms of maize from earnings of a goat in January compared to 128 kilograms in previous month.
- The sale of one goat would enable a household in Mixed Farming livelihood zone to purchase 131 kilograms of maize compared to 123 kilograms in Marginal Mixed Farming livelihood zone.
- The current terms of trade is 29 percent higher than the long-term mean as shown in the figure 16.

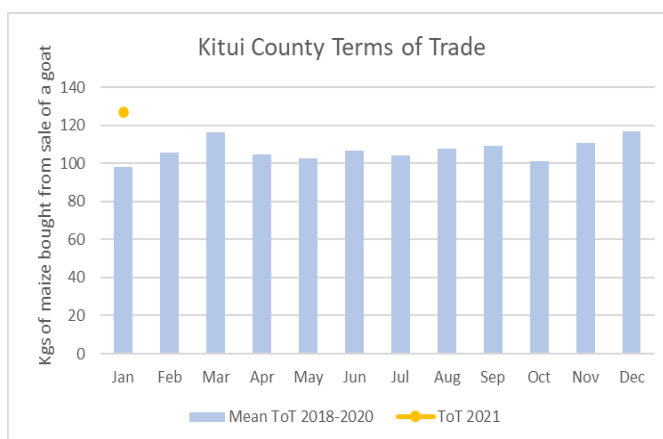


Figure 16: Terms of Trade

## 4.4 Implication of the above indicators to food security

- Household purchasing power is expected to remain stable following the availability of food commodities in the markets and improving livestock productivity.

## 5.0 FOOD CONSUMPTION AND NUTRITION STATUS

### 5.1 MILK CONSUMPTION

- The average daily milk consumption per household per day increased to 0.96 litres from 0.7 litres in previous month.
- Milk consumption has no variation across the livelihood zone where each livelihood recorded a litre
- The current milk consumption is 0.04 percent lower than the long-term average as shown in the figure 17 and this is due to low milk produced compared to normal.

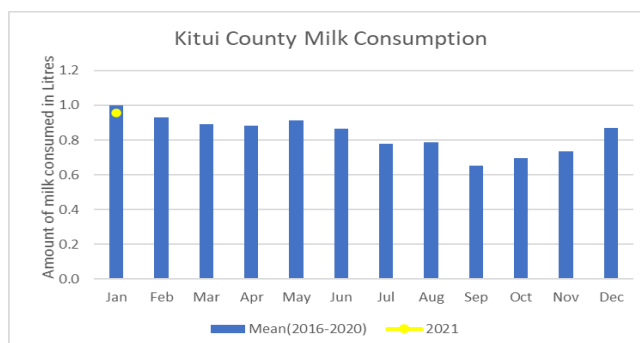


Figure 17: Milk Consumption per Household per Day

### 5.2 FOOD CONSUMPTION SCORE

- The proportion of households in acceptable food consumption category slightly increased in January to 87 percent compared to 82 percent in December.
- The remaining 13 percent of the households were in borderline food consumption category as shown in figure 18.
- Majority of the households in Mixed Farming were at acceptable category at 94 percent compared to 81 percent in Marginal Mixed Farming livelihood zone.

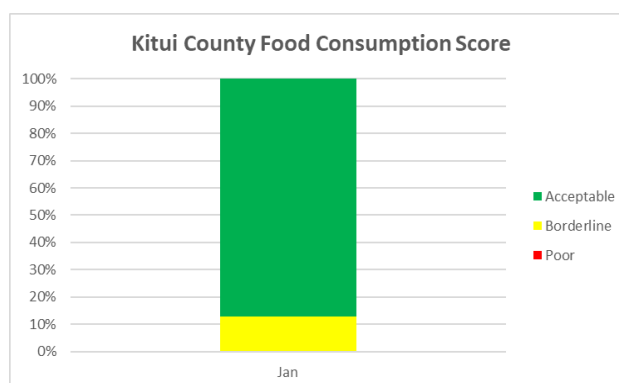


Figure 18: Food Consumption Score

## 5.3 HEALTH AND NUTRITION STATUS

### 5.3.1 Nutrition Status

- The proportion of children at risk of malnutrition remained stable at 2.7 percent in January as it was in December.
- Moreover, no cases of Global Acute Malnutrition (GAM) based on Mid Upper Arm Circumference (MUAC) was reported.
- The current level of children at risk of malnutrition is 3.7 percent lower than the long-term mean as shown in the figure 19 and this is attributed to availability of diversified foods at household and market levels due to stability in terms of trade.

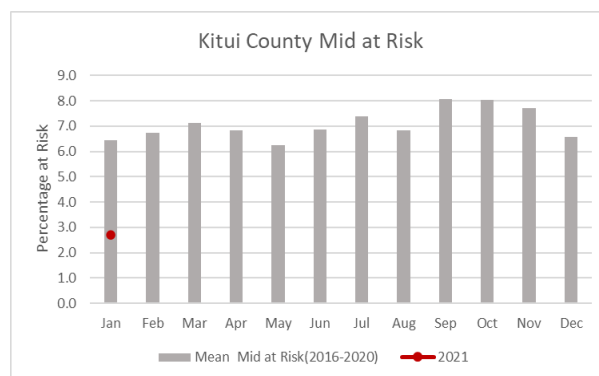


Figure 19: Children at Risk of Malnutrition

### 5.3.2 Health

- The proportion of children suspected to have fever with chills like malaria, fever with breathing difficulties and diarrhoea stood at 2.4, 0.7 and 0.9 percent in January compared to 1.9, 0.9 and 0.7 percent in previous month respectively.



## 5.4 COPING STRATEGIES

- The mean of reduced coping strategy index (rCSI) decreased in January to 3.9 from 4.2 in previous month.
- Households in Marginal Mixed Farming livelihood zone had a high rCSI of 5.4 compared to 2.1 in Mixed Farming livelihood zone. Reliance on less preferred or less expensive food and reduced portion size of meals were the most frequent coping mechanisms adopted across the livelihood zones.
- The current rCSI is 26 percent lower than the long-term mean as shown in the figure 20. Moreover, about 13 and 10 percent of households were employing stressed and crisis food coping mechanisms respectively.

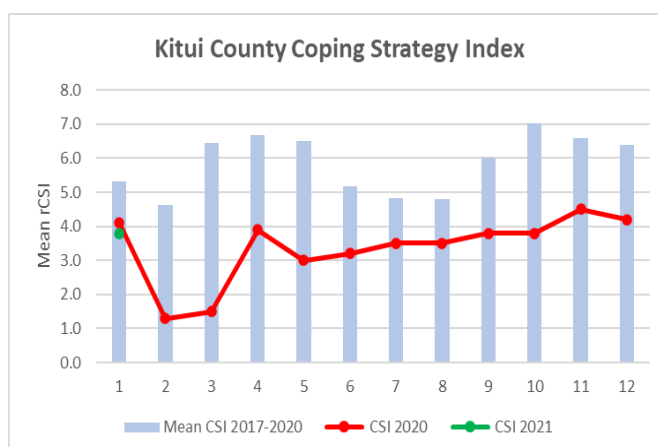


Figure 20: Reduced Coping Strategy Index (rCSI)

## 6.0 CURRENT INTERVENTION MEASURES

### 6.1 NON-FOOD INTERVENTIONS

- Promotion of high value horticulture crops, mango production & value addition, Promotion of viable and equitable commercialization of the agricultural sector through value chain development and strengthening sorghum & millet value chains across the county-by-County Government of Kitui in collaboration with various partners.
- Rehabilitation of water supplies, drilling of boreholes and construction of earth dams by County Government of Kitui in collaboration with various partners.
- Vitamin A Supplementation/Deworming, Growth Monitoring, Iron and Folic acid supplementation (IFAS) by Ministry of Health supported by development partners.
- National Hygiene Programme (NHP), dubbed “Kazi Mtaani” to cushion the most vulnerable citizens living in the informal settlements to address the adverse effects of COVID-19 pandemic by the National Government.
- Desert Locust control by County Government of Kitui in collaboration with United Nations Food and Agriculture Organization (FAO).
- Quelea quelea birds’ control by County Government of Kitui in collaboration with United Nations Food and Agriculture Organization (FAO).

### 6.2 FOOD INTERVENTIONS

- Therapeutic integrated management of acute malnutrition for the under-fives, pregnant and lactating mothers [supplementary feeding program (SFP)], Outpatient therapeutic program (OTP) and Stabilization centres by Ministry of Health supported by several partners.

## 7.0 EMERGING ISSUES

### 7.1 Insecurity/Conflict/Human Displacement

- No abnormal incidences of insecurity, conflict or human displacement were reported in the county.

### 7.2 FOOD SECURITY PROGNOSIS

- Based on Intergovernmental Authority on Development (IGAD) Climate Prediction and Application Centre (ICPAC) Rainfall and Temperature forecast for the period February to April 2021, the county is likely to experience normal to above normal wet conditions coupled with usual to warmer than usual temperatures.

- Based on Sussex Vegetation Outlook for the month of February and March 2021, the 3-month VCI forecast indicates that, the county vegetation greenness is likely to remain normal to above normal throughout the forecasted period and this will boost availability of livestock feeds.
- Based on Kenya Food Security Outlook for October 2020 to May 2021, Ministry of Agriculture estimates that national maize production for the 2020 long rains is projected to be 10-15 percent above the five-year average. This is due to enhanced harvest from high and medium production areas. This will stabilize staple food prices thus boost household purchasing power and access to diversified foods.
- Based on Desert Locust Situation Update released by Food and Agriculture Organization of the United Nations (FAO) on 26<sup>th</sup> January 2021, there is a risk of re-invasion from Somalia and the swarms are likely to spread out looking for favourable areas to mature and lay eggs. This will give rise to hopper bands during February and March and a high likelihood of destruction of rangeland resources.
- In the event of a second wave of the COVID-19 pandemic, the government is likely to impose more stringent measures which will constrain income generating activities thus, lead to loss of income and livelihoods.

## **8.0 RECOMMENDATIONS**

### **Immediate/Short term**

National Government, County Government and Development partners to collaborate on:

#### **Agriculture Sector**

- Promotion of appropriate post-harvest management practices
- Promotion of rain water harvesting technologies for crop production.
- Intensify measures to control desert locusts and quelea quelea birds.
- Set up experimental index insurance schemes.

#### **Livestock Sector**

- Intensifying livestock disease control measures across the county and border counties.
- Promote pasture conservation and management practices.

#### **Water Sector**

- Water trucking to water needy schools and installation of water tanks
- Promote rain water harvesting technologies and management.
- Water infrastructure development and maintenance.

#### **Health and Nutrition Sector**

- Promoting home-based water treatment and conservation measures such as storage facilities across the county.
- Community awareness creation on COVID-19 preventive measures.
- Educate community on sanitation and hygiene related to water.

#### **Education Sector**

- Implementation of COVID-19 protocols in all learning institutions.

#### **Social Protection Sector**

- Mapping of vulnerable and at-risk households, affected food systems and responding through safety-nets.

#### **Peace and Security Sector**

- Enhancing peace building and conflict management activities along Kitui-Tana River border.