




A Vision 2030 Flagship Project



National Drought Management Authority
KITUI COUNTY
DROUGHT EARLY WARNING BULLETIN FOR OCTOBER 2020

OCTOBER EW PHASE	Early Warning Phase Classification		
Drought Status: NORMAL  Shughull za kawaida	LIVELIHOOD ZONE	EW PHASE	TRENDS
	Marginal Mixed Farming	Normal	Worsening
	Mixed Farming	Normal	Worsening
	County	Normal	Worsening

Drought Situation & EW Phase Classification

- Biophysical Indicators**
- The onset of the short rains was observed in parts of the county in the third dekad of October. However, the forecast indicates depressed October to December rainfall season.
 - The vegetation greenness was above normal.
- Socio-Economic Indicators (Impact Indicators)**
- Production Indicators**
- Land preparation and planting for the season was on-going and this is normal.
 - Livestock body condition was good to fair with normal cases of livestock migration and no deaths because of drought reported.
 - Confirmed cases of trypanosomiasis disease and deaths in cattle was reported in Mutha ward.
 - Milk production was below normal.
- Access Indicators**
- Terms of trade were favourable compared to long term mean.
 - Milk consumption was below normal.
 - Water distances were within normal range.
 - The cost of water at source was normal.
- Utilization Indicators**
- The percentage of children at risk of malnutrition was within normal range.
 - Households employed consumption based coping mechanisms less frequently compared to normal.

Biophysical Indicators	Value	Normal ranges
Rainfall (% of normal)	88	80-120
VCI-3 month	85.88	35-50
Forage Condition	Fair to poor	Fair to poor
Production indicators	Value	Normal ranges
Livestock Body Condition	Good to fair	Good to fair
Milk Production (in litres)	0.7	≥ 1.3
Livestock Migration Pattern	Normal	Normal
Livestock Deaths (from Drought)	No death	No death
Access Indicators	Value	Normal ranges
Terms of Trade (ToT)	120	≥ 89
Milk Consumption (in litres)	0.5	≥ 0.7
Return Distance to Water Sources (in km)	5.8	≤ 8.0
Cost of Water at Source (20 litres Jerry can)	2-5	≤ 5Ksh
Utilization indicators	Value	Normal ranges
Nutrition Status, MUAC (% at risk of malnutrition)	3.2	≤ 8.9
Coping Strategy Index (rCSI)	3.8	≤ 8.1

<ul style="list-style-type: none"> Short rains harvests Short dry spell Reduced milk yields Increased HH Food Stocks Land preparation 	<ul style="list-style-type: none"> Planting/Weeding Long rains High Calving Rate Milk Yields Increase 	<ul style="list-style-type: none"> Long rains harvests A long dry spell Land preparation Increased HH Food Stocks Kidding (Sept) 	<ul style="list-style-type: none"> Short rains Planting/weeding 								
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

- The onset of October November December 2020 short rains was observed in parts of the county in the third dekad of October.
- On average, the county recorded 7.3, 7.5 and 11 millimetres of rainfall for first, second and third dekad of October compared to 6.3, 8.1 and 16.9 millimetres normally. This was 88 percent of normal rainfall recorded in October as shown in figure 1.

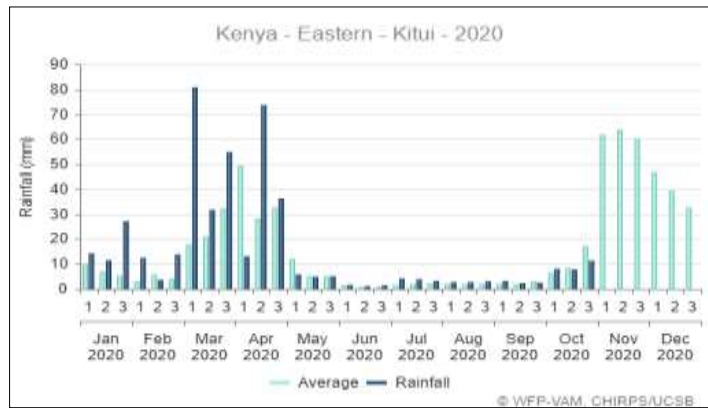


Figure 1: Rainfall Distribution for the Year 2020

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- Most parts of the county recorded rainfall in a span of 1-3 days in the fourth week of October which was characterised by poor temporal and uneven spatial distribution.
- Mutha, Tharaka, Ikanga and Kanyangi rainfall stations in Marginal Mixed Farming livelihood zones recorded 42.8, 31.0, 22.0 and 5.3 millimetres of rainfall compared to 28.7, 20.4 and 5.0 millimetres in Kitui Met, Nguutani and Kyome rainfall stations respectively in Mixed farming livelihood zone.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The county vegetation greenness declined by 11 percent to stand at a 3 month VCI of 85.88 in October from 95.6 in previous month. This is an indication of vegetation greenness above normal as shown in figure 3.
- Kitui Rural, Kitui West, Kitui Central and Mwingi West sub counties recorded the highest 3 month VCI at 108.37, 107.22, 104.85 and 94.68 respectively Compared to Mwingi North, Kitui South, Mwingi Central and Kitui East sub counties which recorded the lowest vegetation greenness at a 3 month VCI of 71.02, 83.68, 88.5 and 89.49 respectively.
- The county vegetation greenness is above the long term average and within the maximum recorded value as shown in figure 2.

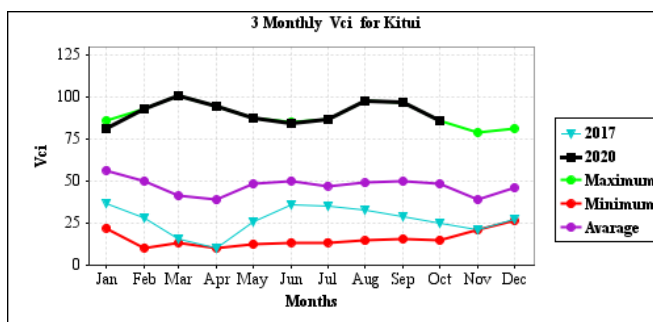


Figure 3: Kitui County 3 Month VCI Trend



Figure 3: Kitui County 3 Month VCI Matrix

2.1.2 Vegetation Condition Index Forecast

- Based on Sussex Vegetation Outlook for the month of November and mid-December 2020, the 3-month VCI forecast indicate an improvement in vegetation condition in the month of November followed by a decline in the month of December across the eight sub counties as shown in figure 4. However, the county vegetation greenness is likely to remain above normal and this will boost availability of livestock feeds.

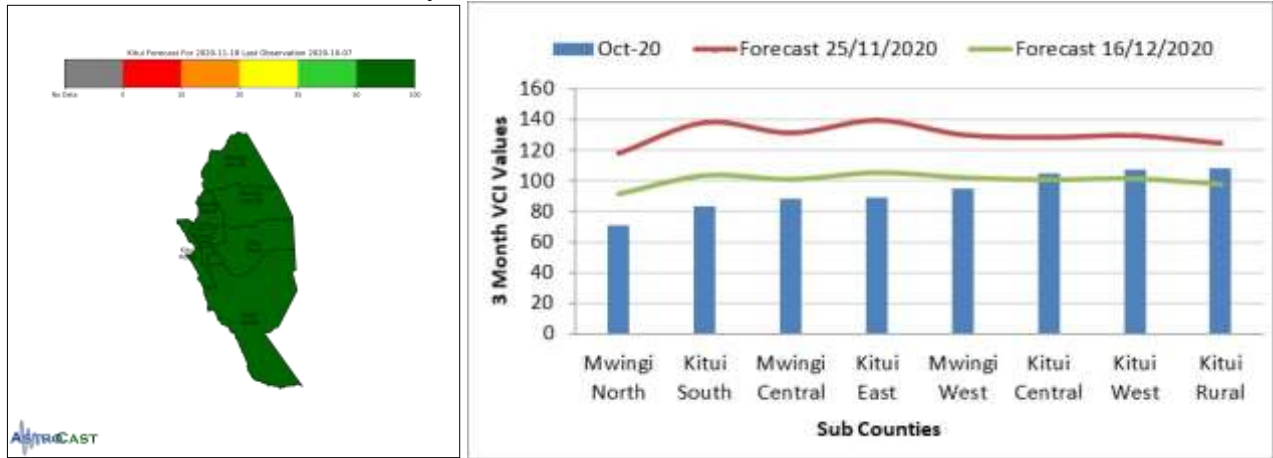


Figure 4: Kitui County 3 Month VCI Forecasts

2.1.3 Pasture

- Pasture condition ranged from fair to poor across the livelihood zones with a declining trend as shown in figure 5.
- On average, about 28 percent of pasture was deemed to be poor in both quality and quantity in October compared to seven percent in previous month. The remaining 72 percent of pasture was fair.
- The available pasture is likely to last for 1-2 months compared to less than a month in a normal season.

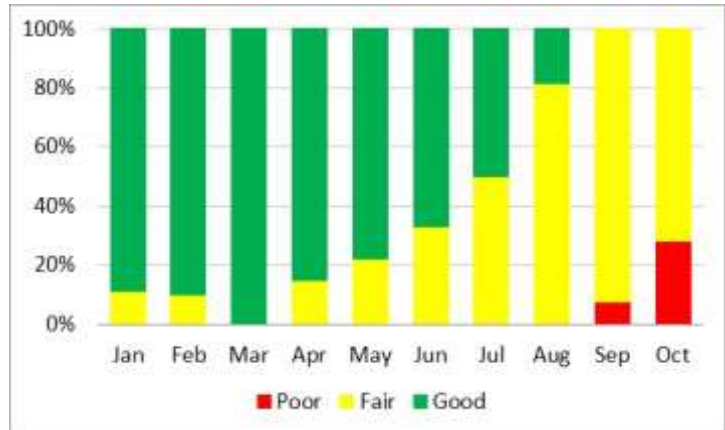


Figure 5: Kitui County Pasture Condition

2.1.4 Browse

- Browse condition was fair to poor across the livelihood zones with a declining trend as shown in figure 6.
- Moreover, about 12 percent of browse was regard as poor in October compared to zero percent in previous month. The remaining 88 percent of browse was fair in both quality and quantity.
- The available browse is likely to last for the next 1-2 months compared to one month normally.

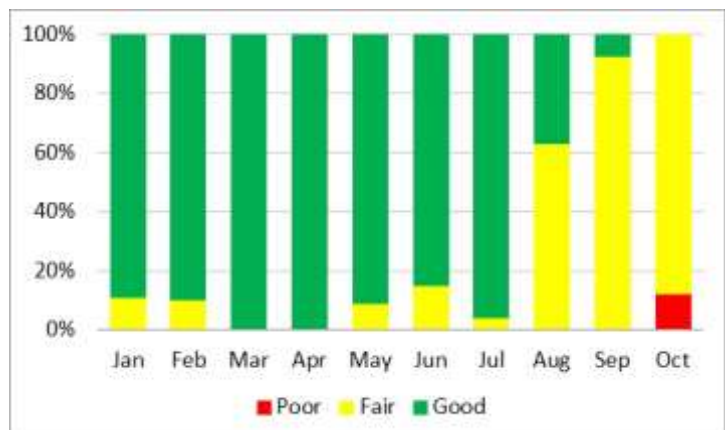


Figure 6: Kitui County Browse Condition

2.2 WATER RESOURCE

2.2.1 Sources

- The main water sources for both human and livestock consumption were boreholes, traditional river wells and shallow wells as shown in figure 7.
- This situation is normal at this time of the year.
- Water levels in most of open water facilities are below 30 percent of their capacity and likely to last for 1-2 months across the livelihood zones.

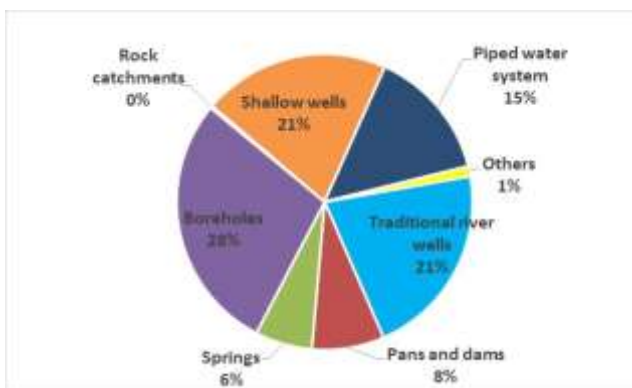


Figure 7: Major Water Sources in Kitui County

2.2.2 Household Access and Utilization

- The average return distances from the households to water sources remained stable at 5.8km in October compared to 5.9km in previous month.
- Households in Marginal Mixed Farming livelihood zone trekked an average of 6.5km compared to 5.2km in Mixed Farming livelihood zone.
- The current water distance is 28 percent lower than the long-term mean as shown in figure 8.
- Water consumption per person per day remained stable at 18 litres in October compared to 17 litres in previous month.
- About eight percent of the households were treating their water before consuming in October compared to nine percent in previous month. Water treatment chemicals was the most preferable treatment method.
- The proportion of households buying water stood at 50 percent in October compared to 49 percent in previous month.
- 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 20-30 shillings from vendors.

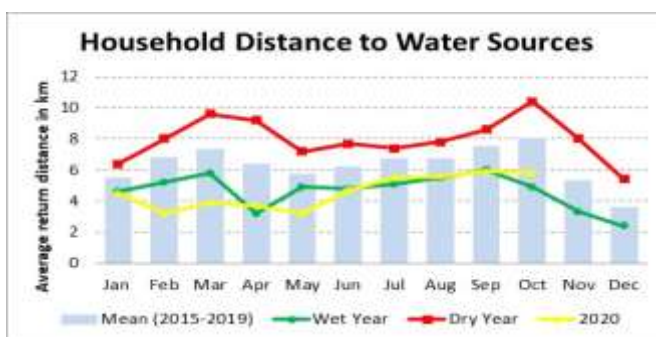


Figure 8: Household Access to Water

2.2.3 Livestock Access

- The average return distances from livestock grazing areas to watering points remained stable at 6.6km in October compared to 6.2km in previous month.
- There was no major variation across the livelihood zones.
- Livestock watering frequency was on alternate days in Marginal Mixed Farming and daily in Mixed Farming livelihood zones. This is normal at this time of the year.
- The current average distance from livestock grazing areas to watering points is 18 percent lower than the long-term mean as shown in figure 9.

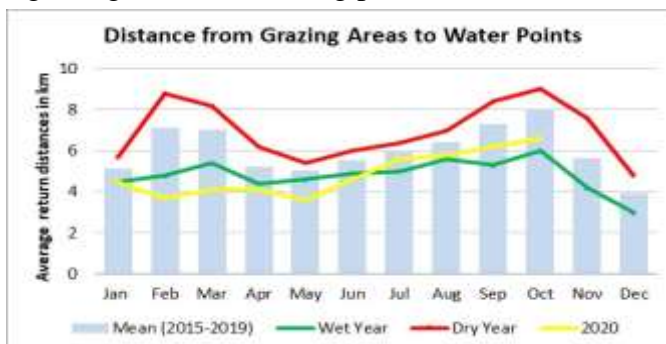


Figure 9: Average Grazing Distances

2.3 Implication of the Above Indicators to Food Security

- Water and forage access and availability is likely to improve partially following the onset of the short rains and this will boost food security at household level.

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, 24 percent of cattle had good smooth appearance body condition in October compared to 26 percent in previous month. The remaining 64 and 12 percent of the livestock had moderate (neither fat nor thin) and Borderline (fore ribs not visible, 12th and 13th ribs visible) body condition respectively as shown in figure 10.

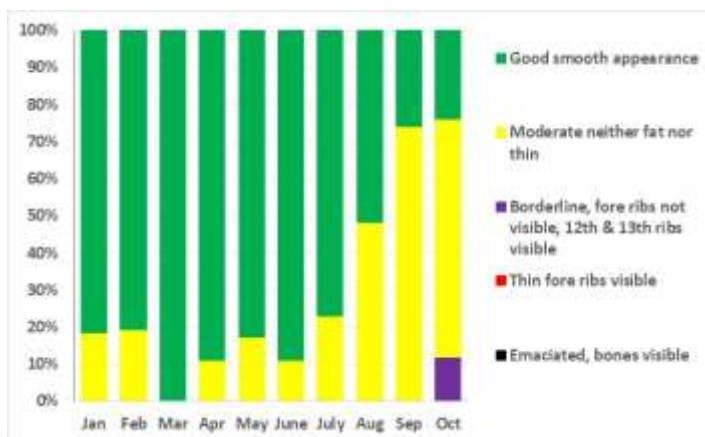


Figure 10: Cattle Body Condition

3.1.2 Livestock Diseases

- About four cattle were suspected to have died as a result of trypanosomiasis in Mutha ward, Kitui South Sub County with around 19 cases confirmed.

3.1.3 Milk Production

- The average daily milk production per household remained stable to stand at 0.7 litres in October compared to 0.6 litres in previous month.
- Households in Marginal Mixed Farming livelihood zone produced an average of 1.0 litres per day compared to 0.5 litres in Mixed Farming livelihood zone.
- The current milk production is lower than the long-term mean and wet year by 46 and 56 percent respectively as shown in figure 11. This is due to household preference of holding bulls for farming and reduced calving rates.

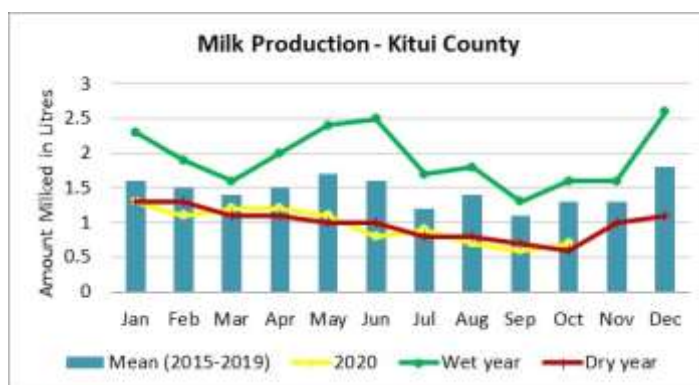


Figure 11: Milk Production per Household per Day

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

- Land preparation and planting for the season was on going 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

- Deteriorating livestock productivity and outbreak of livestock diseases are likely to impact negatively on household purchasing power.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- The average market price of cattle remained stable to stand at Ksh.29,606 in October from Ksh.30,580 in previous month. This was attributed to stability in cattle body condition.
- Cattle prices were higher in Mixed Farming livelihood zone at Ksh.31,463 compared to Ksh.27,867 in Marginal Mixed Farming livelihood zone.
- The current market price of cattle is 14 and 27 percent higher than the long-term mean and 2019 price respectively as shown in figure 12.

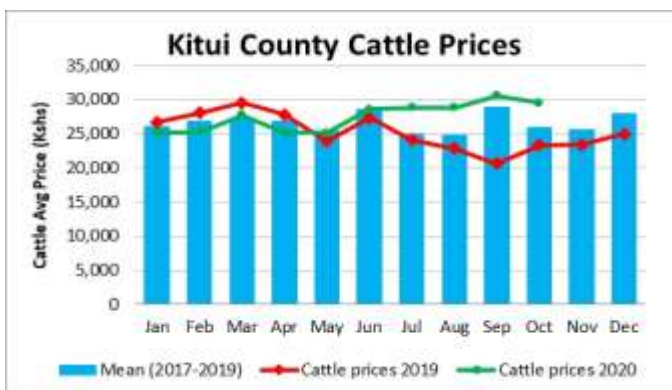


Figure 12: Cattle Prices

4.1.2 Small Ruminants Prices (Goat price)

- The average market price of goat remained stable at Ksh.3,972 in October from Ksh.4,016 in previous month. This was due to stability in goat body condition.
- Mixed Farming livelihood zone recorded a higher price of Ksh.4,500 compared to Ksh.3,660 in Marginal Mixed Farming livelihood zone.
- The current market price of goat is 21 and 22 percent higher than the long-term mean and 2019 price respectively as shown in figure 13.

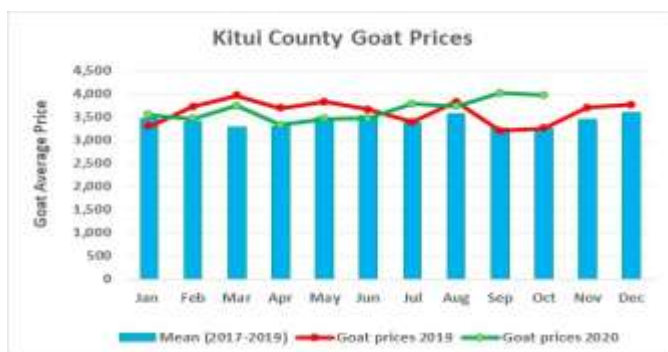


Figure 13: Goat Prices

4.2 CROP PRICES

4.2.1 Maize

- The average market price of maize per kilogram remained stable at Ksh.33 in October from Ksh.34 in previous month.
- Maize price was higher in Marginal Mixed Farming livelihood zone at Ksh.34 per kilogram compared to Ksh.33 in Mixed Farming livelihood zone.
- The current market price of maize is 13 and 27 percent lower than the long-term average and 2019 price respectively as shown in figure 14.
- This is due to availability of the commodity in the market from outside the county.

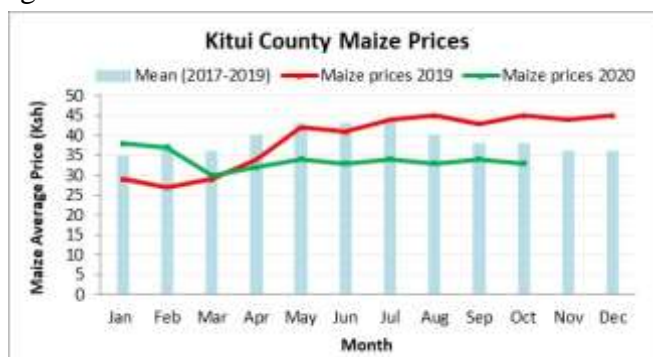


Figure 14: Maize Prices

4.2.2 Beans

- The average market price of beans remained stable at Ksh.85 in October from Ksh.94 in previous month.
- Beans price was higher in Marginal Mixed Farming livelihood zone at Ksh.90 compared to Ksh.68 in Mixed Farming livelihood zone.
- The current beans price is normal as shown in figure 15.
- Beans was available in the market from outside the county.

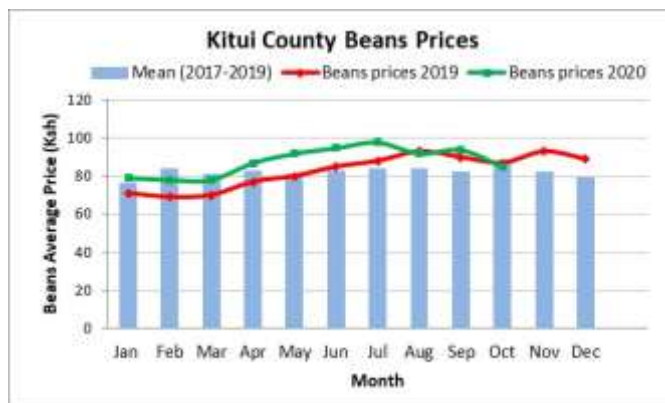


Figure 15: Beans Prices

4.3 Livestock Price Ratio/Terms of Trade

- Terms of trade, remained stable to stand at 120 in October from 118 in previous month. This implies that, households were able to purchase 120 kilograms of maize from earnings of a goat in October compared to 118 kilograms in previous month.
- The sale of one goat would enable a household in Mixed Farming livelihood zone to purchase 138 kilograms of maize compared to 109 kilograms in Marginal Mixed Farming livelihood zone.
- The current terms of trade is 35 and eight percent higher than the long term mean and wet year respectively as shown in figure 16.

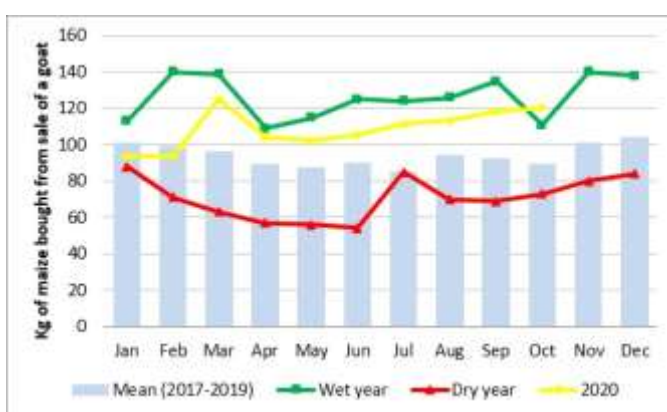


Figure 16: Terms of Trade

4.4 Implication of the above indicators to food security

- Stability in staple food prices will boost household purchasing power.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- The average daily milk consumption per household remained stable to stand at 0.5 litres in October as it was in previous month.
- Milk consumption was higher in Marginal Mixed Farming livelihood zone at 0.6 litres compared to 0.5 litres in Mixed Farming livelihood zone.
- The current milk consumption is 29 percent lower than the long-term average as shown in figure 17 and this is due to low milk produced compared to normal.

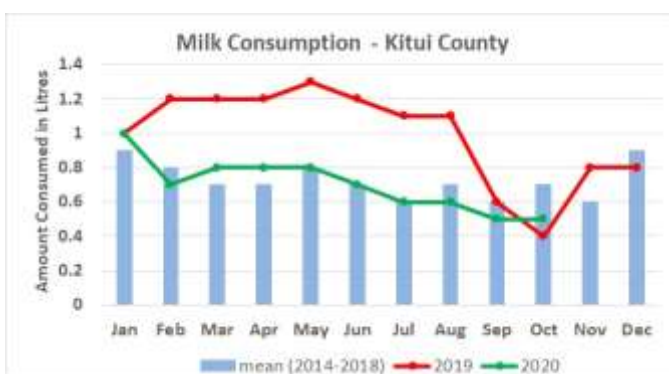


Figure 17: Milk Consumption per Household per Day

5.2 FOOD CONSUMPTION SCORE

- The proportion of households in acceptable food consumption category remained stable at 84 percent in October as it was in previous month.
- The remaining 16 percent of the households were in borderline food consumption category as shown in figure 18.
- Majority (87 percent) of the households in Marginal Mixed Farming Livelihood zone were in acceptable food consumption category compared to 81 percent in Mixed Farming livelihood zone.

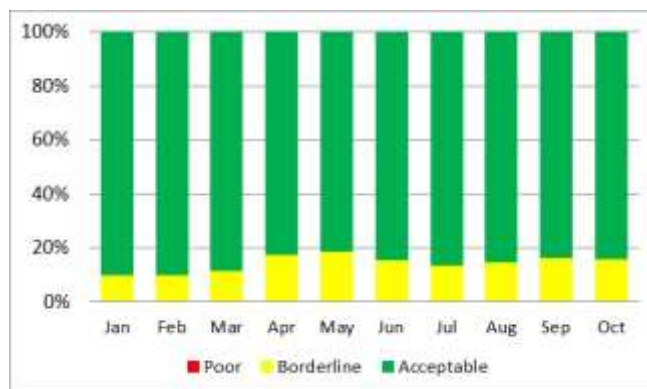


Figure 18: Food Consumption Score

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- The proportion of children at risk of malnutrition declined to stand at 3.2 percent in October from 4.5 percent in previous month.
- Moreover, Global Acute Malnutrition (GAM) based on Mid Upper Arm Circumference (MUAC) was at 0.3 percent.
- The current level of children at risk of malnutrition is 5.7 percent lower than the long-term mean as shown in figure 19 and this is attributed to availability of diversified foods at household and market levels due to improved terms of trade.

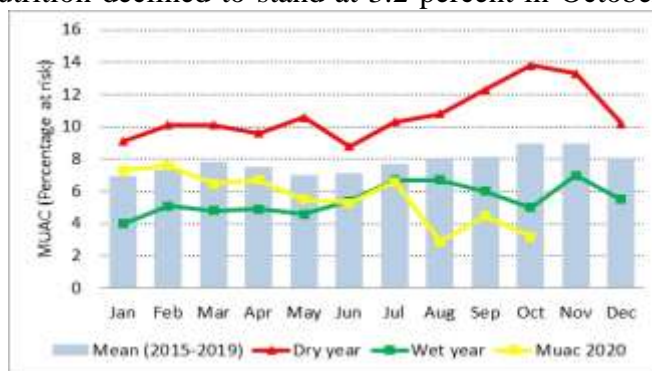


Figure 19: Children at Risk of Malnutrition

5.3.2 Health

- The proportion of children suspected to have fever with chills like malaria, fever with breathing difficulties and diarrhoea stood at 1.5, 0.5 and 1.0 percent in October compared to 1.7, 0.5 and 0.8 percent in previous month respectively.

5.4 COPING STRATEGIES

- The mean of reduced coping strategy index (rCSI) remained stable at 3.8 in October as it was in previous month.
- Households in Marginal Mixed Farming livelihood zone had a high rCSI of 4.9 compared to 2.6 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 53 and 66 percent lower than the long-term mean and 2019 index respectively as shown in figure 20.
- Moreover, about 69 percent of the households were employing none or minimal coping mechanisms to cope with lack of food or money to buy food in October compared to 73 percent in previous month. The remaining 21 and 10 percent of the households were employing stress and crisis 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.
- Development and distribution of climate and weather advisories by Kenya Meteorological Department, County Government of Kitui, National Drought Management Authority and other partners.
- Distribution of assorted drought tolerant seeds, drying canvas, hematic bags and post-harvest equipment's to more than 500 households in Mwingi North Sub County by County Government of Kitui and Adventist Development Relief and Agency Kenya.
- 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.

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

- High influx of livestock migrating from neighbouring Tana River County was reported in Mutha ward, Kitui South Sub County in search of water and pasture.

7.2 FOOD SECURITY PROGNOSIS

- Based on ForPac forecasts of Standard Precipitation Index (SPI) for October to December 2020 season issued on September 2020, there is a higher than usual chances that the county will pass thresholds signifying alert phase and alarm worsening phase. Hence a need to take early action to cushion households against the adverse impacts of drought.
- Moreover, the weather outlook for October, November and December 2020 published by Kenya Meteorological Department, issued on 05th September 2020 indicates that, the county is likely to receive below-average (depressed) rainfall with timely onset and cessation. This will lead to partially recharge of water facilities and regeneration of pasture hence a slight improvement in livestock feeds and productivity. Food availability at household level is likely to improve partly due to favourable terms of trade.
- Based on Sussex Vegetation Outlook for the month of November and mid-December 2020, the 3-month VCI forecast indicate an improvement in vegetation greenness in the month of November followed by a decline in the month of December. However, the county vegetation greenness is likely to remain above normal throughout the forecasted period and this will boost availability of livestock feeds.
- Moreover, the TAMSAT-ALERT Soil Moisture Forecast released on 25th October 2020 signify that the county will experience average to below average soil moisture conditions, this will partly boost development of crops and pasture hence farmers need to be advised on the right crop enterprise.
- Based on Kenya Food Security Outlook for June 2020 to January 2021, Kenya's maize supply is expected to be adequate to meet the national consumption throughout the scenario period

despite border closures and restrictions on movement as a measure to curb the spread of corona virus which will slow down cross-border trade in food commodities. Thus, maize supply will be filled by local production and regional imports. This will stabilize staple food prices thus boost household purchasing power and access to diversified foods.

- Conversely, increased upsurge of livestock migrating to Mutha ward from Tana River county will result to accelerated depletion of rangeland resources leading to increased risk of resource-based conflicts between in-migrating herders and farmers. Moreover, there is a likelihood of upsurge of livestock pests and diseases and this might lower livestock productivity.

8.0 RECOMMENDATIONS

Immediate/Short term

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

- Dissemination of climate and agro-weather advisories across the county.
- Intensifying livestock disease control measures along Kitui-Tana River border.
- Promoting home-based water treatment and conservation measures such as storage facilities across the county.
- Enhancing repair and maintenance of strategic water points.
- Advocating on pasture conservation and management practices.
- Creating awareness on COVID-19 preventive measures.
- Mapping of vulnerable and at-risk households, affected food systems and responding through safety-nets.
- Enhancing peace building and conflict management activities along Kitui-Tana River border.
- Implementation of COVID-19 protocols in all learning institutions.

Medium and Long term

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

Water Sector

- Promotion of water harvesting, storage and management.
- Awareness creation on the importance of protecting water sources.

Agriculture Sector

- Capacity building on safe use of chemicals.
- Enhancing asset creation for households especially Farm ponds and water pans for food production.
- Enhancing Soil analysis and crops suitability surveys in all sub counties to support irrigation activities.
- Community sensitization on soil conservation structures.

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

- Sensitization on hygiene and sanitation at household level with emphasis on Water treatment.
- Carry out routine disease surveillance.
- Improve Vitamin A supplementation and de-worming to children under five years
- Improve vector control activities.
- Promotion and sensitization of kitchen garden
- Continuous sensitization on staying safe from the COVID-19 as the infections are continuously rising

Education Sector

- Promotion of water harvesting, storage and management in schools.

Peace Building Initiatives

- Peace building and conflict management initiatives.