National Drought Management Authority

KITUI COUNTY

DROUGHT EARLY WARNING BULLETIN FOR NOVEMBER 2019

A Vision 2030 Flagship Project

NOVEMBER EW PHASE

Early Warning Phase Classification

LIVELIHOOD ZONE	EW PHASE	TRENDS
Marginal Mixed Farming	Recovery	
Mixed Farming	Normal	Stable
County	Recovery	

Drought Situation & EW Phase Classification

Biophysical Indicators

- The county experienced above normal rainfall with good temporal and uneven spatial distribution.
- The vegetation greenness was above normal.

Socio-Economic Indicators (Impact Indicators)

Production Indicators

- Crops were mainly at knee high/flowering stage and in good condition.
- Maize infestation by fall armyworms was reported.
- Livestock body condition was fair to good for all the species with no abnormal cases of livestock diseases and deaths reported.
- Milk production was below normal.

Access Indicators

- Terms of trade were unfavourable compared to long term mean.
- Milk consumption was within normal range.
- Water distances were below normal range.
- The cost of water at source was normal.

Utilization Indicators

- The percentage of children mid at risk of malnutrition was above normal range.
- Households employed consumption based coping mechanisms more frequently compared to normal.

Biophysical Indicators	Value	Normal ranges
Rainfall (% of normal)	129	80-120
VCI-3 month	50.6	35-50
Forage Condition	Fair to good	Fair to good
Production indicators	**Value**	**Normal ranges**
Maize Crop Condition	Good	Good
Livestock Body Condition	Fair to good	Fair to good
Milk Production (in litres)	0.9	≥ 1.2
Livestock Migration Pattern	Normal	Normal
Livestock Deaths (from Drought)	No death	No death
Access Indicators	**Value**	**Normal ranges**
Terms of Trade (ToT)	84	≥ 112
Milk Consumption (in litres)	0.8	≥ 0.6
Return Distance to Water Sources (in km)	3.2	≤ 5.7
Cost of Water at Source (20 litres Jerry can)	2-5	≤ 5Ksh
Utilization indicators	**Value**	**Normal ranges**
Nutrition Status, MUAC (% at risk of malnutrition)	8.3	≤ 7.2
Coping Strategy Index (rCSI)	9.9	≤ 6.0

▪ Short rains harvests ▪ Short dry spell ▪ Reduced milk yields ▪ Increased HH Food Stocks ▪ Land preparation			▪ Planting/Weeding ▪ Long rains ▪ High Calving Rate ▪ Milk Yields Increase			▪ Long rains harvests ▪ A long dry spell ▪ Land preparation ▪ Increased HH Food Stocks ▪ Kidding (Sept)			▪ 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 month of November was wet across the livelihood zones with moderate to heavy rainfall amounts.
- On average, the county recorded 26.3 and 90.6 milimetres of rainfall in first and second dekads of November compared to 61.5 and 63.6 milimetres normally as shown in figure 1. This was 129 percent of normal rainfall recorded in November.

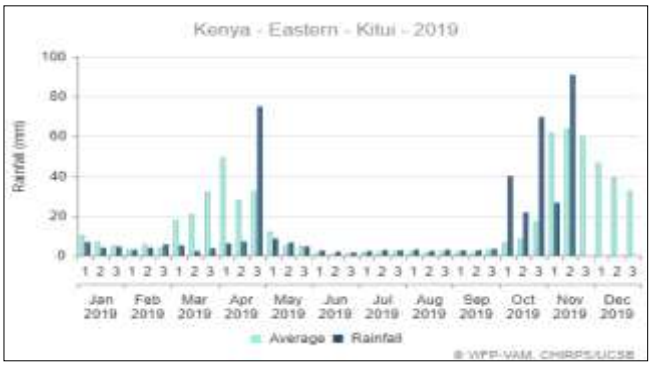

Figure 1:Rainfall Distribution for the Year 2019

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- Cumulatively for the season, most parts of Mixed Farming livelihood zones recorded enhanced rains at 300-900 millimetres compared to 200-400 millimetres in Marginal Mixed Farming livelihood zone at a span of 10-20 wet days.
- Matinyani and Kitui ATC rain stations in Mixed Farming livelihood zone recorded the highest cumulative amount of rainfall at 941 and 927.5 millimetres in 29 and 28 wet days respectively.
- Conversely, Tharaka station in Marginal Mixed Farming livelihood zone recorded 53.6 in 10 wet days.
- Temporal distribution was good while spatial distribution was uneven across the livelihood zones.

1.3 OTHER EVENTS

- Most of infrastructures such as pans and dams, pit latrines, roads and bridges were destroyed by floods.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The county vegetation greenness improved by 107 percent to stand at a 3 month VCI of 50.6 in November from 24.61 in previous month, this is an indication of vegetation greenness above normal as shown in figure 3.
- Kitui West and Kitui Central sub counties recorded the highest 3 month VCI at 82.59 and 81.39 respectively while Kitui South sub county recorded the normal vegetation greeness of 38.63.
- The current vegetation greenness is above normal as shown in figure 2.

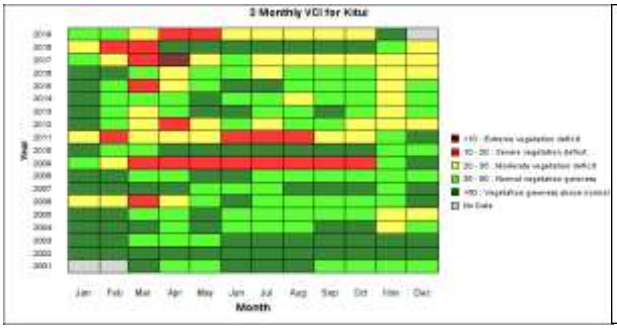

Figure 2: Kitui County 3 Month VCI

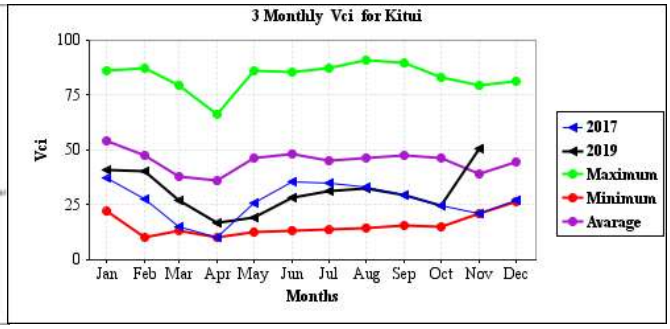

Figure 3: Kitui County 3 Month VCI Trend

2.1.2 Pasture

- Pasture quality and quantity improved across the livelihood zones compared to previous month.
- About 65 percent of pasture was considered good in November compared to 14 percent in previous month. The remaining 35 percent of pasture was fair in both quality and quantity.
- Improvement in pasture condition was attributed to progression of seasonal rainfall.

2.1.3 Browse

- Browse condition ranged from fair to good across the livelihood zones.
- About 65 percent of browse was considered good in November compared 18 percent in previous month. The remaining 35 percent of browse was fair in both quality and quantity.
- This situation is normal at this time of the year with an improving trend.

2.2 WATER RESOURCE

2.2.1 Sources

- The main water sources for both human and livestock consumption were traditional river wells, pans & dams and roof catchments as shown in figure 4.
- This situation is normal at this time of the year.
- Water resources had a recharge level of more than 80 percent of their capacity.
- Heavy rains experienced in the county led to destruction of some water facilities.

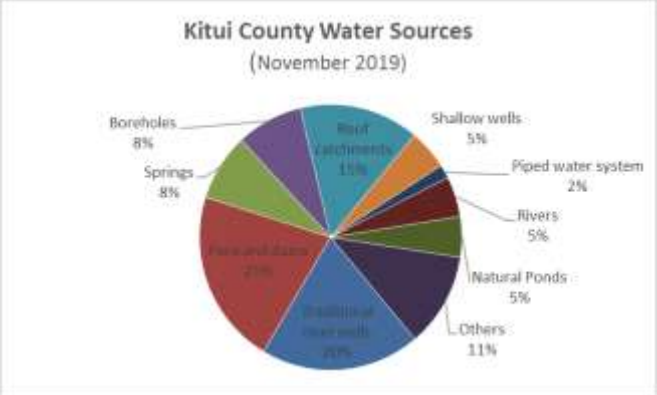

Figure 4: Kitui County Main Water Sources

2.2.2 Household Access and Utilization

- The average return distances from the households to water sources reduced by 35 percent to stand at 3.2km in November from 4.9km in previous month. This was mainly attributed to recharge of nearby water sources.
- There was no major variation across the livelihood zones.
- The current water distances is 44 percent lower than the long term mean as shown in figure 5.
- Water consumption per person per day remained stable at 12 litres in November as it was in previous month.
- The proportion of households buying water stood at nine percent in November compared to 54 percent in previous month.

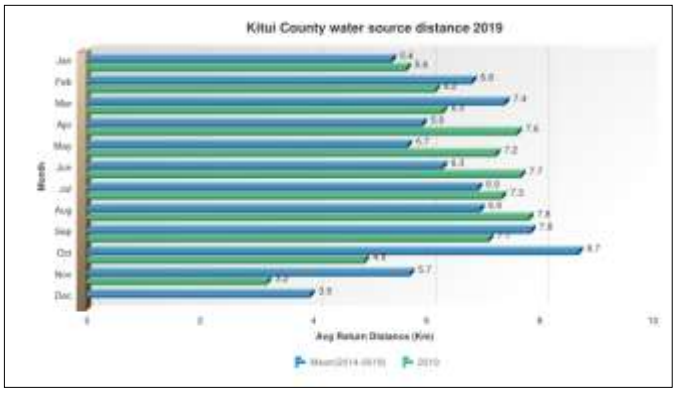

Figure 5: Household Access to Water

- The average price of water per 20 litre Jerry can at source was normal at 2 to 5 shillings. In some areas the price of water was one shilling.

2.2.3 Livestock Access

- Livestock average return distances from grazing areas to watering points declined by 34 percent to stand at 3.7km in November from 5.6km in previous month.
- Livestock in the Marginal Mixed Farming livelihood zone trekked longer distances at 4.0km compared to 3.4km in the Mixed Farming livelihood zone.
- Livestock were being watered daily across the livelihood zones and this is normal at this time of the year.
- The current average distance from the livestock grazing areas to watering points is 33 percent lower than the long term mean as shown in figure 6.

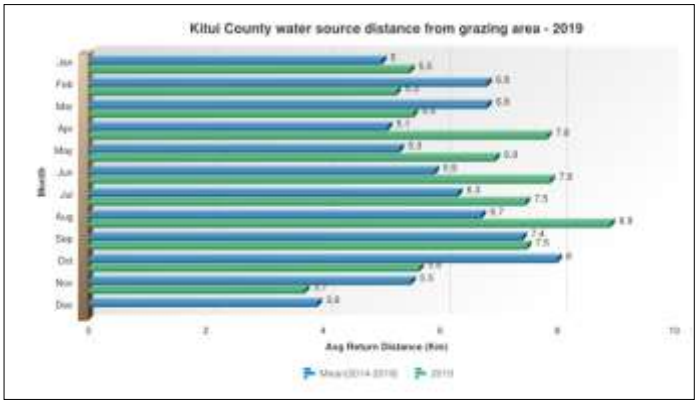

Figure 6: Average Grazing Distances

2.3 Implication of the Above Indicators to Food Security

- Regeneration of forage is likely to impact positively on livestock productivity hence improve household purchasing power.
- Stability in water availability and accessibility will cushion both households and livestock from water stress.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Livestock body condition was fair to good for all livestock species across the livelihood zones with an improving trend.
- On average, 73 and 23 percent of cattle had moderate (neither fat nor thin) and good smooth appearance body condition respectively.
- However, four percent of cattle had borderline (fore ribs not visible, 12th and 13th ribs visible) body condition.

3.1.2 Livestock Diseases

- Suspected cases of CCPP, PPR, goat and sheep pox were reported in Mwingi North sub county.

3.1.3 Milk Production

- The average daily milk production per household rose by 50 percent to stand at 0.9 litres in November from 0.6 litres in previous month. This could have been attributed to improvement in forage and water availability which impacted positively on livestock body condition.
- Households in Marginal Mixed Farming livelihood zone produced an average of 1.1 litres per day compared to 0.9 litres in the Mixed Farming livelihood zone.
- The current milk production per household per day is 25 percent lower than the long term mean as shown in figure 7.

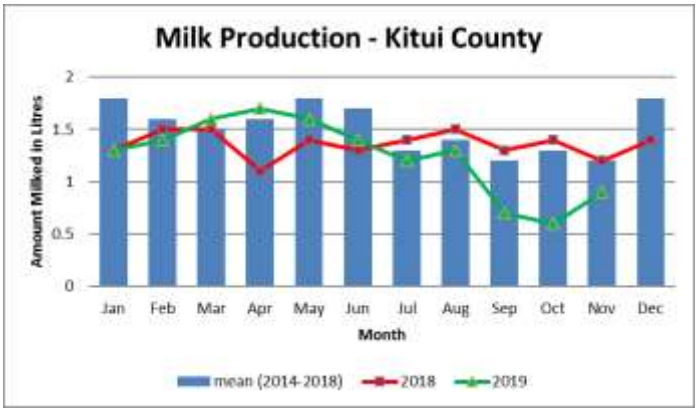

Figure 7: Milk Production per Household per Day

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

- The major crops planted in the Mixed Farming livelihood zone included maize, cowpeas, beans, pigeon peas and green grams while green grams, sorghum, millet, cowpeas and maize were planted in the Marginal Mixed Farming livelihood zone.
- These crops were mainly at knee high/flowering stage and in good condition.
- However, the crops were at podding/tussling stage in some pockets and cow peas leaves were being harvested across the livelihood zones.
- Crops in pockets of black cotton soil had been affected by water logging.
- Maize crops infestation by fall armyworms were reported across the livelihood zones and the county department of Agriculture was advising farmers on the best chemicals to purchase through local radio station.
- 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

- Although an improvement in livestock productivity and crop condition might impact positively on household food security, presence of fall armyworms will impact negatively on maize production if it will remain uncontrolled.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- The average market price of cattle remained stable at Ksh.23,424 in November from Ksh.23,333 in previous month.
- The traded volume of cattle reduced in the markets compared to previous month.
- Cattle prices were higher in Mixed Farming livelihood zone at Ksh.26,800 compared to Ksh.20,933 in Marginal Mixed Farming livelihood zone.
- The current market price of cattle is 15 percent lower than the long-term mean as shown in figure 8.

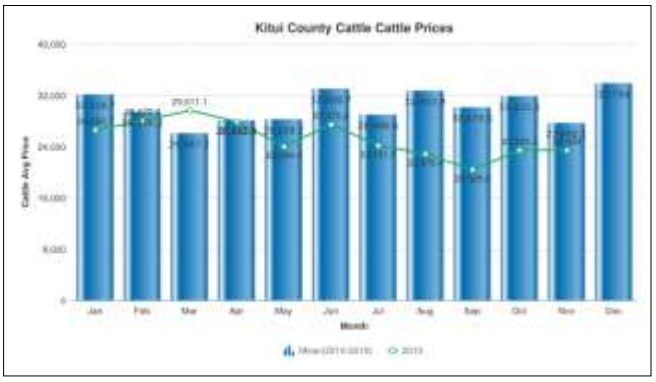

Figure 8: Cattle Prices

4.1.2 Small Ruminants Prices (Goat price)

- The average market price of goat rose by 14 percent to stand at Ksh.3,704 in November from Ksh.3,257 in previous month. This could have been attributed to an improvement in goat body condition.
- Mixed Farming livelihood zone recorded a higher price of Ksh.4,509 compared to Ksh.3,033 in Marginal Mixed Farming livelihood zone.
- The current market price of goat is four percent above the long-term mean as shown in figure 9.

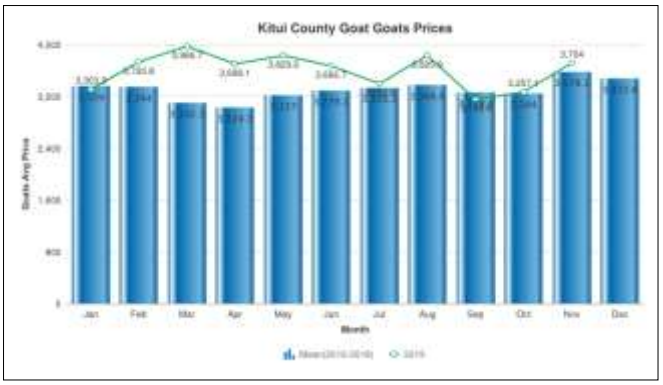

Figure 9: Goat Prices

4.2 CROP PRICES

4.2.1 Maize

- The average market price of maize per kilogram remained stable at Ksh.44 in November from Ksh.45 in previous month. This was mainly attributed to availability of the commodity in the market from traders sourcing the commodity in other counties.
- Mixed Farming livelihood zone recorded a higher price of Ksh.45 compared to Ksh.43 in Marginal Mixed Farming livelihood zone.
- The current market price of maize is 33 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 remained stable at Ksh.93 in November from Ksh.87 in previous month. Beans was mainly sourced from other counties by traders.
- Beans price was higher in Mixed Farming livelihood zone at Ksh.96 compared to Ksh.89 in Marginal Mixed Farming livelihood zone.
- The current beans price is 22 percent higher than the long-term mean as shown in figure 11.

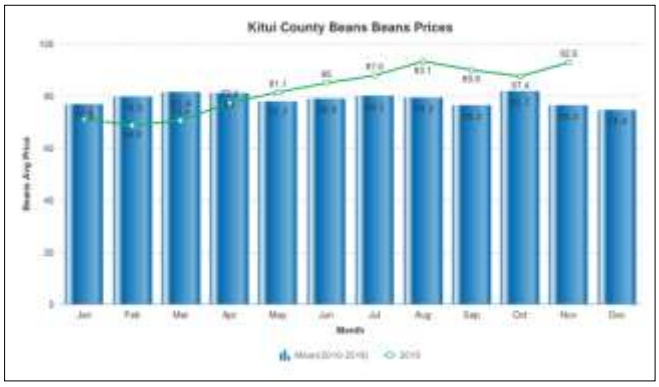

Figure 11: Beans Prices

4.3 Livestock Price Ratio/Terms of Trade

- Terms of trade was favourable in November at 84 compared to 73 in previous month. This implies that, households were able to purchase 84 kilos of maize from earnings of a goat in November compared to 73 kilos in previous month.
- The sale of one goat would enable a household in Mixed Farming livelihood zone to purchase 100 kilos of maize compared to 71 kilos in Marginal Mixed Farming livelihood zone.
- The current terms of trade is 25 percent lower than the long term mean as shown in figure 12.

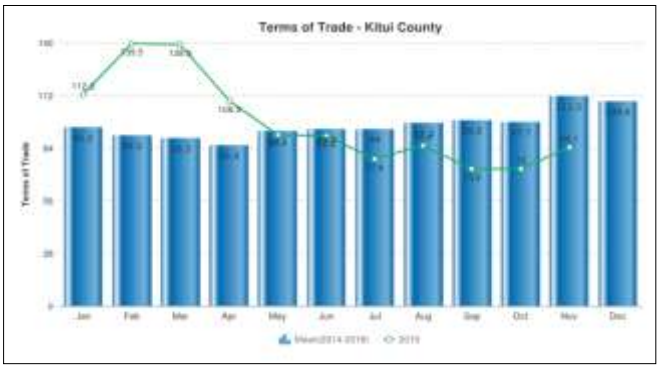

Figure 12: Terms of Trade

4.4 Implication of the above indicators to food security

- Livestock prices are likely to remain high hence improve household purchasing power following improvement in livestock body condition.
- Progression of the short rain season is likely to impact positively on crop productivity hence lower the prices of staple food commodities.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- The average daily milk consumption per household rose by 100 percent to stand at 0.8 litres in November from 0.4 litres in previous month. This could have been attributed to improvement in forage and water availability.
- There was no major variation across the livelihood zones.
- The current milk consumption is 33 percent higher than the long term mean as shown in figure13.

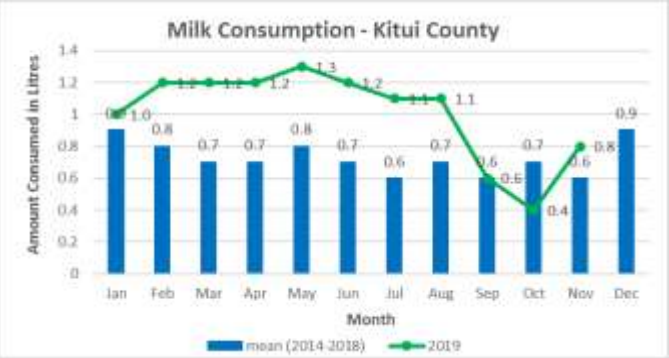

Figure 13: Milk Consumption per Household per Day

5.2 FOOD CONSUMPTION SCORE

- The proportion of households in acceptable food consumption category rose to 75.7 percent in November from 67.8 percent in previous month. This could have been attributed to improvement in dietary diversity and food consumption at household level.
- The remaining 23.5 and 0.7 percent of households were in borderline and poor food consumption category respectively as shown in figure 14.
- Majority (77.6 percent) of households in Marginal Mixed Farming livelihood zone were in acceptable food consumption category compared to 73.3 percent in Mixed Farming livelihood zone.

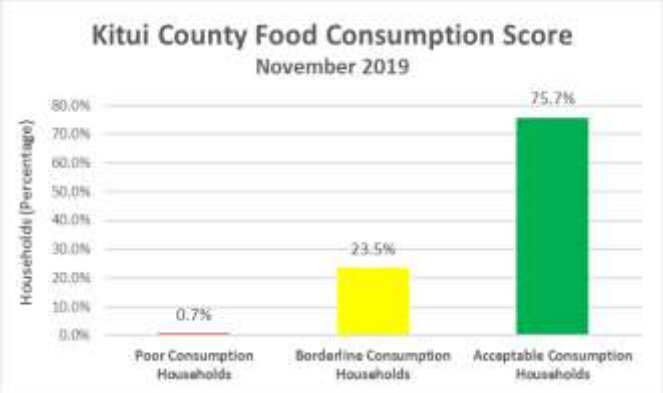

Figure 14: Food Consumption Score

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 8.3 in November from 8.2 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 1.1 percent above the long term mean as shown in figure 15.

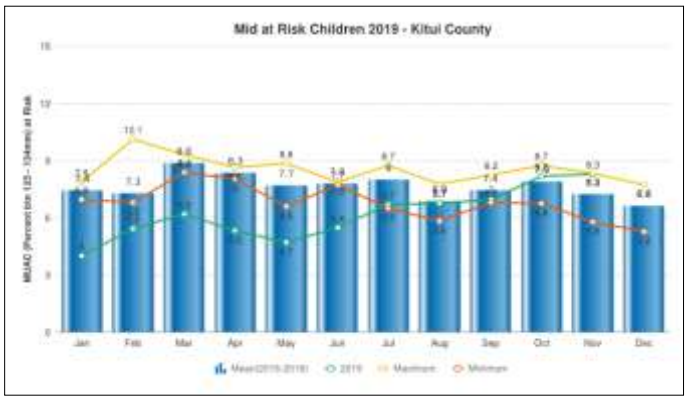

Figure 15: Proportion of Children at Risk of Malnutrition

5.3.2 HEALTH

- The proportion of children suspected to have fever with chills like malaria, fever with breathing difficulties and diarrhoea stood at 2.7, 2.0 and 1.3 percent in November compared to 2.9, 2.6 and 1.6 percent in previous month respectively.

5.4 COPING STRATEGIES

- The mean of reduced coping strategy index (rCSI) declined by 12 percent to stand at 9.9 in November from 11.2 in previous month. This implies that, fewer coping mechanisms due to lack of food or money to buy food were employed in November compared to previous month.
- Households in Marginal Mixed Farming livelihood zone had a high rCSI of 11.3 compared to 8.5 in Mixed Farming livelihood zone.
- The current rCSI is 65 percent higher than the long term mean as shown in figure16.

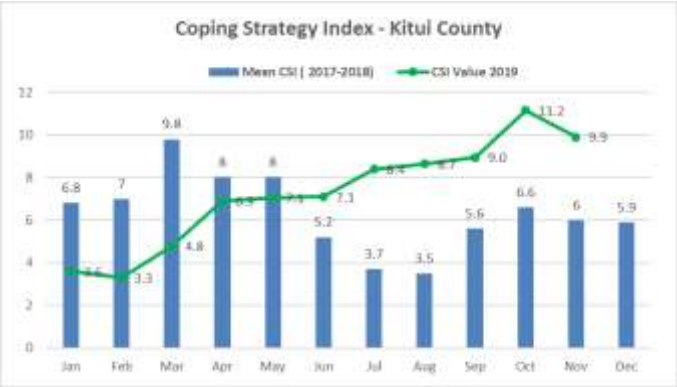

Figure 16: Reduced Coping Strategy Index (rCSI)

- Based on rCSI, about 29, 22 and 3 percent of households were in stress, crisis and emergency coping strategies in November compared to 40, 16 and 6 percent in previous month respectively.

6.0 CURRENT INTERVENTION MEASURES

6.1 NON-FOOD INTERVENTIONS

- Baby friendly community initiatives in Kitui South, Kitui East, Mwingi North and parts of Mwingi Central Sub Counties by Nutrition and Health program plus (NHP+).
- Issue of advisories to farmers on the best chemicals to purchase in order to control the spread of fall armyworms by County Government of Kitui.
- Issuance and dissemination of heavy rains advisories by Kenya Meteorological Department and Kenya Red Cross.

6.2 FOOD AID

- 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

- According to Kenya Meteorological Department weather outlook for December 2019 released on 29th November 2019, the county is likely to receive above normal rainfall which may cause occasional flash floods that can lead to destruction of properties and infrastructures. Conversely, the rains will lead to improvement in water and forage availability hence impact positively on household food security.
- Based on ForPAC TAMSAT-ALERT soil moisture forecast for Kitui OND 2019 released on 25th November 2019, Kitui County is likely to experience above average (enhanced) soil moisture throughout the season, this will impact positively on crop production. Hence, the county is likely to experience bumper harvest ceteris paribus.
- In addition, household purchasing power is expected to stabilize following an improvement in both crop and livestock production.

8.0 RECOMMENDATIONS

Immediate/Short term

- Intensify livestock disease control measures.
- Promote home-based water treatment and conservation measures such as storage facilities.
- Repair and maintenance of water points.
- Promotion of water harvesting, storage and management.
- Promotion of post-harvest management.
- Promotion of livestock feed storage and management practices.
- Community sensitization on the impacts of flash floods.

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

- 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.