



A Vision 2030 Flagship Project



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

FEBRUARY EW PHASE	Early Warning Phase Classification		
<div style="display: flex; justify-content: space-between;"> <div style="text-align: left;"> <p>Drought Status: NORMAL</p> <p>Shughull za kawaida</p> </div> </div>	LIVELIHOOD ZONE	EW PHASE	TRENDS
	Marginal Mixed Farming	Normal	Stable
	Mixed Farming	Normal	Stable
	County	Normal	Stable

Drought Situation & EW Phase Classification

Biophysical Indicators

- The month of February was dry and this is normal at this time of the year.
- The vegetation greenness was normal.
- Forecast indicates normal to above normal vegetation greenness and soil moisture.

Socio-Economic Indicators (Impact Indicators)

Production Indicators

- Crops were mainly at harvesting stage with fair condition.
- Livestock body condition was fair to good with normal cases of livestock migration and deaths.
- Confirmed cases of CCPP and PPR disease were reported in Kitui Rural, Kitui East and Mwingi Central sub counties.
- Cases of desert locust Invasion were reported.
- Milk production was slightly below normal.

Access Indicators

- Terms of trade were favourable.
- Milk consumption was within normal range.
- 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)	118	80-120
VCI-3 month	51.71	35-50
VCI-3 month forecast Apr-22	53.64	35-50
Forage Condition	Good to fair	Good to fair
Production indicators	Value	Normal ranges
Maize Crop Condition	Fair	Good
Livestock Body Condition	Fair to good	Good to fair
Milk Production (in litres)	1.3	≥ 1.4
Livestock Migration Pattern	Normal	Normal
Livestock Deaths (from Drought)	No death	No death
Access Indicators	Value	Normal ranges
Terms of Trade (ToT)	120	≥ 106
Milk Consumption (in litres)	1.1	≥ 1.0
Return Distance to Water Sources (in km)	5.2	≤ 5.8
Cost of Water at Source (20 litres Jerry can)	2-5	≤ 5Ksh
Utilization indicators	Value	Normal ranges
Nutrition Status, MUAC (% at risk of malnutrition)	4.8	≤ 7.0
Coping Strategy Index (rCSI)	3.4	≤ 4.4
Food Consumption Score (% at Acceptable)	87	≥ 80

<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 month of February was dry across the livelihood zones with light showers reported in pockets of the county.
- On average, the county recorded 8.3, 2.9 and 4.9 millimetres of rainfall for the first, second and third dekad of February compared to 2.8, 5.5 and 3.8 millimetres normally respectively as shown in figure 1. This was 118 percent of normal rainfall recorded in February.

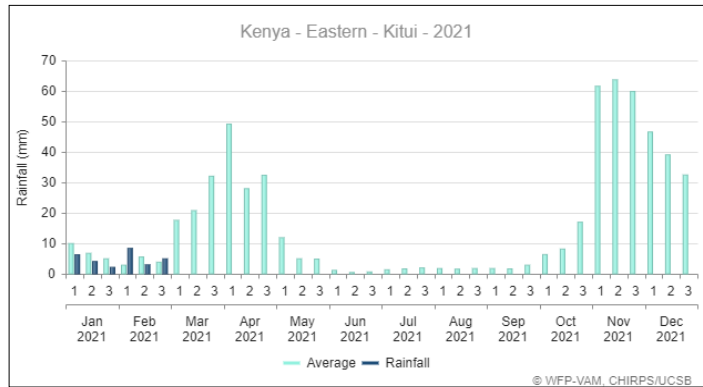


Figure 1: Rainfall Distribution for the Year 2021

1.2 OTHER EVENTS

- Desert locust invasion was reported in all sub counties and spraying by the National and County Government was on-going to control the spread of desert locust and minimize destructions to crop and forage.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The county vegetation greenness remained stable to stand at a 3 month VCI of 51.71 in February from 52.16 in previous month. This is an indication of above normal vegetation greenness as shown in figure 3.
- Kitui Central, Kitui West, Mwingi West, Kitui Rural, Kitui East and Kitui South sub counties recorded the highest 3 month VCI at 69.98, 67.85, 64.7, 62.19, 54.45 and 52.08 respectively Compared to Mwingi North and Mwingi Central sub counties which recorded the lowest vegetation greenness at a 3 month VCI of 37.76 and 49.3 respectively.
- The county vegetation greenness is normal compared to long term average but lower than the maximum recorded value as shown in figure 2.

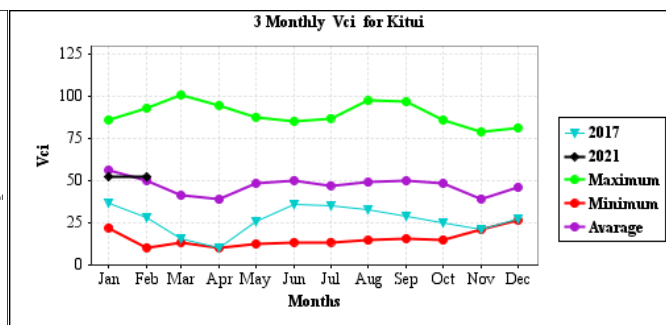
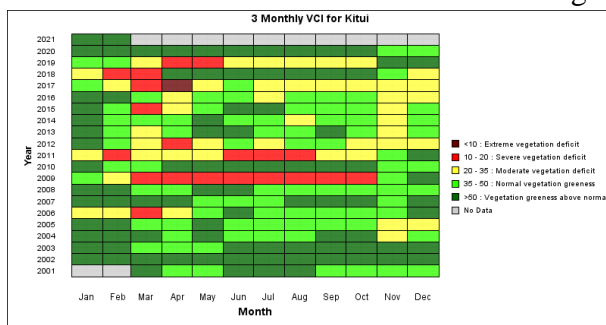


Figure 3: Kitui County 3 Month VCI Matrix

Figure 2: Kitui County 3 Month VCI Trend

2.1.2 Vegetation Condition Index Forecast

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

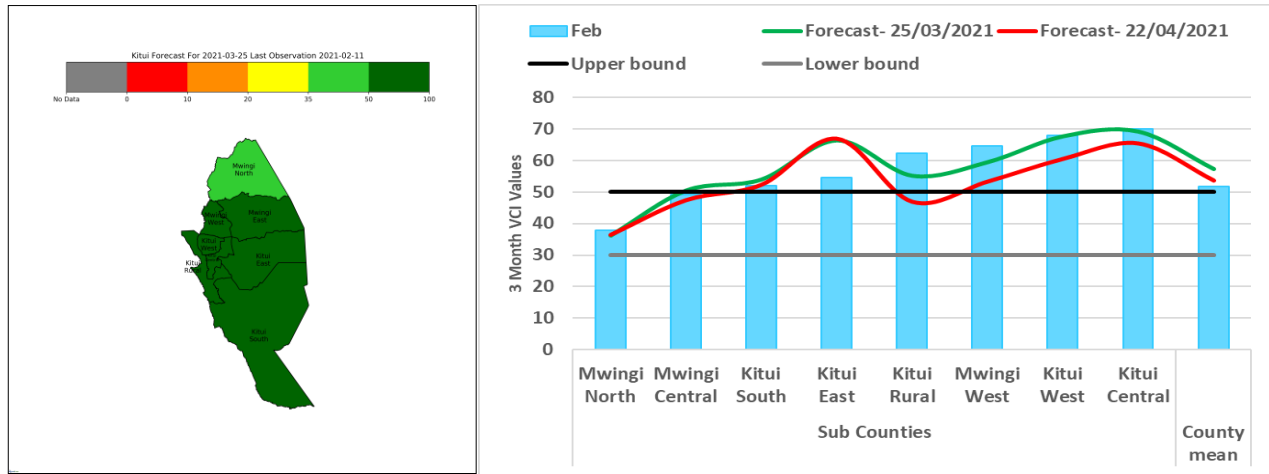


Figure 4: Kitui County 3 Month VCI Forecast

2.1.3 Pasture

- Pasture condition ranged from good to poor across the livelihood zones with a declining trend as shown in figure 5.
- On average, about 22 percent of pasture was deemed to be good in both quality and quantity in February compared to 42 percent in previous month. The remaining 59 and 19 percent of pasture was fair and poor respectively.
- The available pasture is expected to last for 1-2 months in Marginal Mixed Farming and 2-3 months in Mixed Farming livelihood zones compared to 2-3 months normally.
- Pasture condition was better in year 2020 compared to similar period in year 2021.

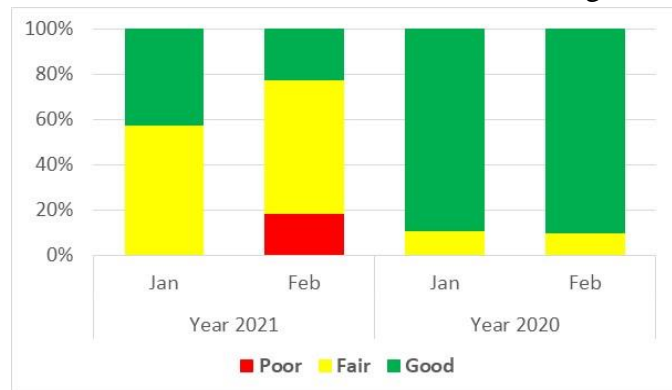


Figure 5: Kitui County Pasture Condition

2.1.4 Browse

- Browse condition ranged from good to fair across the livelihood zones with a declining trend as shown in figure 6.
- On average, about 44 percent of browse was regarded as good in February compared to 46 percent in previous month. The remaining 56 percent of browse was fair in both quality and quantity.
- Browse is expected to last for a normal of 3-4 months across the livelihood zones.
- Browse condition was better in year 2020 compared to similar period in year 2021.

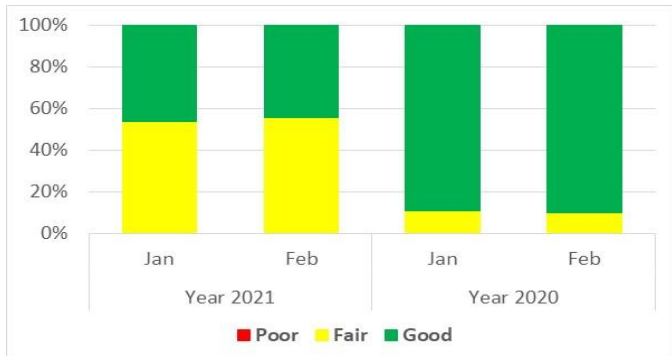


Figure 6: Kitui County Browse Condition

2.1.5 Soil Moisture Forecast

- The TAMSAT-ALERT Soil Moisture Forecast for March-April-May 2021 long rains season released on 25th February 2021 indicates normal to above normal soil moisture conditions in most parts of the county as shown in figure 7.
- These conditions might impact positively on crop yield and pasture availability.
- Therefore, it is advisable for farmers to plant the right crops as advised by Agricultural Extension Officers.

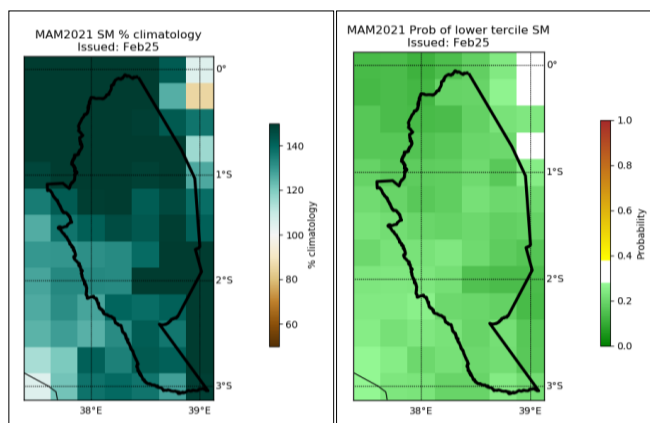


Figure 7: Kitui County Soil Moisture Forecast

2.2 WATER RESOURCE

2.2.1 Sources

- The main water sources for both human and livestock consumption were traditional river wells, boreholes, shallow wells, pans & dams and piped water system as shown in figure 8.
- This situation is normal at this time of the year.
- Water levels at open water facilities are likely to last for <1-3 months across the livelihood zones compared to 2-3 months normally. This is mainly due to high levels of siltation and poor recharge of 2020 short rains.

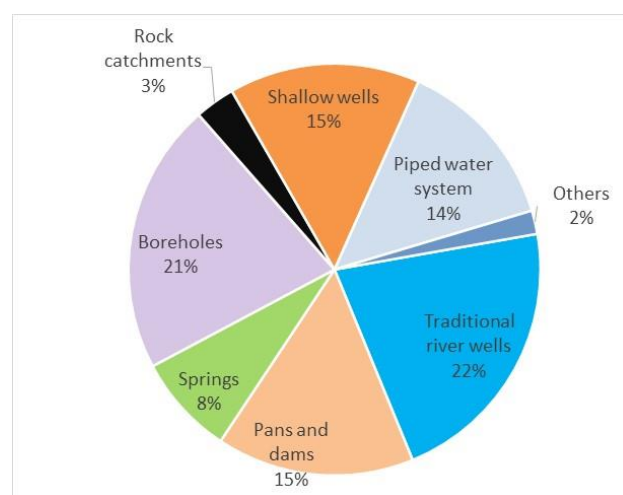


Figure 8: Major Water Sources in Kitui County

2.2.2 Household Access and Utilization

- The average return distances from the households to water sources rose by 18 percent to stand at 5.2km in February from 4.4km in previous month. This was due to drying up of small water pans mainly in Marginal Mixed Farming livelihood zones.
- Households in Marginal Mixed Farming livelihood zone trekked an average of 5.7km compared to 4.5km in Mixed Farming livelihood zone.
- The current water distance is 10 percent lower than the long-term mean as shown in figure 9.
- Water consumption per person per day remained stable at 17 litres in February compared to 18 litres in previous month.
- The proportion of households treating water before consuming stood at 16.4 percent in February compared to 11.6 percent in previous month. Water treatment chemicals and boiling were the most preferred method at 13.4 and 3.0 percent respectively.
- The proportion of households buying water stood at 46 percent in February compared to 33 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 10-25 shillings from vendors.

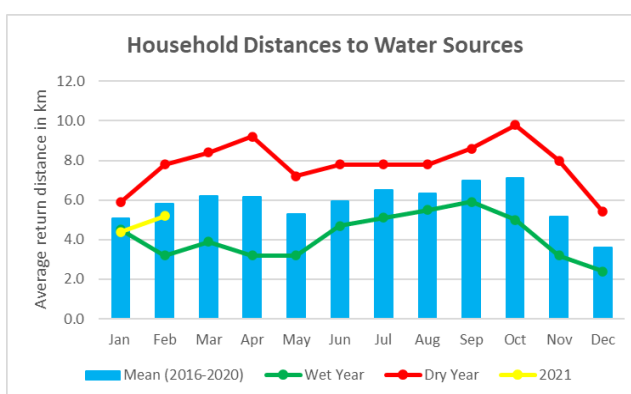


Figure 9: Household Access to Water

2.2.3 Livestock Access

- The average return distances from livestock grazing areas to watering points rose by 12 percent to stand at 4.6km in February from 4.1km in previous month.
- Livestock in Marginal Mixed Farming livelihood zones trekked a higher distance at 5.1km compared to 4.0km in Mixed farming livelihood zone.
- Livestock watering frequency was 3-4 days per week in Marginal Mixed Farming and daily in Mixed Farming livelihood zones compared to daily normally.
- The current average distance from livestock grazing areas to watering points is 19 percent lower than the long-term mean as shown in figure 10.

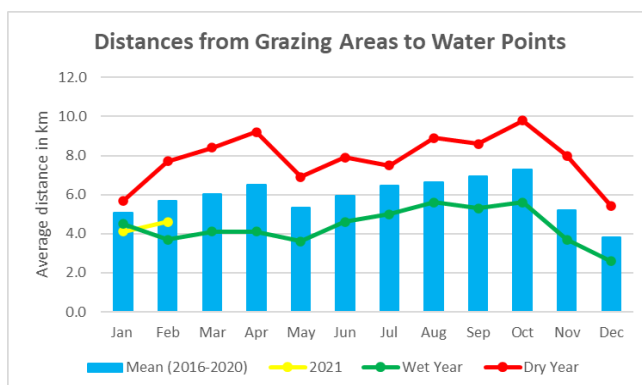


Figure 10: Average Grazing Distances

2.3 Implication of the Above Indicators to Food Security

- Water and forage access and availability is likely to remain stable following normal vegetation conditions and onset of the 2021 long rains.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Livestock body condition ranged from fair to good for all species across the livelihood zones with an improving trend. This could be attributed to availability of forage, water and crop residues.
- On average, 67 percent of cattle had good smooth appearance body condition in February compared to 45 percent in previous month. The remaining 33 percent of the livestock had moderate (neither fat nor thin) body condition as shown in figure 11.
- Livestock body condition was better in year 2020 compared to similar period in year 2021.

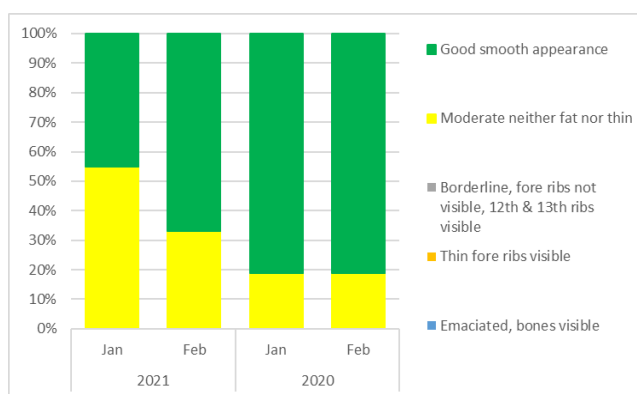


Figure 11: Cattle Body Condition

3.1.2 Livestock Diseases

- About 46 goats died as a result of contagious caprine pleuropneumonia (CCPP) in Kitui Rural, Kitui East and Mwingi central sub counties together with 95 confirmed cases reported.
- Moreover, 34 cases of peste des petits ruminants (PPR) were reported in Mwingi Central and Kitui South sub counties with about 21 cattle deaths reported.

3.1.3 Milk Production

- The average daily milk production per household remained stable to stand at 1.3 litres in February as it was in previous month. This was attributed to stability in livestock body condition.
- Households in Marginal Mixed Farming livelihood zone produced an average of 1.4 litres per day compared to 0.7 litres in Mixed Farming livelihood zone.
- The current milk production is lower than the long-term mean and wet year by 10 and 33 percent respectively as shown in figure 12.

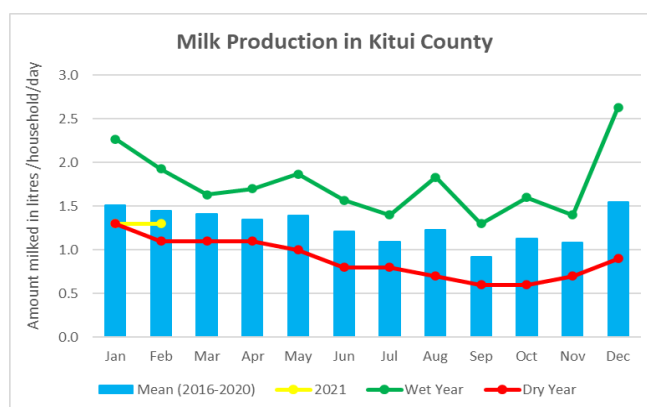


Figure 12: Milk Production per Household per Day

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.
- Harvesting of mainly maize, millet, sorghum, green grams, beans and cow peas was ongoing across the livelihood zones and this is normal at this time of the year.
- Moreover, land preparation had started in pockets of the county in anticipation of the 2021 long rains.
- 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

- Livestock body condition is likely to stabilize following availability of forage and crop residues and this will impact positively on household purchasing power.
- There will be a boost in household food consumption patterns following on-going harvest of food crops.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- The average market price of cattle rose by 12 percent to stand at Ksh.30,173 in February from Ksh.26,912 in previous month. This was attributed to stability in cattle body condition.
- Cattle prices were higher in Mixed Farming livelihood zone at Ksh.31,292 compared to Ksh.29,267 in Marginal Mixed Farming livelihood zone.
- The current market price of cattle is 18 and 20 percent higher than the long-term mean and year 2020 price respectively as shown in figure 13.

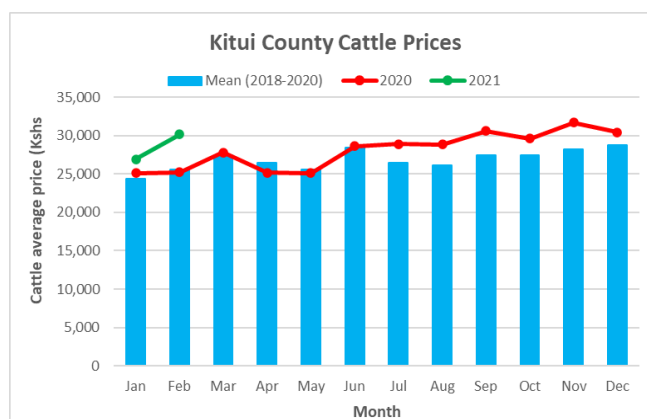


Figure 13: Cattle Prices

4.1.2 Small Ruminants Prices (Goat price)

- The average market price of goat remained stable at Ksh.4,069 in February from Ksh.4,252 in previous month. This was due to stability in goat body condition.
- Mixed Farming livelihood zone recorded a higher price of Ksh.4,404 compared to Ksh.3,800 in Marginal Mixed Farming livelihood zone.
- The current market price of goat is 19 and 18 percent higher than the long-term mean and year 2020 price respectively as shown in figure 14.

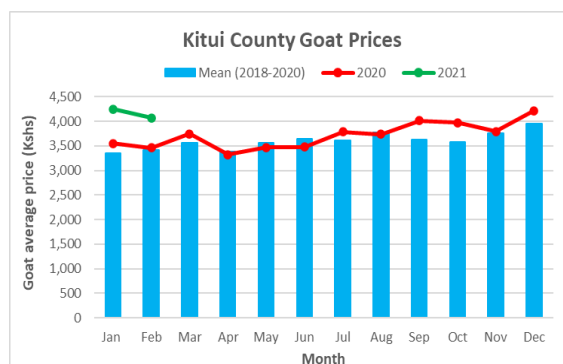


Figure 14: Goat Prices

4.2 CROP PRICES

4.2.1 Maize

- The average market price of maize per kilogram remained stable at Ksh.34 in February as it was in previous month.
- Maize price was higher in Marginal Mixed Farming livelihood zone at Ksh.35 per kilogram compared to Ksh.34 in Mixed Farming livelihood zone.
- The current market price of maize is normal as shown in figure 15. This is due to availability of the commodity in the market from outside the county.

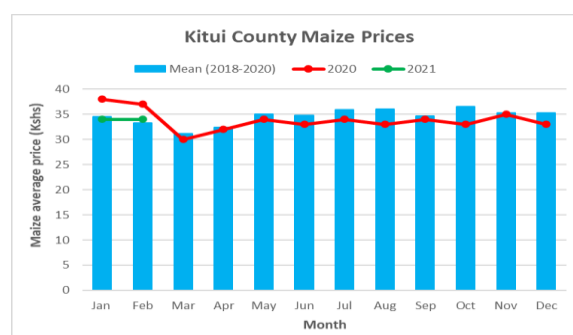


Figure 15: Maize Prices

4.2.2 Beans

- The average market price of beans per kilogram remained stable to stand at Ksh.90 in February from Ksh.92 in previous month.
- Beans price was higher in Marginal Mixed Farming livelihood zone at Ksh.95 compared to Ksh.83 in Mixed Farming livelihood zone.
- The current beans price is 20 and 15 percent higher than the long term mean and year 2020 price as shown in figure 16.

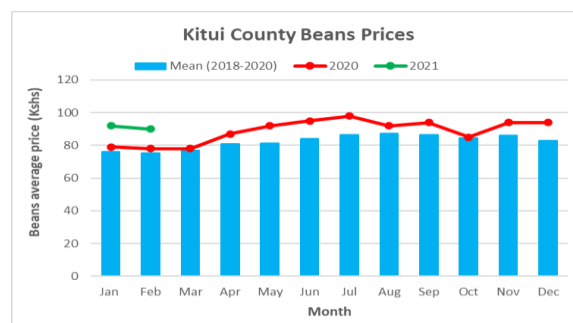


Figure 16: Beans Prices

4.3 Livestock Price Ratio/Terms of Trade

- Terms of trade remained stable to stand at 120 in February from 125 in previous month. This implies that, households were able to purchase 120 kilograms of maize from earnings of a goat in February compared to 125 kilograms in previous month.
- The sale of one goat would enable a household in Mixed Farming livelihood zone to purchase 130 kilograms of maize compared to 110 kilograms in Marginal Mixed Farming livelihood zone.
- The current terms of trade is 13 percent higher than the long term mean as shown in figure 17.

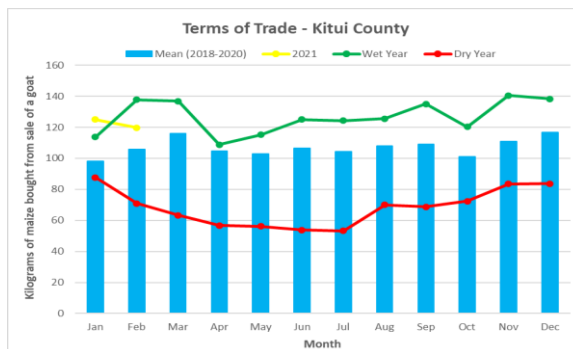


Figure 17: Terms of Trade

4.4 Implication of the Above Indicators to Food Security

- Household purchasing power is expected to stabilize following high livestock prices and on-going harvest which might stabilize the prices of staple food commodities.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- The average daily milk consumption per household remained stable to stand at 1.1 litres in February as it was in previous month and this was due to stability in milk production.
- Milk consumption was higher in Marginal Mixed Farming livelihood zone at 1.1 litres compared to 0.7 litres in Mixed Farming livelihood zone.
- The current milk consumption is 12 percent higher than the long-term average as shown in figure 18.

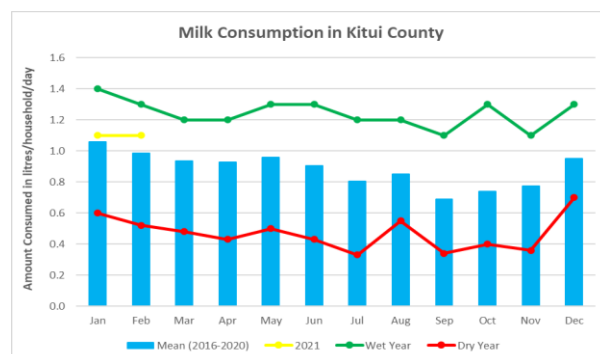


Figure 18: Milk Consumption per Household per Day

5.2 FOOD CONSUMPTION SCORE

- The proportion of households in acceptable food consumption category remained stable at 87 percent in February as it was in previous month.
- The remaining 13 percent of the households were in borderline food consumption category as shown in figure 19.
- Majority of households in Mixed Farming livelihood zone were in acceptable food consumption category at 91 percent compared to 84 percent in Marginal Mixed Farming livelihood zone.
- More households were in acceptable food consumption category in similar period in year 2020 compared to year 2021.

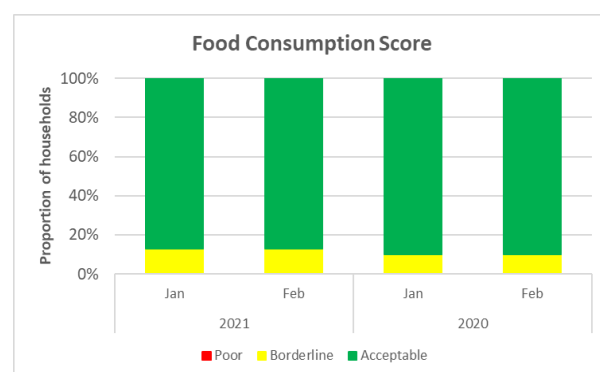


Figure 19: Food Consumption Score

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- The proportion of children at risk of malnutrition rose to 4.8 percent in February from 2.6 percent in previous month.
- Moreover, no severely malnourished children were reported.
- The current level of children at risk of malnutrition is 2.2 percent lower than the long-term mean as shown in figure 20 and this due to availability of diversified foods at household and market levels due to stability in terms of trade.

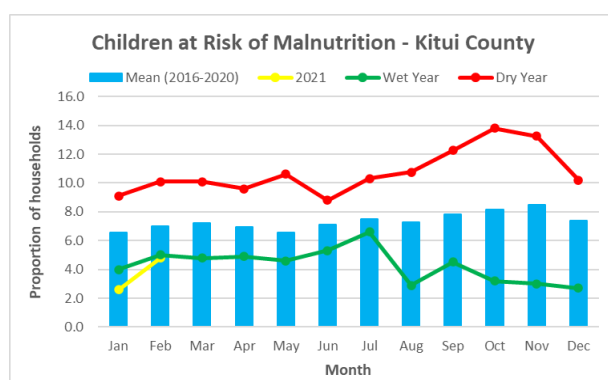


Figure 20: Children at Risk of Malnutrition

5.3.2 Health

- The proportion of children suspected to have fever with chills like malaria, fever with breathing difficulties and diarrhoea declined to stand at 1.5, 0.4 and 0.4 percent in February compared to 2.7, 0.8 and 1.1 percent in previous month respectively.

5.4 COPING STRATEGIES

- The mean of reduced coping strategy index (rCSI) declined by 14 percent to stand at 3.4 in February compared to 3.9 in previous month.
- Households in Marginal Mixed Farming livelihood zone had a high rCSI of 5.3 compared to 1.1 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 22 percent lower than the long-term mean as shown in figure 21.
- Moreover, about 10 and five percent of households were employing crisis and stressed food based coping mechanisms in February compared to 10 and 13 percent in previous month respectively.

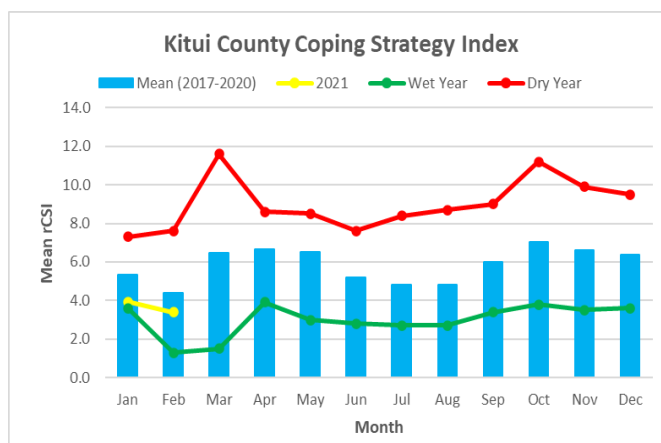


Figure 21: Reduced Coping Strategy Index

6.0 CURRENT INTERVENTION MEASURES

6.1 NON-FOOD INTERVENTIONS

- Promotion of high value horticulture crops, mango production & value addition and 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.
- Desert locust control through spraying the affected areas by National Government and County Government of Kitui.
- Livestock vaccination against lumpy skin disease in Kitui East and Kitui Rural sub counties by County Government of Kitui.

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 Kenya Meteorological Department Weather Outlook for the Long Rains (March-April-May) 2021 season issued on 19th February 2021, Kitui County is likely to experience near average to below normal rainfall with timely onset (on 3rd to 4th week of March) and late cessation (on 3rd to 4th week of May). This will lead to partially recharge of water resources and regeneration of pasture hence impact positively on livestock productivity. However, the likelihood of depressed rains will reduce crop production activities which might lower household income and food consumption patterns.

- According to Sussex Vegetation Outlook for the month of March and April 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 and productivity.
- Moreover, the TAMSAT-ALERT Soil Moisture Forecast released on 25th February 2021 signify that the county will experience normal to above normal soil moisture conditions. It is therefore advisable to plant the right crops at the right time as advised by Agricultural Extension Officers.
- Based on Kenya Food Security Outlook for October 2020 to May 2021, Ministry of Agriculture estimates the above average maize harvest from high and medium production areas. This will stabilize the prices of the staple food commodities in the market; thus, boost household purchasing power and access to diversified foods.
- Based on the Desert Locust Situation Update released by Food and Agriculture Organization of the United Nations (FAO) on 03rd March 2021, showers that fell during February may allow swarms to mature rapidly and lay eggs that could hatch in late March, causing small hopper bands to form. Hence a likelihood of destructions of rangeland resources. However, breeding this spring is likely to be limited as control operations continue to reduce current infestations.

8.0 RECOMMENDATIONS

Immediate/Short term

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

Agriculture Sector

- Dissemination of climate and agro-weather advisories across the county.
- Promotion of appropriate post-harvest management practices.
- Promotion of rain water harvesting technologies for crop production.
- Intensify measures to control desert locusts.
- Set up experimental index insurance schemes.

Livestock Sector

- Intensifying livestock disease control measures in affected areas.
- Promote pasture conservation and management practices.

Water Sector

- 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.