



A Vision 2030 Flagship Project



National Drought Management Authority
KITUI COUNTY
DROUGHT EARLY WARNING BULLETIN FOR APRIL 2023

APRIL EW PHASE	Early Warning Phase Classification		
<div style="background-color: #d9ead3; padding: 10px;"> <p>Drought status: RECOVERY</p> <p>Mipango ya ahueni</p> </div>	LIVELIHOOD ZONE	EW PHASE	TRENDS
	Marginal Mixed Farming	Recovery	
	Mixed Farming	Recovery	
	County	Recovery	
<u>Drought Situation & EW Phase Classification</u>			
<u>Biophysical Indicators</u>			
<ul style="list-style-type: none"> The county received moderate rains with timely onset in 3rd to 4th week of March. Vegetation greenness and forage condition was below normal. 			
<u>Socio-Economic Indicators (Impact Indicators)</u>			
<u>Production Indicators</u>			
<ul style="list-style-type: none"> Crops were at germination to knee high/flowering stage and in good condition. Livestock body condition ranged from fair to good for cattle and good for small species with no abnormal cases of livestock migration, mortalities and diseases. Milk production averaged at 0.9 litres compared to a normal of 1.2 litres. 			
<u>Access Indicators</u>			
<ul style="list-style-type: none"> Terms of trade were unfavourable at 57kg compared to an LTA of 109kg. Milk consumption was lower than normal at 0.6 litres compared to an LTA of 1.0litre. Trekking distances to water sources was below normal ranges at 3-4 kilometres compared to a normal of 4-5 kilometres. Water retailed normally at 2-5 shillings from source and 10-20 shillings from vendors. 			
<u>Utilization Indicators</u>			
<ul style="list-style-type: none"> About 7.5% of children were at risk of malnutrition compared to an LTA of 6.2%. About 46 percent of households had acceptable food consumption score. Households employing stressed, crisis and emergency food-based coping mechanisms stood at 38.7, 30.5 and 10 percent respectively. 			
Biophysical Indicators		Value	Normal ranges
Rainfall (% of normal)		76-1251	80-120
VCI-3 month		27.29	35-50
Forage Condition		Fair to good	Good
Production indicators		Value	Normal ranges
Crop Condition (Maize)		Good	Good
Livestock Body Condition		Fair to good	Good to fair
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)		57	≥ 109
Milk Consumption (in litres)		0.6	≥ 1.0
Return Distance to Water Sources (Km)	Household	3.2	≤ 4.7
	Livestock	3.8	≤ 5.2
Cost of Water (20 litres Jerry can)	At Source	2-5	≤ 5Ksh
	Vendor	10-20	10-20
Utilization indicators		Value	Normal ranges
Nutrition Status, MUAC (% at risk of malnutrition)		7.5	≤6.2
Coping Strategy Index (rCSI)		18.26	≤ 5.9
Food Consumption Score (%)	Mean	33	≥ 35.5
	Acceptable	45.7	≥ 80
	Borderline	50.9	≤ 20
	Poor	3.3	0

<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 2022 (March to May) long rains was timely in the 3rd to 4th week of March.
- The reporting month was characterized by moderate rainfall with even distribution in terms of time and space.
- Based on WFP-VAM, CHIRPS/MODIS data, the county recorded an average of 55.3 and 45.7 milimetres of rainfall compared to 43.6 and 26.7 milimetres normally in the first and second dekad respectively as shown in figure 1.
- This was 124 percent of normal rainfall recorded in April.
- The April Normalized Difference Vegetation Index (NDVI) was 82 percent of normal NDVI values.

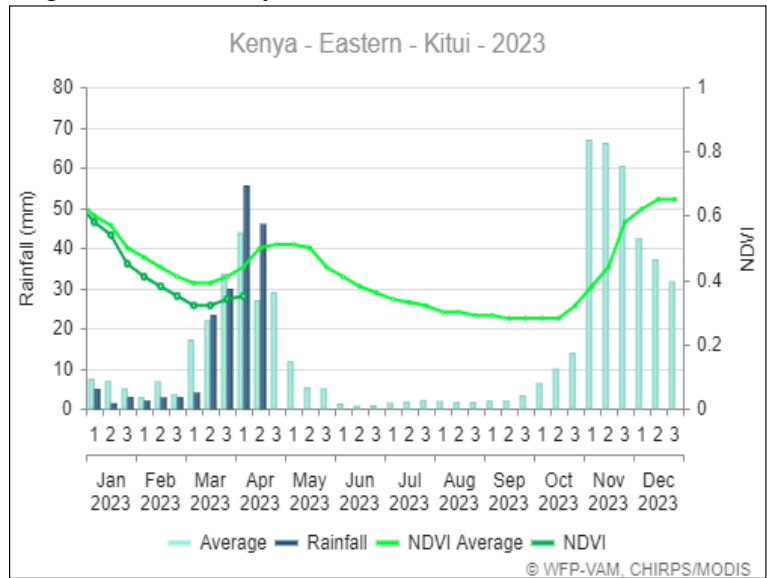


Figure 1: Rainfall and NDVI Distribution

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- Based on Kenya Meteorological Department, most parts of the county received 76-125 percent of normal rainfall in April while pockets of Kitui South Sub County received 126-150 percent of normal rainfall as shown in figure 2.
- The spatial distribution was even and temporal distribution was good across the livelihood zone.

1.3 OTHER EVENTS

- Overflowing of river Enziu was reported making the road impassable in Mwingi Central Sub County.
- A dam in Endau Malalani Kitui East Sub County, broke its embankment and eroded shambas downstream.

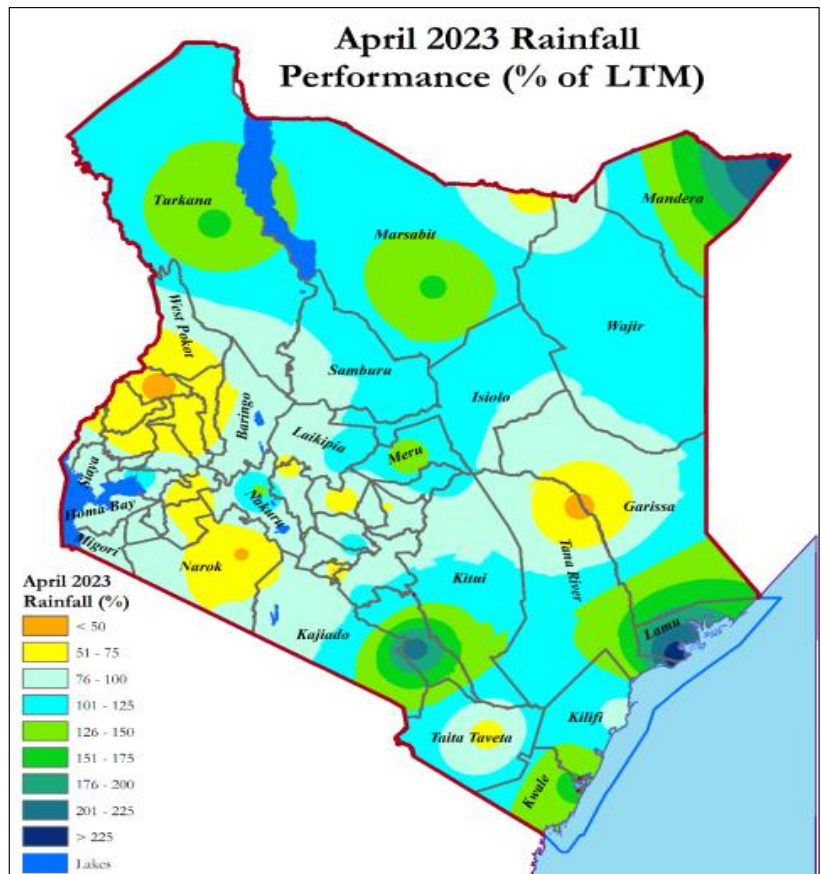


Figure 2: April 2023 Rainfall Performance

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The county 3 month vegetation condition index (VCI) declined to stand at 27.29 in April compared to 39.46 in previous month. This is an indication of moderate vegetation greenness.
- The current vegetation greenness is below the long term average as shown in figure 3.

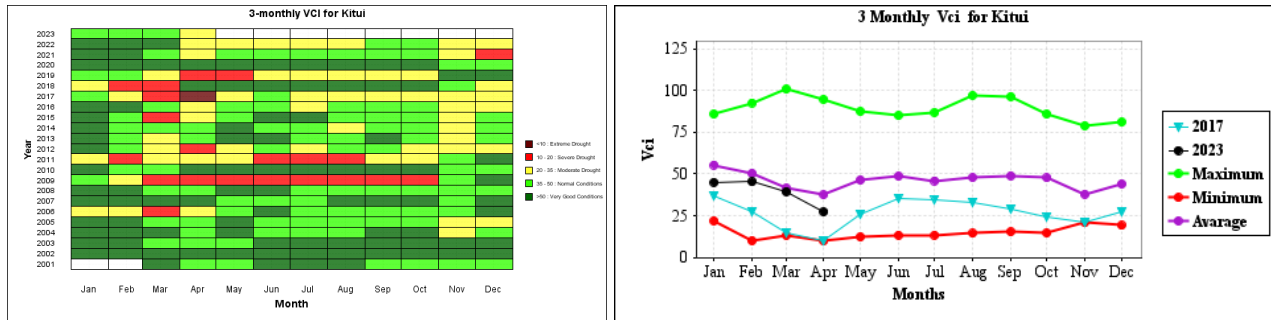


Figure 3: Kitui County 3 Month VCI Matrix and Trend

2.1.1.1 Sub County and Ward Vegetation Condition Index (VCI)

- Mwingi Central and Mwingi West sub counties had extreme vegetation deficit at a 3 month VCI of 2.28 and 9.68 while Mwingi North and Kitui East sub counties had severe vegetation deficit at a 3 month VCI of 17.86 and 12.66 respectively.
- Kitui South had normal vegetation greenness at a 3 month VCI of 37.54 while Kitui Rural and Kitui West had above normal vegetation greenness at a 3 month VCI of 89.18 and 64.42 respectively.

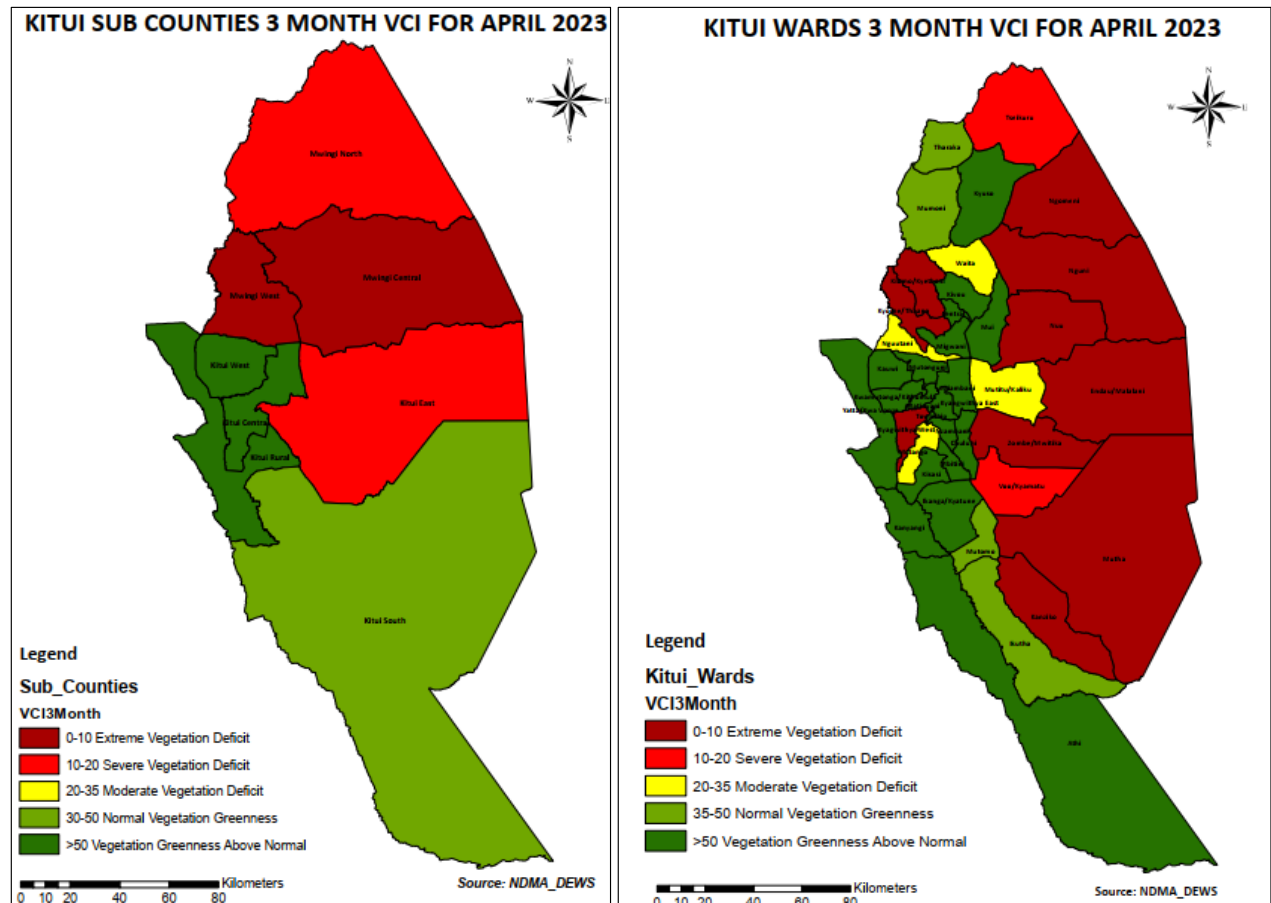


Figure 4: Kitui County 3 Month Sub County and Ward Vegetation Condition Index (VCI)

- Ngomeni, Nguni, Kyangwithya West, Kyome/Thaana, Kiomo/Kyethani, Zombe/Mwitika, Endau/Malalani, Kanziko/Simisi, Nuu and Mutha wards had extreme vegetation deficit while Voo/Kyamatu and Tseikuru wards had severe vegetation deficit.
- Mutitu/Kaliku, Mulango, Nguutani and Waita had moderate vegetation deficit as shown in figure 4.

2.1.2 Pasture

- Pasture condition improved within the reporting month in both quality and quantity as shown in figure 5.
- This was mainly due to regeneration with the onset of the long rains. Full regeneration is expected with the continued long rains
- On average, 56 percent of pasture was good in April compared to 11 percent in previous month. The remaining 37 and seven percent of pasture was fair and poor respectively.
- The available pasture is likely to last for a normal of 3-4 months.

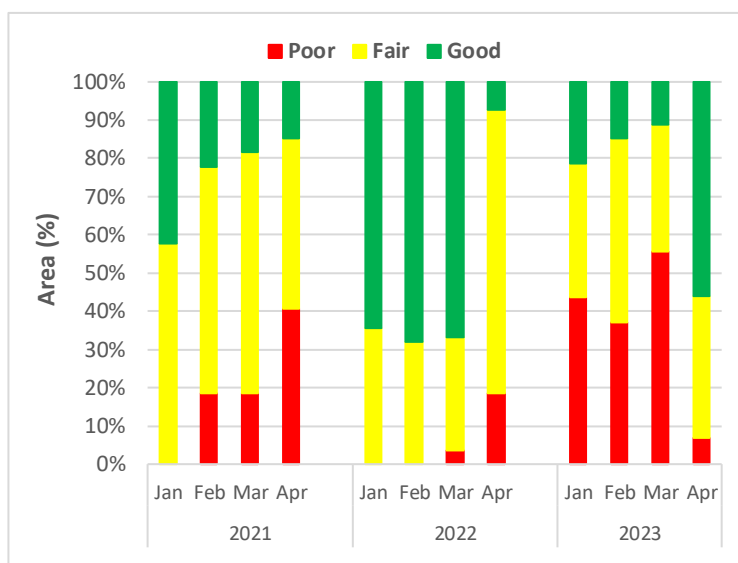


Figure 5: Pasture Condition in Kitui County

2.1.3 Browse

- Browse condition improved ranging from good to fair in April 2023 compared to previous month and to similar periods in 2022 and 2021 respectively as shown in figure 6.
- On average, 78 and 22 percent of browse was regarded as good and fair in April, 2023 compared to 22, 33 and 44 percent good, fair and poor respectively in previous month respectively.
- The available browse is likely to last for a normal of 3-4 months.

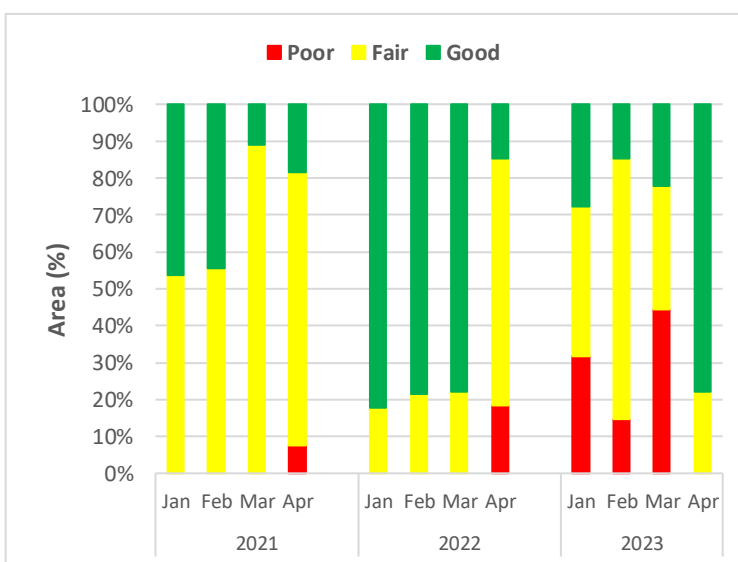


Figure 6: Browse Condition in Kitui County

2.2 WATER RESOURCE

2.2.1 Sources

- The main water sources for both human and livestock consumption in the month under review were traditional river wells, water pans, earth dams and roof water harvesting as shown in figure 7 and this situation is normal at this time of the year.
- Traditional river wells and pans/dams were the most relied water sources by 30 and 29 percent of the households respectively.
- Most of open water sources recharged at 85-100 percent of their capacity.
- However, Yiuku earth dam in Endau/Malalani earth dam broke its embankment and eroded shambas downstream.

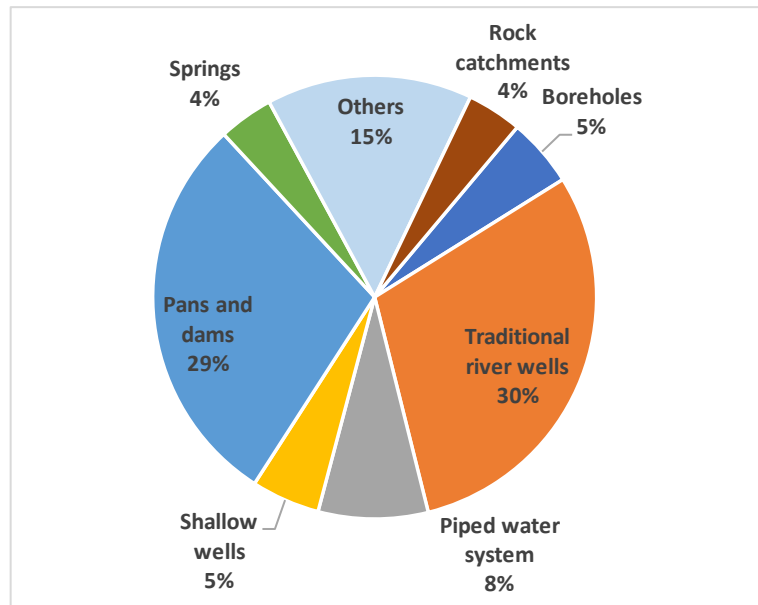


Figure 7: Major Water Sources in Kitui County

2.2.2 Household Access and Utilization

- The average return distances from the households to water sources significantly reduced by 55 percent to stand at 3.2km in April from 7.1km in previous month.
- Households in Marginal Mixed Farming livelihood zone trekked an average of 2.4km compared to 3.8km in Mixed Farming livelihood zone.
- The current water distance is 33 percent lower than the long-term mean of 4.7km as shown in figure 8.
- Water consumption per person per day remained stable at 17 litres in April as it was in previous month.
- The proportion of households buying water declined to stand at 22 percent in April from 51 percent in previous month.
- Households treating water before consuming stood at 8.6 percent in April from 10.4 percent in previous month. Water treatment chemicals was the most preferred treatment method across the livelihood zones.
- The price of water per 20-litre Jerry can at source was normal at 2-5 shillings. Water retailed at 10-20 shillings from vendors.

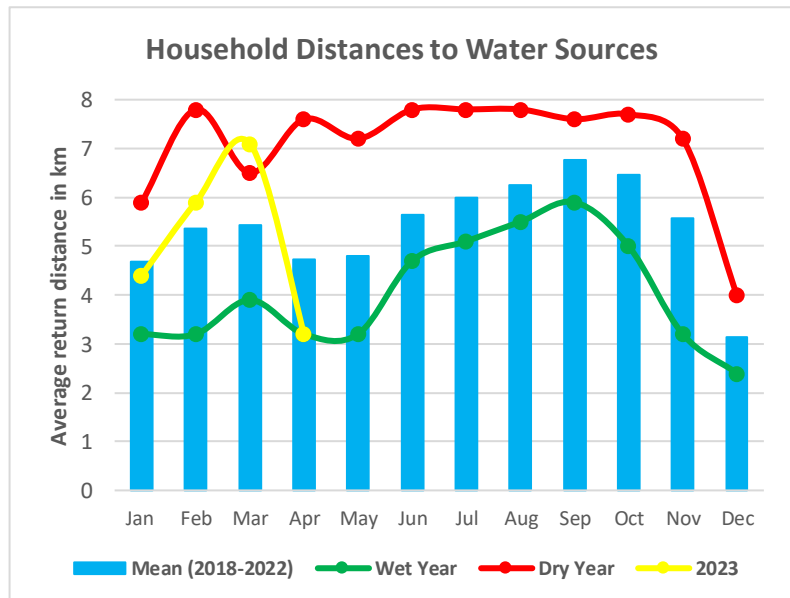


Figure 8: Household Access to Water

2.2.3 Livestock Access

- The average return distances from livestock grazing areas to watering points significantly decreased by 51 percent to stand at 3.8km in April from 7.7km in previous month.
- Livestock in Marginal Mixed Farming livelihood zones trekked a distance of 3.7km compared to 3.3km in Mixed Farming livelihood zone.
- Livestock watering frequency was daily across all the livelihood zones.
- The current average distance from livestock grazing areas to watering points is 27 percent higher than the long-term average of 5.2 as shown in figure 9.

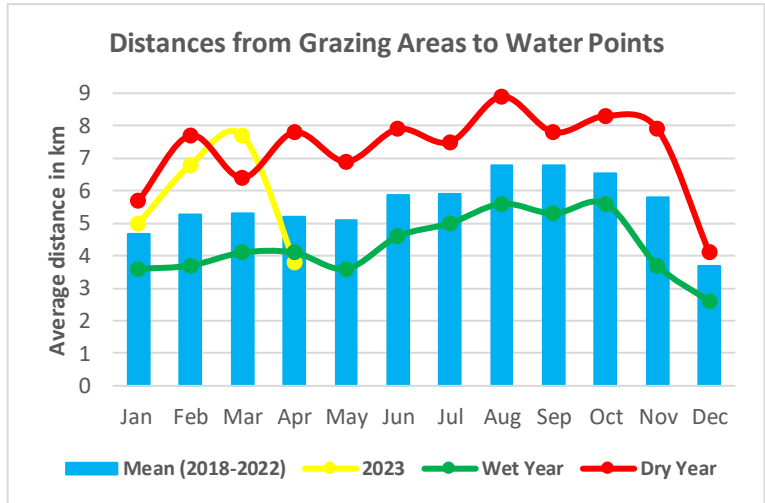


Figure 9: Livestock Distances from Grazing Areas to Water Points

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Livestock body condition ranged from fair to good for cattle and good for small species across the livelihood zones with an improving trend. This is attributed to regeneration of pasture and browse.
- About 19 percent of cattle had good (smooth appearance) body condition compared to 11 percent in previous month as shown in figure 10.
- The remaining 82 percent of cattle had moderate (neither fat nor thin) body condition.

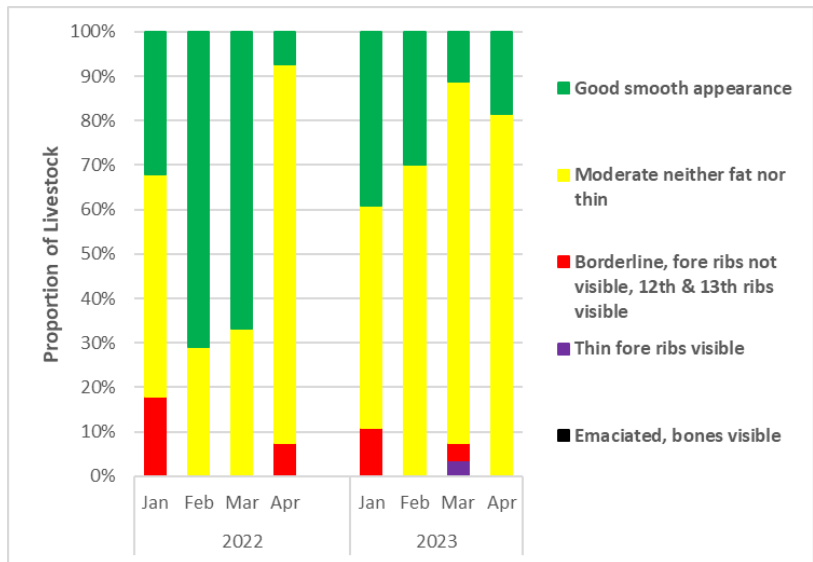


Figure 10: Cattle Body Condition

3.1.2 Livestock Diseases and Mortalities

- There was no unusual livestock disease outbreak reported in the county within the reporting month

3.1.3 Milk Production

- The average daily milk production per household remained stable at 0.9 litres in April compared to one litre in previous month.
- Milk production was higher in Marginal Mixed Farming livelihood zone at one litre compared to 0.6 litres in Mixed Farming livelihood zone.
- The current milk production is 27 percent below the long-term average of 1.2 litres as shown in figure 11.
- This is attributed to deteriorating livestock body condition and households' preference of holding bulls for farming.

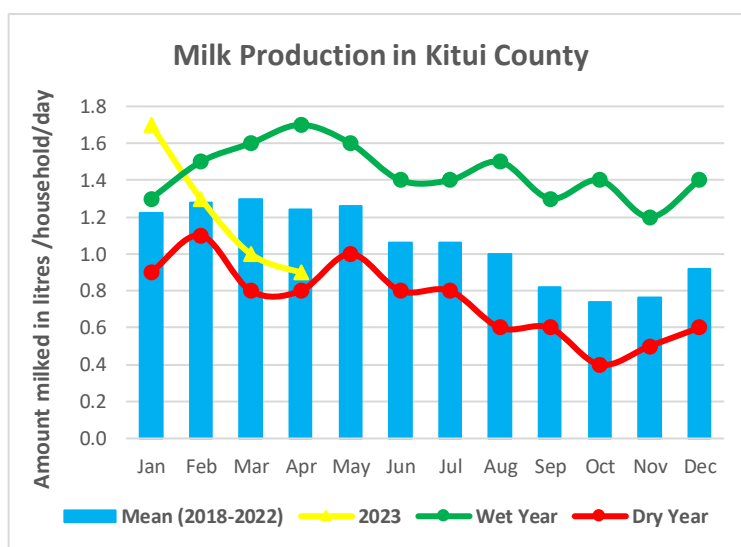


Figure 11: Milk Production

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

- The major crops planted in Mixed Farming livelihood zone were 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.
- Majority of crops were at germination stage. However, the early planted crops were at knee high/flowering stage and in good condition.

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.27,230 in April from Ksh.25,598 in previous month. This was due to stability in body condition and high demand for restocking attributable to regeneration of livestock feeds.
- Cattle prices were higher in Mixed Farming livelihood zone at Ksh.30,200 compared to Ksh.24,159 in Marginal Mixed Farming livelihood zone.
- The current market price of cattle is eight percent lower than the long-term mean of Ksh.29,614 as shown in figure 12.

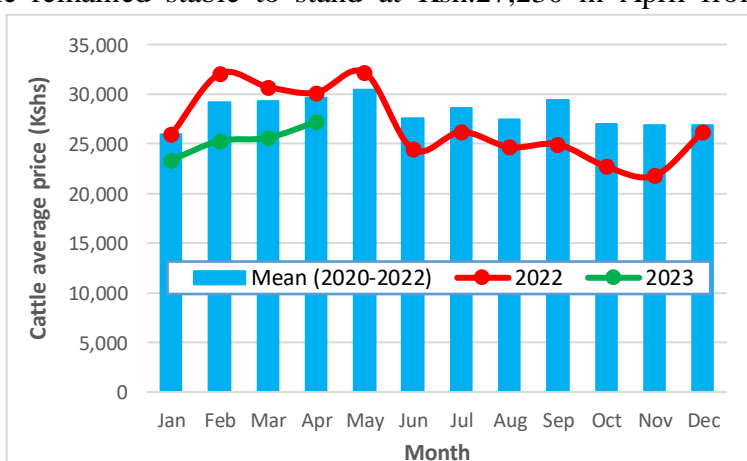


Figure 12: Cattle Prices

4.1.2 Small Ruminants Prices (Goat Price)

- The average market price of goat slightly increased to stand at Ksh.4,045 in April from Ksh.3,895 in previous month.
- The increased was due to improved body condition and high demand.
- Marginal Mixed Farming livelihood zone recorded a higher price of Ksh.4,208 compared to Ksh.3,912 in Mixed Farming livelihood zone.
- The current market price of a goat is slightly higher than the long-term mean of Ksh.3,885 as shown in figure 13 and this is due to good goat body condition.

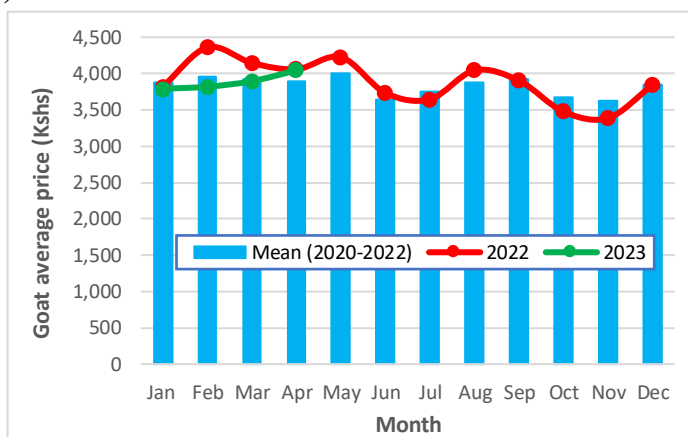


Figure 13: Goat Prices

4.2 CROP PRICES

4.2.1 Maize

- The average market price of maize per kilogram remained stable to stand at Ksh.71 in April as it was in previous month.
- Maize prices ranged at 65-70 shillings across the livelihood zones.
- The current market price of maize is 94 percent higher than the long-term mean of Ksh.37 as shown in figure 14. This is mainly due to reliance on the market for the commodity and diminished household stocks.
- Maize was mainly sourced from outside the County.

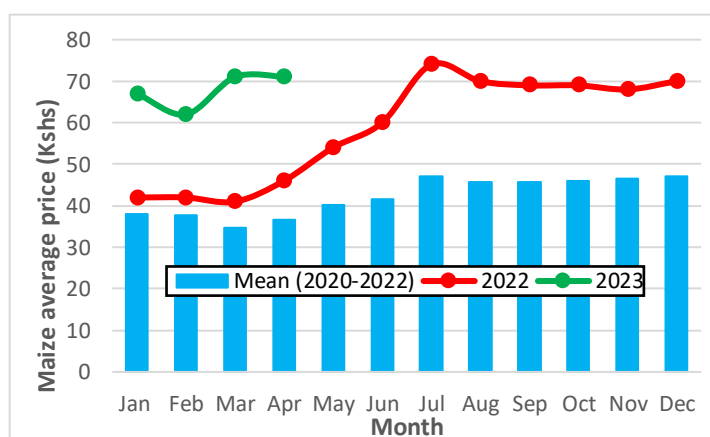


Figure 14: Maize Prices

4.2.2 Beans

- The average market price of beans per kilogram remained higher at Ksh.160 in April from Ksh.148 in previous month. This was mainly due to reliance on the market and high demand during the planting season.
- Beans price was higher in Marginal Mixed Farming livelihood zone at Ksh.162 compared to Ksh.158 in Mixed Farming livelihood zone.
- The current beans price is 73 percent higher than the long-term mean of Ksh.93 as shown in figure 15.
- Beans was mainly obtained from outside the county.

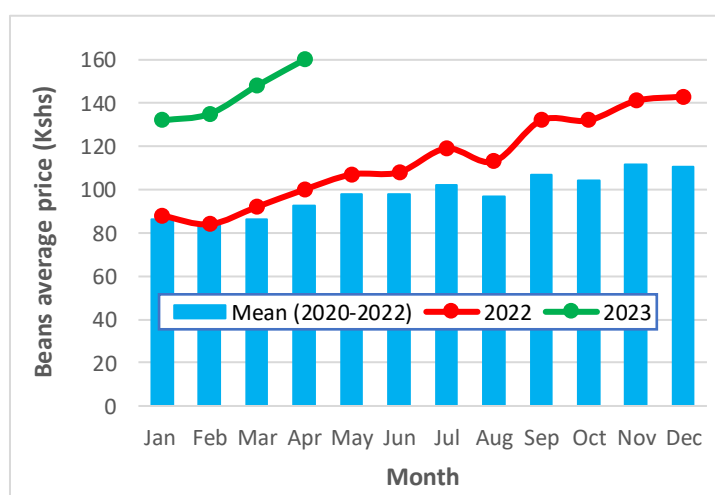


Figure 15: Beans Prices

4.3 Livestock Price Ratio/Terms of Trade

- Household purchasing power remained stably lower at 57 in April compared to 55 in previous month. This implies that, households were able to purchase 57 kilograms of maize from exchange of a goat in April.
- Terms of trade was lower in Mixed Farming livelihood zone at 56 kilograms compared to 60 kilograms in Marginal Mixed Farming livelihood zone.
- The current terms of trade are lower than the long-term average of 109 kilograms by 48 percent as shown in figure 16.
- This is attributed to high staple food prices and depletion of food stocks at household levels.

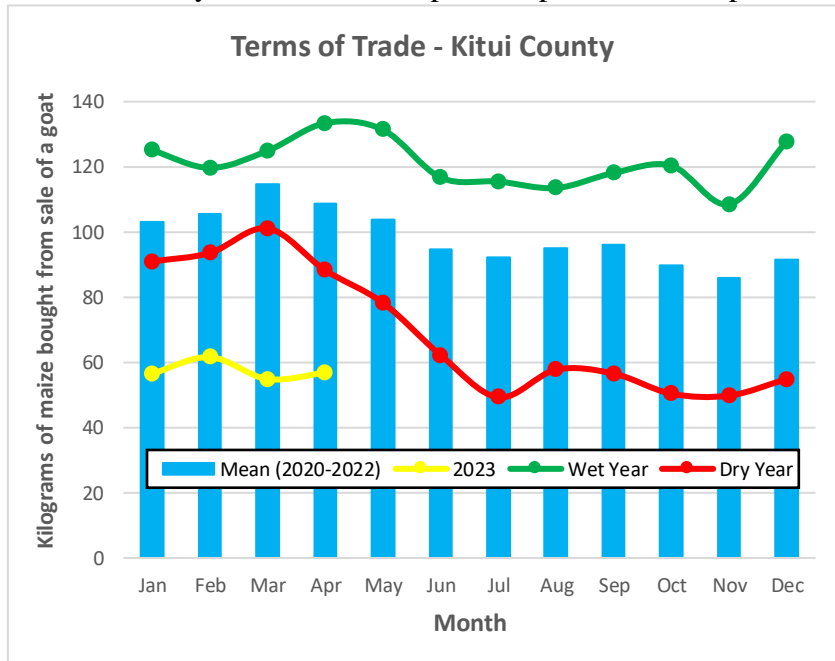


Figure 16: Terms of Trade

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- The average daily milk consumption per household remained stable at 0.6 litres in April compared to 0.8 litres in previous month.
- Milk consumption was higher in Marginal Mixed Farming livelihood zone at 0.9 litres compared to 0.3 litres in Mixed Farming livelihood zone.
- The current milk consumption is 39 percent lower than the long-term average of 1.0 litre as shown in figure 17.
- This is due to decline in milk production.

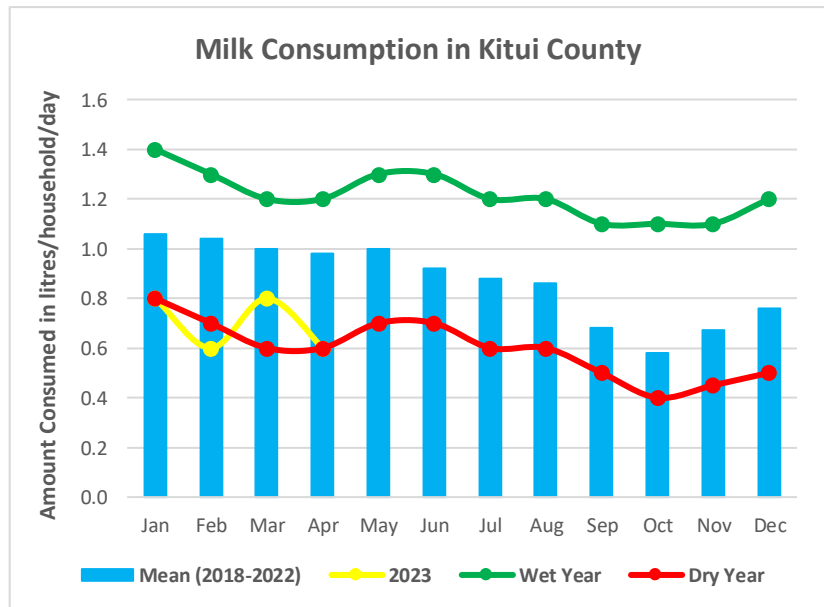


Figure 17: Milk Consumption

5.2 FOOD CONSUMPTION SCORE

- Proportion of households with acceptable food consumption score slightly increased to stand at 45.7 percent in April compared to 43.1 percent in previous month. The remaining 50.9 and 3.3 percent of households had borderline and poor food consumption score as shown in figure 18.
- Mixed Farming livelihood zone had the highest number of households in acceptable food consumption group at 60 percent compared to 34.1 percent in Marginal Mixed Farming livelihood zone.
- On average, households consumed cereals six days per week; pulses five days per week; vegetables three days per week; oils and sugars/sugary products twice per week and fruits once per week as shown in Table 1. Households rarely consumed meat, eggs or fish.

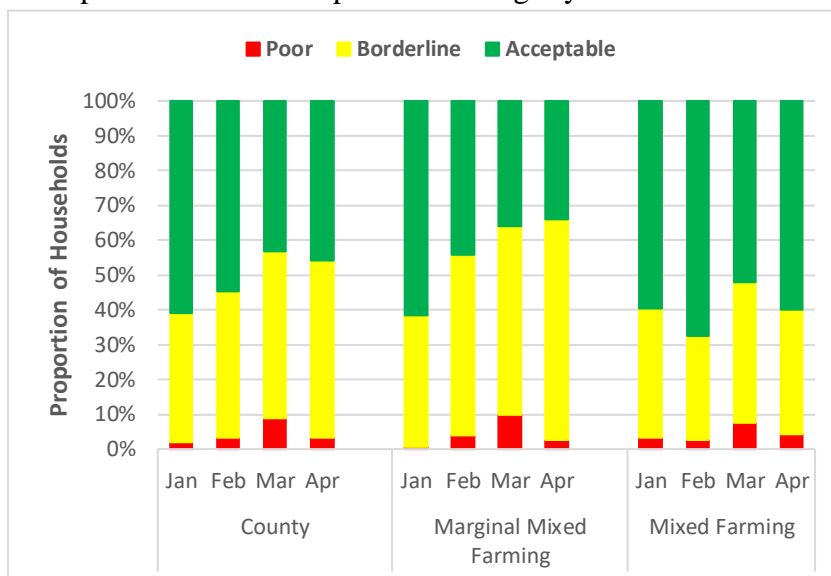


Figure 18: Food Consumption Score

Table 1: Meals Eaten Per Day in the Last One-Week Recall Period

	Cereals	Pulses	Vegetables	Meat, Eggs or Fish	Milk	Oil	Sugars	Fruits	FCS
County	6	5	3	0	0	2	2	1	33.0
Marginal Mixed Farming	6	4	2	0	1	1	1	1	32.0
Mixed Farming	7	5	4	0	0	3	2	1	36.5

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- The percentage of children at risk of malnutrition decreased to stand at 7.5 percent in April compared to 8.4 percent in previous month.
- This was attributed to harvest of green leaves (kunde) from cowpeas which diversified the diet.
- The current proportion of children at risk of malnutrition is higher than the long-term average of 6.2 percent as shown in figure 19.

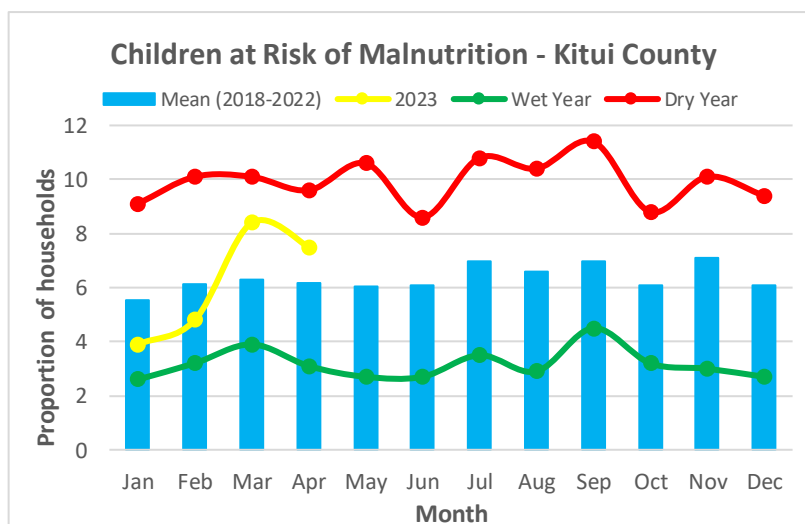


Figure 19: Children at Risk of Malnutrition

5.3.2 Health

- The proportion of children suspected to have fever with chills like malaria, fever with breathing difficulties and diarrhoea cases stood at 4.8, 0.0 and 0.6 percent in April compared to 6.1, 0.9 and 1.3 percent in previous month respectively.

5.4 COPING STRATEGIES

5.4.1 Food Based Coping

- The mean of reduced coping strategy index (rCSI) remained high at 18.2 in April compared to 16.2 in previous month.
- Households in Mixed Farming livelihood zone had a high rCSI of 20.4 compared to 16.6 in Marginal Mixed Farming livelihood zone.
- Reliance on less preferred or less expensive food, reduced portion size of meals and reduced number of meals eaten per day were the most frequent coping mechanisms adopted across the livelihood zones.
- The current rCSI is 172 percent higher than the long-term mean of 5.9 as shown in figure 20.
- About 38.7, 30.5 and 10 percent of households employed stressed, crisis and emergency food-based coping mechanisms in April compared to 42, 30.9 and 5.9 percent in previous month respectively.
- In Marginal Mixed Farming livelihood zone, 30.2, 21.5 and 17.4 percent of the households employed stressed, crisis and emergency food-based coping mechanisms compared to 49.2, 41.7 and 0.8 percent in Mixed Farming livelihood zone respectively (Figure 21).

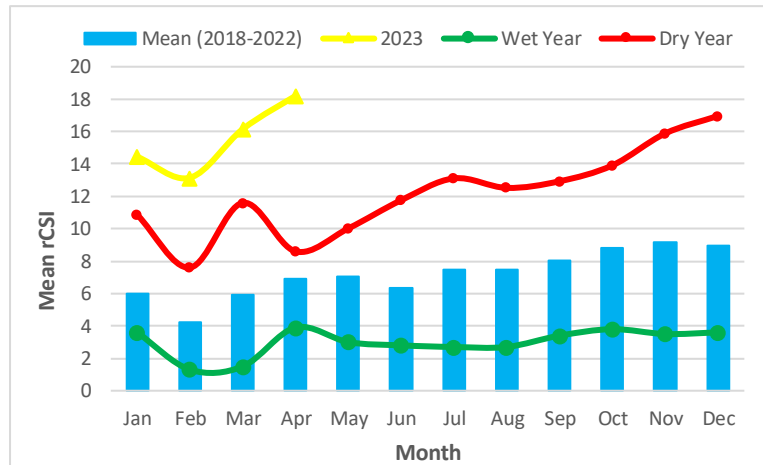


Figure 20: Reduced Coping Strategy Index (rCSI)

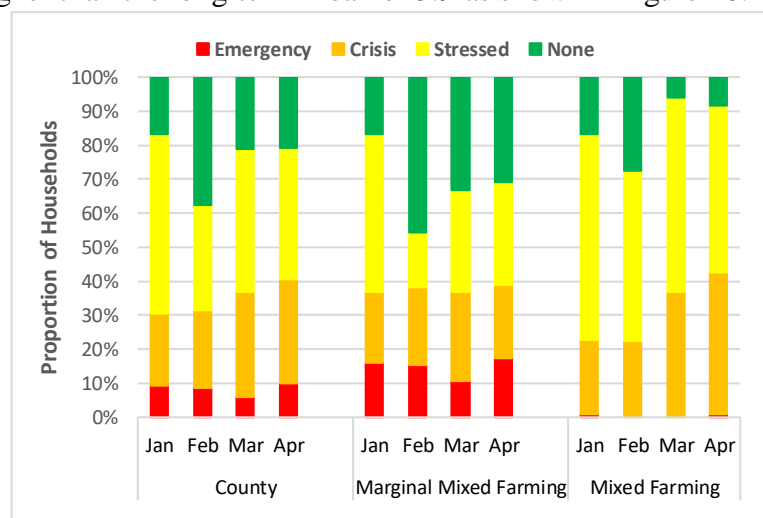


Figure 21: Households Employing Food Based Coping Mechanisms

5.4.2 Livelihood Coping

- About 9.7, 5.9 and 20.1 percent of households employed stressed, crisis, and emergency livelihood based coping mechanisms in April compared to 7.4, 2.6 and 11.2 percent in previous month respectively.
- In Marginal Mixed Farming livelihood zone, 9.4, 2.7 and 16.8 percent of the households employed stressed, crisis and emergency Livelihood coping mechanisms such as reducing non-food expenses, selling productive assets, selling household land and last female animal in order to buy food compared to 10.0, 10.0 and 24.2 percent in Mixed Farming livelihood zone respectively (figure 22).

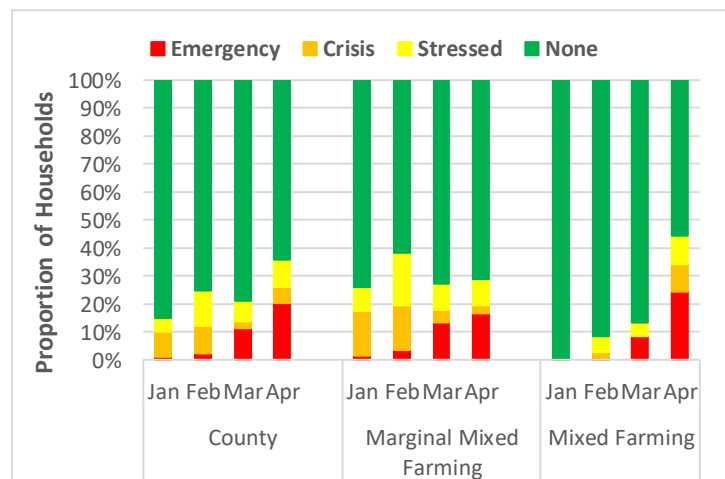


Figure 22: Household Employing Livelihood Coping Mechanisms

6.0 EMERGING ISSUES

6.1 Insecurity/Conflict/Human Displacement

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

7.0 FOOD SECURITY PROGNOSIS

- According to climate outlook for May 2023 issued by Kenya Meteorological Department on 29th April 2023, the month of May marks the cessation of the Long Rains season and the county is likely to receive near average rainfall of about 51-150 millimetres of rainfall.
- Harvesting of horticultural crops and cow peas leaves will continue to boost household food consumption patterns.
- Availability of farm casual labour opportunities will also boost households' income and terms of trade.
- The prices of staple food commodities are likely to remain higher than the long-term average until the next harvest season in July 2023. This is occasioned by reduced production and depletion of stocks at household level.
- Regeneration of forage and recharged water sources are expected to impact positively on livestock productivity.
- The livestock prices are likely to increase following an improvement in both water and forage access and availability.
- Household purchasing power is likely to improve but remain below the long-term average following low food stocks at household level and high staple food prices. This will limit access to diversified foods.
- Poor income-households are likely to continue employing severe food based coping mechanisms in-order to access food or money to buy food.

8.0 CURRENT INTERVENTION MEASURES

8.1 NON-FOOD INTERVENTIONS

Sector	Intervention	Target Beneficiaries/Areas	Cost (Ksh.)	Lead Actor	Time Frame
Social Protection	Lisha Jamii Drought Response Plan (Cash transfer at a rate of Ksh.11,200 per household per month)	8,097 Households	90,686,400 per month for 6 months	World Food Program (WFP)	May to October 2023
Health & Nutrition	Supplementary feeding program (support to children 5 years & pregnant lactating women who are moderately malnourished with RUSF & CSB super cereal plus	5,666 children under 5 years and 1,163 pregnant lactating women in Government health facilities across the county		World Food Program (WFP)	Continu ous

8.2 FOOD INTERVENTIONS

Intervention	Target beneficiaries/Areas	Items	Lead Actor	Time Frame
Home grown school meals programme	Ikutha, Katulani, Kyuso, Lower Yatta, Mumoni, Mutitu, Mutomo, Mwingi Central, Mwingi East and Tseikuru	Ksh. 50,648,000	Ministry of Education	March- May 2023

9.0 RECOMMENDATIONS

Immediate/Short Term

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

Sector	Intervention	Target Area
Food & Safety Nets	Provision of food aid/cash transfer to severely affected households	64,000 households in all eight sub-counties
Agriculture	Promotion of conservation agriculture mainly on soil and water retention principles to mitigate wilting	All 8 sub counties
	Support control of army worm, quelea birds and any other notifiable pests and diseases	All 8 sub counties
	Training farmers on post-harvest management	All 8 sub counties
Livestock	Promote pasture conservation and management practices	All 8 sub counties
	Enhance livestock disease surveillance	All 8 sub counties
	Rehabilitation of strategic grazing areas	All 8 Sub Counties
Water	Repair and rehabilitation of strategic boreholes and shallow wells	50 boreholes in all eight sub counties
	Promotion of water harvesting and storage practices	All 8 Sub Counties
	Supply and installation of plastic water tanks	Areas with water scarcity
	Extension of pipelines from high-yielding boreholes	All 8 sub counties
Health and Nutrition	Nutrition Surveillance and periodic Surveys	Under 5-year children, pregnant & lactating women in all eight sub counties
	Mass screening, campaign, outreaches and active case finding	126,087 persons in all eight sub counties
	Promote home-based water treatment and conservation measures	All 8 sub counties
	Strengthen nutrition Supply chain of commodities and supplies	50 health facilities in all eight sub counties
Education	Provision of School feeding programmes	All public ECD, primary and secondary schools
	Provision of dignity kits	5,833 girls
Peace and Security	Support community-based conflict early warning and enhance surveillance	Tseikuru, Ngomeni, Nguni, Endau/Malalani and Mutha wards.