

National Drought Management Authority

MERU (MERU-NORTH) COUNTY

DROUGHT EARLY WARNING BULLETIN FOR OCTOBER 2022



A Vision 2030 Flagship Project



OCTOBER 2022 EW PHASE

Drought Status: ALERT



Maandalizi ya mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

Most parts of the County experienced dry weather condition during the month of October 2022. Towards the end of the month, several areas recorded light to moderate rainfall.

Overall the county is in normal vegetation greenness. However, the Sub-Counties of Igembe North and Igembe Central depicted moderate vegetation greenness.

Socio Economic Indicators (Impact Indicators)

Production Indicators:

The main crop production activities taking place in the county include planting and land preparation.

Livestock body condition is poor in Igembe North, Igembe Central and Buuri while it is poor to fair in Tigania West and fair to good in Tigania East. Milk production was stable compared to September and below long-term average

Access Indicators

The Terms of Trade are significantly above the LTA and unfavourable towards the livestock farmers.

The average return distance to water source for households and to grazing areas remained significantly high and above the long-term average. Milk consumption decreased compared to September and below the LTA

Utilization Indicator:

Over 70 percent of the households interviewed were under the poor and borderline food consumption score marking a significant increase compared to the previous month. Out of the 300 children screened for malnutrition 15.5 percent were facing moderate malnutrition and 5.1 percent were facing severe malnutrition

Early Warning Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming	Alert	Worsening
Agro - Pastoral	Alarm	Worsening
Rain Fed Cropping	Normal	Worsening
County	Alert	Worsening
Biophysical Indicators	Value	Normal Range/ Value
Rainfall (% of Normal)	97	80 – 120
VCI-3Month	38.13	35 – 50
Production indicators	Value	Normal
Maize Crop Condition	poor	Good
Livestock Body Condition for cattle	poor	Good
Milk Production per HH/ day	1	1.8litres
Livestock Migration Pattern	External and internal migration	No migration
Access Indicators	Value	Normal
Terms of Trade (ToT)	38	100
Milk Consumption per HH/ day	0.8	1.4Litres
Return HHs distance to water sources	22.1	8.4 Km
Water source return distance from grazing areas	32 km	13.26 Km
Cost of water (20 litres)	Ksh 2.5-5.00	Ksh 2.5 - 5.00
Utilization indicators	Value	Normal
Nutrition Status, MUAC (% at risk of malnutrition)	■ 79.4% ■ = 15.5% ■ = 5.1%	0
Copying strategy Index (CSI)	19.37	<15

- Short rains harvests
- Increased HH Food Stocks
- Short dry spell
- Reduced milk yields
- Land preparation

- Planting/Weeding
- Long rains
- High Calving Rate
- Milk Yields Increase

- Long rains harvests
- Increased HH Food Stocks
- A long dry spell
- Land preparation
- Kidding (Sept)

- Short rains
- Planting/weeding

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
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Seasonal Calendar

1. CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- From the figure 1 shown below, dekadal rainfall for estimate (RFE) amounts for the first and second dekads are below normal when compared to their corresponding long-term dekadal rainfall.
- The onset of the October November December short rains which normally starts from the second dekad of October has not kicked in.

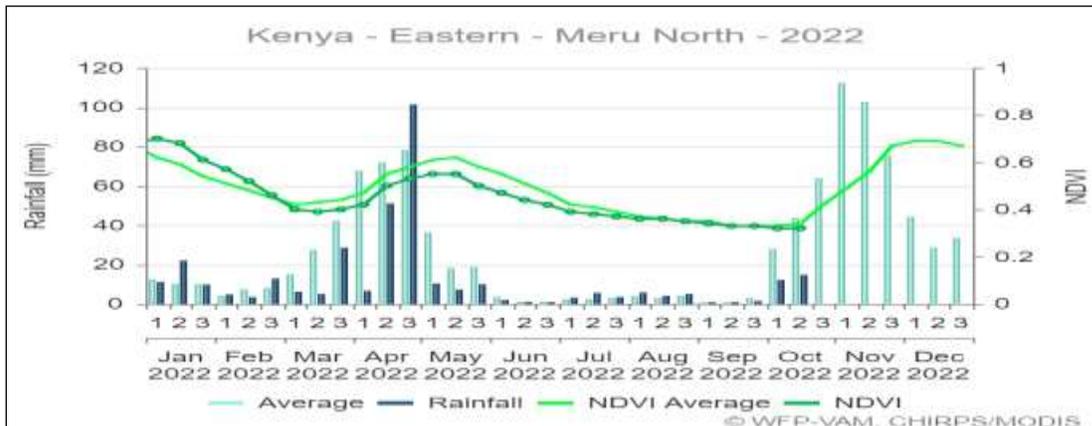


Figure 1: Rainfall estimates in Meru North

1.2 Amount of Rainfall and Spatial Distribution

- From the figure 1 above, the rainfall for estimates (RFE) amounts for the first dekad and second dekad were below the long term average. The county received an average of 13.105 mm for the first and second dekad compared to the long term average of 35.35 mm for this time of the year.
- However, analysis of data from rain gauges in four NDMA sentinel sites indicates that several areas of the Mixed Farming Livelihood Zone including Tigania East and West, parts of Buuri, Igembe South, parts Igembe Central and parts of Igembe North received light to moderate rainfall in the last three days of the month under review.
- Nonetheless, the Normalized Difference Vegetation Index (NDVI) values for the first and second dekad remained within the long-term average for the month.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

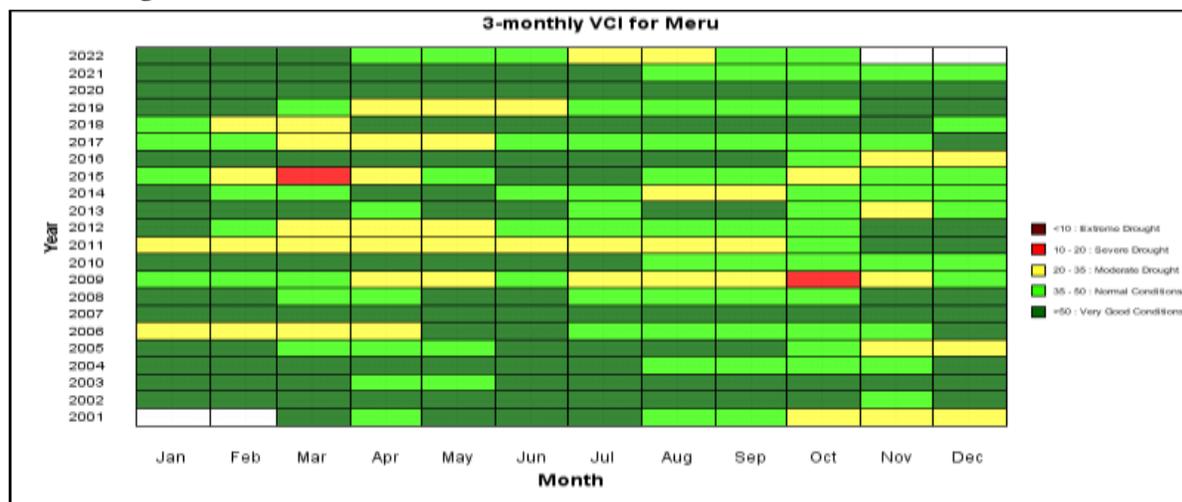


Figure 2: Three-monthly VCI for Meru County [Source: MODIS Data]

- The county vegetation condition in the month under review is within normal vegetation greenness as depicted by the vegetation condition index (VCI).
- The Sub-Counties of Igembe North and Igembe Central recorded moderate vegetation greenness. Tigania west, Tigania East, Buuri and Igembe south all recorded normal vegetation greenness in the month under review.
- Compared to similar period last year and the long term average the current condition remains below normal with the condition associated with the late onset of the OND rains and the failure of the previous rain seasons.

2.1.2 Pasture and browse Condition

- The condition of pasture and browse across the livelihood zones is generally poor. The current pasture and browse conditions are below normal in the Agro Pastoral Zones of Igembe Central and Igembe North (Mutuati) and Mixed zone of Tigania West as compared to normal years with no improvement realized when compared to the previous month due to minimal precipitation in the rangelands. However, the current condition of pasture is normal in the Rain Fed Zones of Tigania East.
- The available pasture and browse are expected to last for less than a month across the livelihood zones except in the Rain Fed parts of Tigania East where browse is expected to last for up to a month.

2.2 WATER RESOURCE

2.2.1 Sources

- From figure 3 shown, the three main sources of water within the period under review were; Boreholes, piped water and rivers.
- Water shortages were experienced across the county with the drying up of rivers and springs.
- Households in Igembe North and parts of Igembe central majorly rely on water trucking and water vendors as the main source of water.
- This situation is not normal as compared to a similar period in a normal year.

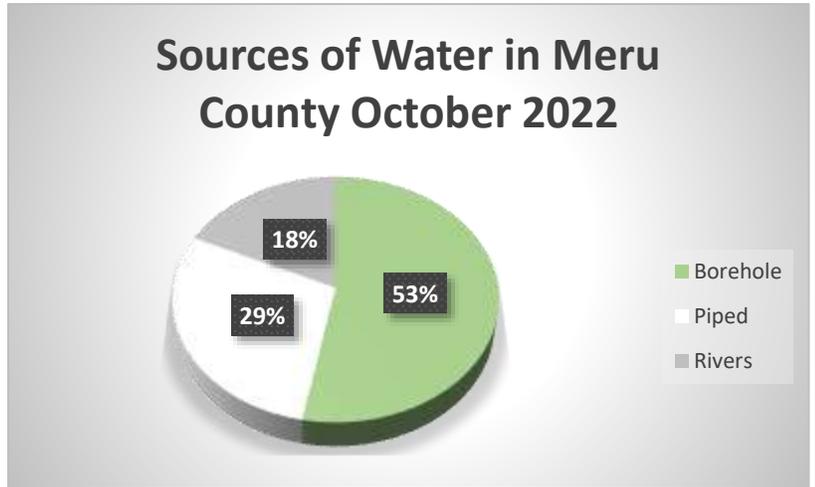


Figure 3:sources of water

2.2.2 Household Access to Water

- There was slight increase in the household distance to water sources in October 2022 when compared to the previous. In October, households trekked for an average of 21.1 km when compared to 23 km in September 2022.
- However, the average distances recorded in the month are significantly above the long-term average of 8.5 km for similar periods of the year.

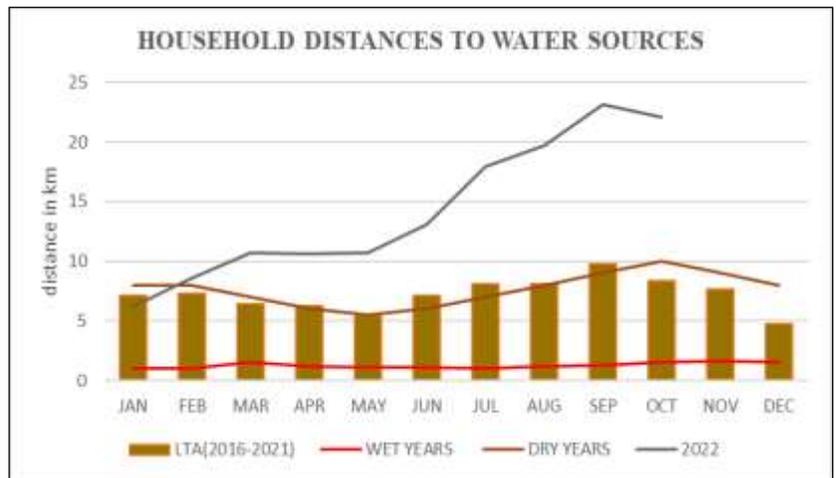
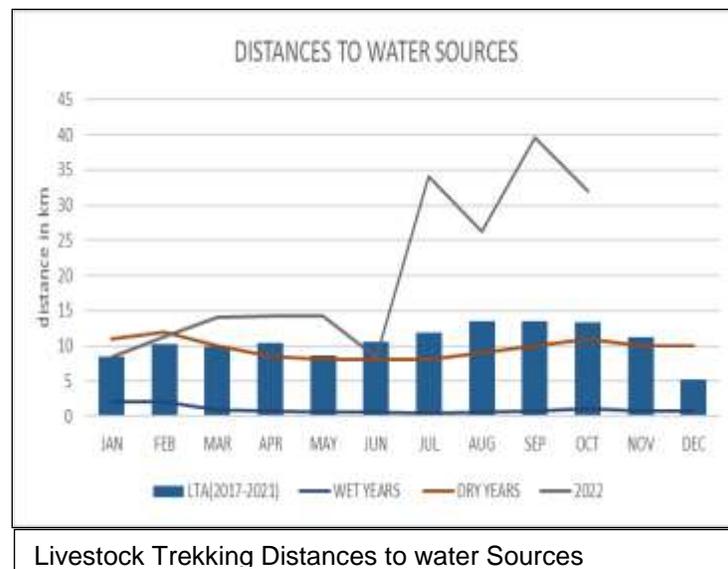


Figure 4:household access to water sources

- The high distances are attributed to drying up of open water sources and rivers due to poor performance of the 2022 long rains and the cumulative effect of poor performance of four previous rain seasons in the county.
- The average cost of a 20 litre jerrican of water is ksh 2.5 -ksh 5 across the livelihood zones.
- Areas such as Kachiuru, Kinisa and Mwanika in Igembe North depend on water trucking and water vendors as the main source of water with a 20 litre jerrican at ksh 20-25.

2.2.3 Livestock Trekking Distance to Water Sources from Grazing Area

- There was a slight decrease in average return distance for livestock from grazing areas in the month of October. The return trekking distance to watering points was 32 km in October compared to 39 km in September. The slight decrease might be attributed to light to moderate showers experienced in some parts of the County in the month under review.
- However, the current trekking distances are significantly above the long-term average of 13.3 km for similar periods in a normal year.
- The high distances are due to the drying up of water sources across the livelihood zones.
- The Agro Pastoral areas of Igembe North such as Mwanika, Kamweline and Kachiuru and Kinisa recorded the highest livestock trekking distances of 40 km.
- The watering frequency for small stock and cattle in the Agro Pastoral Zones of Igembe North was once per week. In the Agro Pastoral Zone of Igembe Central and Mixed Zones of Tigania West the frequency was three times per week. The rain fed livelihood zone of Tigania East, the watering frequency for both small stock and cattle was on a daily basis



3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The current livestock body condition ranged from poor to fair across the livelihood zones. Livestock body condition is fair in the Rain Fed Livelihood Zone of Tigania East and poor to fair in the Mixed Livelihood Zone of Tigania West. The body condition in Agro Pastoral Areas of Igembe North, Buuri East and Igembe central is poor.
- The condition is expected to further deteriorate with the continued depletion of forage due to the poor performance of the 2022 long rain season coupled with the previous failed seasons.

3.1.2 Livestock Diseases and Mortality

- Suspected cases of foot and mouth and Newcastle have been reported in Akithi in Tigania West.
- No unusual death from livestock was reported in the county during the month under review.
- However, reports indicate death of livestock especially those migrating back into the county from exhaustion and starvation in Igembe central

3.1.4 Milk Production

- The average milk production per household per remained stable at 1 litre per household per day in October compared to the same amount in September 2022.
- Poor livestock productivity is due to the deteriorating livestock body condition emanating from lack of pasture and browse.
- The current prices are below the long-term average of 1.8 litres per household per day for this time of the year.
- The highest milk prices were recorded in Kangeta Igembe Central at Ksh 150.

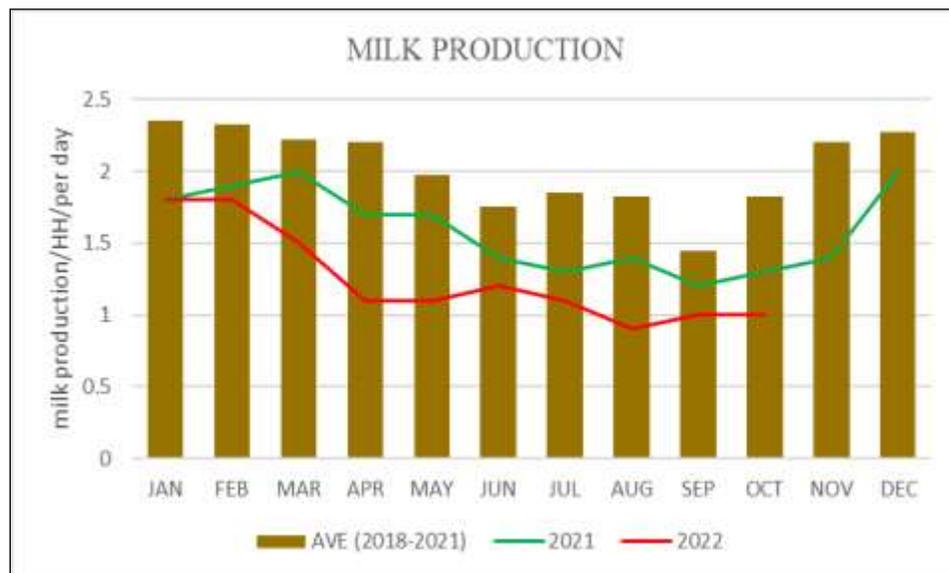


Figure 5: milk production per HH per day

RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of food Crops.

- Majority of the Farmers in the Rain Fed Zones of Tigania East, Mixed Zones of Tigania West and parts Igembe Central have started planting in anticipation of the October November December short rains. A few farmers are also preparing the lands for planting.
- Land preparation activities and planting are low compared to the long-term average for this time of the year due to lack of seeds and uncertainty of the performance of the Short Rains

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

- In majority of the livestock markets the cattle prices remained unstable in the current month when compared to the previous month. The average market price for cattle for the month under review was at ksh 14,208 compared to Ksh 14,958 in the month of September.
- The current prices are below the normal in comparison with a similar period in a normal year.
- The highest market price for cattle was Ksh 20,000 in Mikinduri in Tigania East with Kangeta in Igembe central recording the lowest price at ksh 10,000

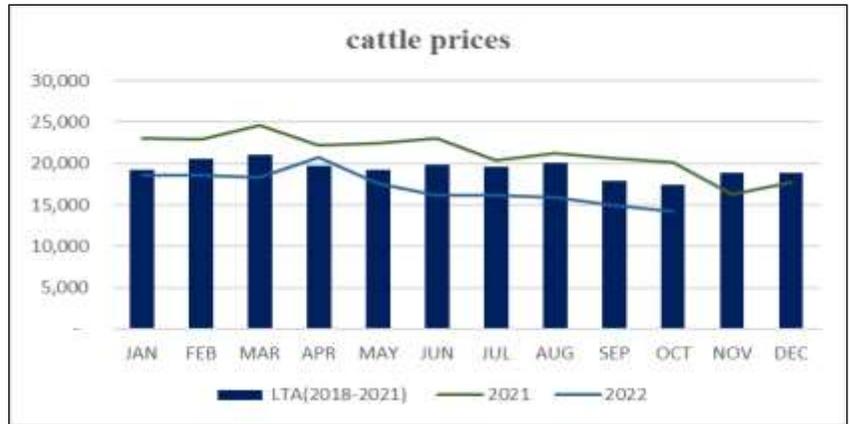


Figure 6: cattle prices

- The current prices are attributed to deteriorating livestock body condition which is driven by depletion of pastures across the livelihood zones.

4.1.2 Goat Prices

- The current average market price for a two-year goat remained stable at Ksh 3208 in the month of October compared to Ksh 3442 in September 2022.
- The current market price is slightly below long term averages in comparison a similar period in a normal year.
- The highest market price recored was Ksh 3500 in Mikinduri in Tigania East and the lowest price is Ksh 2,933 in Ng'undune in Tigania East



Figure 7; Goat prices

- The current average price is expected to gradually as the browse improves following the onset of the OND short rains.

4.2 CROP PRICES

4.2.1 Maize

- Maize prices in all the markets across all the livelihood zones are high affecting the households purchasing power
- There was a significant increase of market price for maize to Kshs 85 per kilogram in October as compared to compared to Ksh 80 in the previous month of September.

- The current market prices are also significantly above the LTA when compared to a similar period in a normal year.
- This is attributed to the meagre harvest from the 2022 long rains and cumulative poor productivity from four previous rain seasons.
- The current prices are also associated with low supply and high demand in the market especially with the start of planting season in anticipation of the 2022 short rains

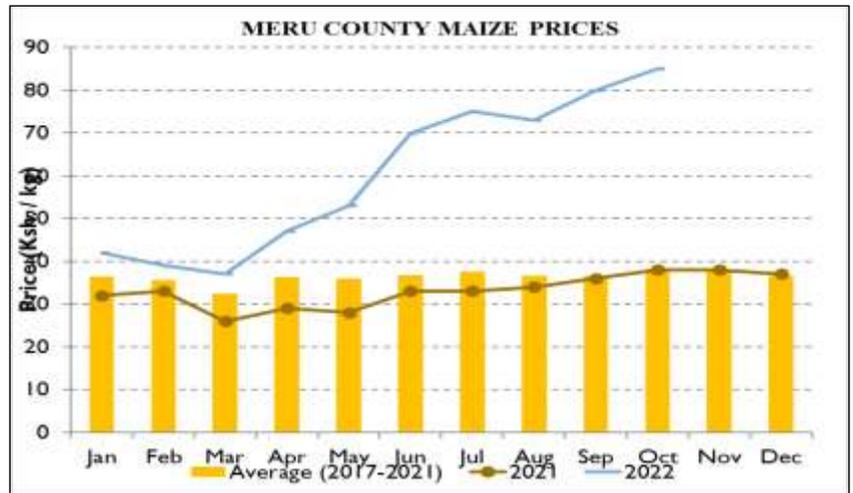


Figure 8:Maize prices

- The current prices are significantly higher in Igembe Central and Igembe North (Mutuati) with a Kilogram of maize selling at ksh 100.This is attributed to the vast distances between these areas and the main maize markets in Meru and Maua town. The lowest prices were recorded in Mikinduri at ksh 65 per kilogram.

4.2.2 Beans Prices

- The average price of a kilogram of beans increased to Ksh 188 in the month under review compared to Ksh 145 for the previous month of September 2022.
- The high prices are credited to the depletion of household stock from the below average harvest in the 2022 long rain season. The prices are also associated with the low supply /stock in the market and increased demand especially with the onset of the planting season.

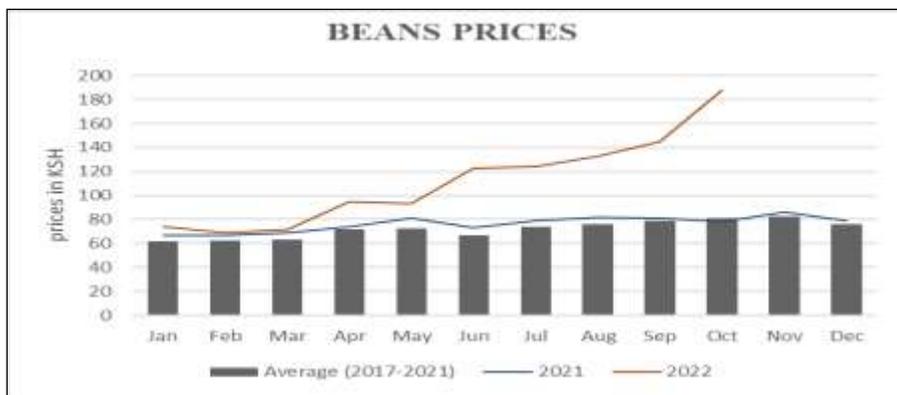


Figure 9: Beans price

- The current prices are above the LTA as compared to a similar period in a normal year.
- The highest market prices were recorded in Kianjai, Mutuati and Kangeta markets at Ksh 200 per kilogram of bean, the lowest price was Ksh 150 in Mikinduri Market.

4.2 TERMS OF TRADE

- Table 11 shows the trends in terms of trade (TOT) between the relative prices of goats and maize in Meru North County. The current TOT trends show a declined to 38 kilograms of maize purchased from the sale of a medium size goat in the month under review compared to 45 kilograms in the month of September
- The current TOT is significantly below the long term average of ksh 100 per kilogram by 62 percent for normal periods of the year.

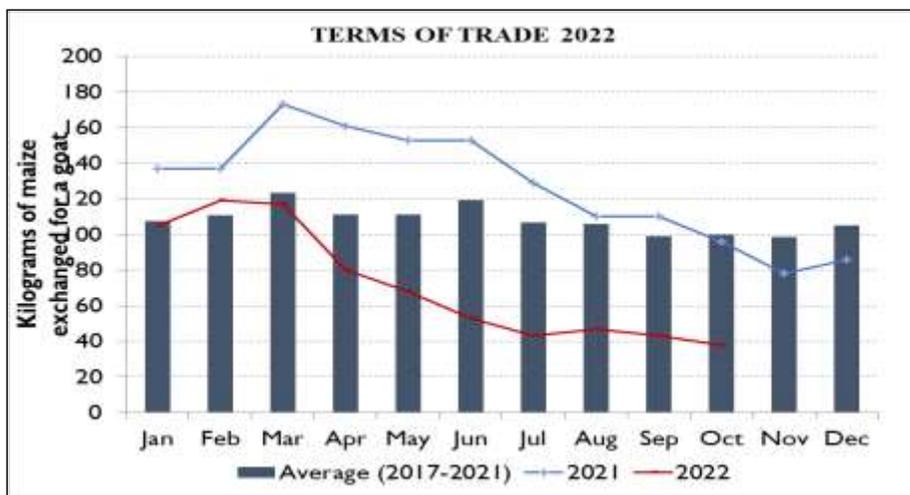


Figure 10: Terms of Trade

- The TOT is expected to remain unfavourable especially towards livestock farmers for the rest of the year with the prevailing drought situation in the county.
- The unfavourable terms of trade are attributed to the high cost of maize coupled with low household purchasing power across the livelihood zones.

INCOME

- The main source of income for the month under review was casual labour at 91.6 with trade and sale of livestock and livestock products at 4.2 percent.
- Many households especially in Tigania West and Igembe Central rely on casual labour in Isiolo Town
- The sale of livestock and livestock products decreased from 8.4 percent in September to 4.2 percent in October. This is due to poor market performance conditioned by poor body condition for cattle and small stock
- Households also dependent of sale of charcoal and firewood as alternative sources of income.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 MILK CONSUMPTION

- The average milk consumed per household per day declined to 0.8 litres in October compared to 1 litre in September 2022
- The continuous decline of milked consumed is as a result of the poor livestock body condition hindering livestock productivity.
- The average milk consumed per litre remained significantly below the long-term average of 1.4 litres for similar periods of the year.

5.2 FOOD CONSUMPTION SCORE

- Food consumption scores have further deteriorated in the month of October compared to September with slightly over 70 percent of households under the poor and borderline food consumption score.
- This is due to depletion of household stock along with low purchasing power at household level hindering dietary diversity
- Households under acceptable food consumption score have decreased from 35.3 percent in September to 23.5 percent in October.
- There is a significant increase in the households under poor food consumption score from 17.65 in September to 38.7 percent in October 2022. Households under borderline food consumption score decreased to 37.8 percent in October from 47.2 percent in September
- Majority of the households especially in the Agro Pastoral livelihood zones have limited access to fruits, meat and milk, majorly relying on pulses

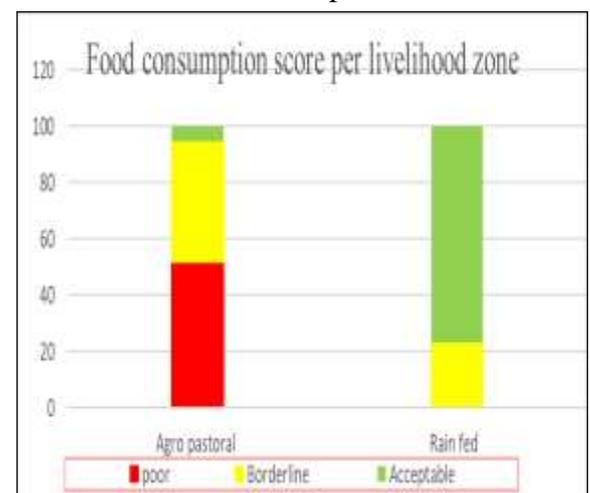


Table 12: Food Consumption Score

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status of Children

- Out of the 300 children between 5-69 months who were screened for malnutrition using the family MUAC, 79.4 percent were under the green band indicating that they were normal. This is a significant decrease from the 87 percent in September.
- 15.5 percent and 5.1 percent of the children 6-59 months screened for malnutrition were under the yellow and red band respectively. This is an increase from the previous months' rates at 9 and 4 percent respectively.
- The trend shows the rate of malnutrition is worsening across the livelihood zones with continued drought situation negatively impacting the food accessibility and utilisation in households.

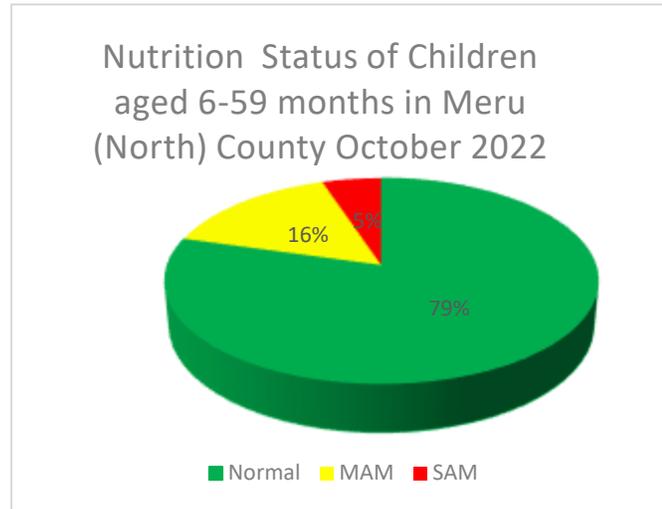


Figure 3: Nutrition Status of Children

5.4 Coping Strategy Index (CSI)

- Reduced consumption-based index for the month of October increased to 19.37 compared to 15.75 in September 2022.
- The Rain Fed Livelihood Zone recorded a CSI of 9.7 with the Agro pastoral zone recording a CSI of 29.
- The increase indicates that household needed to employ more consumption based coping strategies to cater to the nutritional need with the continued high cost of living across the county and the impact of the drought situation negatively affecting livestock productivity
- The most common consumption based coping strategy include reducing the quality and quantity of food consumed by adults and borrowing food, relying on friends and relatives and reducing number of meals consumed in a day.
- The coping strategy index is below LTA when compared to a similar period during a normal year.

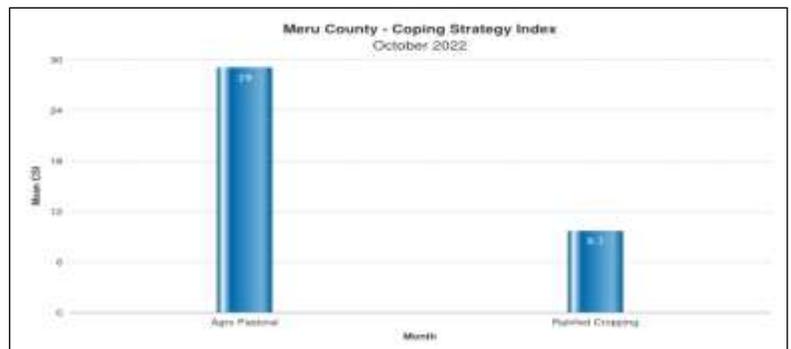


Figure 11: Coping Strategy

Migration and security

- Tension and insecurity are still high across the county with continued conflict between farmers from Meru and herders from Isiolo and Wajir over grazing land and destruction of farms to feed livestock
- Migration into the county from Tharaka Nithi, and parts of Imenti has been reported as herders from Meru moved back with the expected onset of the short rains

6.1 Emerging Issues

- Cases of mutilation of camels by Farmers are on the rise as camels infringe on farm lands in search of pasture and water
- Cases of loss of human life reported with one female killed by herder in retaliation for the mutilation of camels by farmers on the border of Isiolo and Meru.

6.2 FOOD SECURITY PROGNOSIS

- According to the Kenya Meteorological Department forecast 2022 October-November – December (OND) rain season is expected to be depressed in most parts of Meru County.
- The forecasted depressed rainfall during the months of October to December 2022 is expected to deteriorate the prevailing drought conditions in the county; this could lead to unprecedented impacts.
- Farming activities and crop productivity is expected to be below average
- Livestock production and productivity is expected to gradually improve with the regeneration of pasture following the onset of the short rains. Distances to water sources for both livestock and households is expected to decrease in the next one month.
- Terms of trade will likely improve slightly as result of improvement livestock body conditions triggering improvement in livestock prices.
- However, the rates of malnutrition expected to increase with continued depletion of household stock
- Food consumption score expected to further deteriorate with number of households under the poor food consumption score expected to increase.

6.3 ON-GOING INTERVENTIONS

Sector	Current Intervention	Implementer	Target population/Schools/Households
Education	School feeding programme for 31 schools	Food for the hungry International	(6769 pupils) in Buuri East
Education	School feeding programs in 7 schools for two terms	Ripples International	7 schools
Food Aid	Food Aid to	Kenya Red Cross	150HH in Kamweline, Kinisa and kachuiru in Igembe North .Plans underway to upscale to 500 households
Safety Nets	Cash transfer Meru county	Food for the Hungry International in partnership with FAO	Target 800 house household in Meru (North) County
Water	Water Trucking to schools	Tana Athi Water Agency in collaboration with County Government of Meru	28 schools in Mutuati, Igembe North, Igembe Central , Tigania East and West Sub-Counties
Safety Nets	School feeding programs in 7 schools for two terms	Planning to upscale to 8 schools	Ripples International
Safety Nets	Cash transfer in Baibariu, Ndoleli, Kanjoo and Nthambiro Sub locations for five (5) months (Sept 2022 to Jan 2023)	Anglican Development Agency	1500 households
Livestock Feeds	Supply and distribution of 2240 of drought pellets to 6 Su-Counties	National Drought Management Authority	2000 heads of Cattle
Crops	Provision of planting seeds	County Government of Meru	Across the County
Food Aid	Provision of relief food to vulnerable households	National Government	Across the County

6.4 Recommended Interventions

Sector	Proposed Intervention	Proposed Implementer	Target Location/Population
Crops	Upscale Provision of quick maturing quality planting seeds	County Government of Meru	Across the County
Health and Nutrition	Upscale health and nutrition outreaches	County Government of Meru and partners	Igembe North & Central, Mutuati and Tigania East & West
Health and Nutrition	Support on hygiene and sanitation promotions.	County Government of Meru and partners	Across the county
Peace and Security	Upscale inter county /community peace and security meetings	Ministry of Interior	Tigania East, Buuri, Igembe Central
Livestock	Treatment and vaccination against emerging livestock diseases.	County Government of Meru	Across the County
Water	Rehabilitate water facilities and provision of water storage facilities in schools and	Meru County Government of Meru, National Drought Management Authority (NDMA)	Mutuati, Igembe North, Igembe Central