

National Drought Management Authority

EMBU (MBEERE) COUNTY

DROUGHT EARLY WARNING BULLETIN FOR APRIL 2023



A Vision 2030 Flagship Project



APRIL DROUGHT EW PHASE	Early Warning (EW) Phase Classification		
Drought Status: NORMAL Shughuli za kawaida	LIVELIHOOD ZONE	EW PHASE	TRENDS
	Marginal Mixed Farming	Normal	Improving
	Mixed Farming	Normal	Improving
	County	Normal	Improving
Drought Situation & EW Phase Classification			
<u>Biophysical Indicators</u>			
<ul style="list-style-type: none"> ▪ The rains were well distributed in both time and space in April. ▪ Forage condition improved notably across the county. <p><u>Socio-Economic Indicators (Impact Indicators)</u></p> <p><u>Production Indicators</u></p> <ul style="list-style-type: none"> ▪ Crop condition was good, maize crop in MF livelihood zone at knee length while in MMF at vegetative stage. Second weeding of early planted crops ongoing while late planted crops are germinating ▪ Livestock body condition improved in the month. It ranges between good to borderline moderate and is expected to improve further with improvement in forage condition. ▪ Milk production has increased to 0.5 litres per household per day <p><u>Access Indicators</u></p> <ul style="list-style-type: none"> ▪ Prices of beans and green grams increased during the month due to increased demand for seed during the planting season. ▪ Livestock prices increased across all the markets which can be attributed to improved body condition. ▪ Milk consumption remained stable during the month occasioned by stable production ▪ The terms of trade in April increased due to decrease in maize prices and increase in goat prices. ▪ Trekking distances to water sources decreased due recharge on the water sources by the ongoing rains. <p><u>Utilization Indicators</u></p> <ul style="list-style-type: none"> ▪ The proportion of households that recorded acceptable food consumption remained stable at 67 percent while 33 percent recorded borderline food consumption. ▪ Coping strategy index decreased from 14.07 to 11.41 this can be attributed to improved purchasing power among 	Biophysical Indicators	Value	Normal ranges
	Rainfall (% of normal)	98	80-120
	VCI-3 month	30.25	35-50
	VCI-1-month	14.04	35-50
	Forage Condition	fair to good	fair to good
	Production indicators	Value	Normal ranges
	Crop Condition	Good 2nd weeding	Good weeding ^{2nd}
	Livestock Body Condition	Borderline-Moderate	Moderate/Good
	Milk Production (l/p/p/day)	0.5	1 litre
	Livestock Migration Pattern	None	None
	Livestock Deaths (Drought related)	None	None
	Access Indicators	Value	Normal ranges
	Terms of Trade (ToT)	75	131
	Milk consumption (l/p/p/day)	0.2	1.46
	Household Distance to Water Sources (in km)	2.2	2.9
Livestock Distance to Water Sources (in km)	3.7	3.32	
Utilization indicators	Value	Normal ranges	
% of Children at risk of malnutrition by MUAC	0%	0	
Coping Strategy Index (CSI)	11.41	3.39	
<ul style="list-style-type: none"> <li style="width: 25%;">▪ Short rains harvests <li style="width: 25%;">▪ Planting/Weeding <li style="width: 25%;">▪ Long rains harvests <li style="width: 25%;">▪ Short rains <li style="width: 25%;">▪ Short dry spell <li style="width: 25%;">▪ Long rains <li style="width: 25%;">▪ A long dry spell <li style="width: 25%;">▪ Planting/weeding <li style="width: 25%;">▪ Reduced milk yields <li style="width: 25%;">▪ High Calving Rate <li style="width: 25%;">▪ Land preparation <li style="width: 25%;">▪ Pest control <li style="width: 25%;">▪ Increased HH Food Stocks <li style="width: 25%;">▪ Milk Yields Increase <li style="width: 25%;">▪ Increased HH Food Stocks <li style="width: 25%;">▪ Kidding (Sept) <li style="width: 25%;">▪ Land preparation <li style="width: 25%;">▪ Pest control 			
Dry Season			Long Rains
Jan	Feb	Mar	Apr
May	Jun	Jul	Aug
Sept	Oct	Nov	Dec

1.0 CLIMATIC CONDITIONS

1.1 Rainfall Performance.

- The rainfall received during the month was well distributed in time and space in both livelihood zones.
- The Mbeere region recorded 9 rainy days in the month under review.
- The decadal distribution was good since rains were recorded continuously across all the sub counties.
- Dekad one recorded the highest 69.1 mm of rainfall while dekad two recorded 57 mm

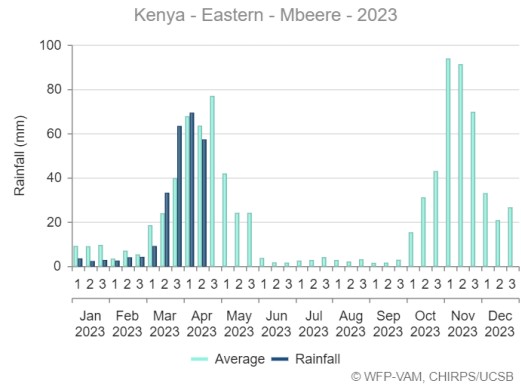


Figure 1: Rainfall estimates (WFP-VAM CHIRPS data)

AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- The marginal mixed framing zone recorded more rains cumulatively at 191 mm compared to the marginal mixed farming zone with 126 mm.
- The spatial distribution was good across both livelihood zones.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The vegetation condition remained good and stable during the month under review
- The 3-month VCI for Mbeere recorded a decline from 50.51 in the month of March to 30.96 in the month of April.
- Mbeere south sub-county recorded a higher 3-month VCI of 33.84 as compared to Mbeere north Sub County that recorded 3-month VCI of 28 (Figure 2).

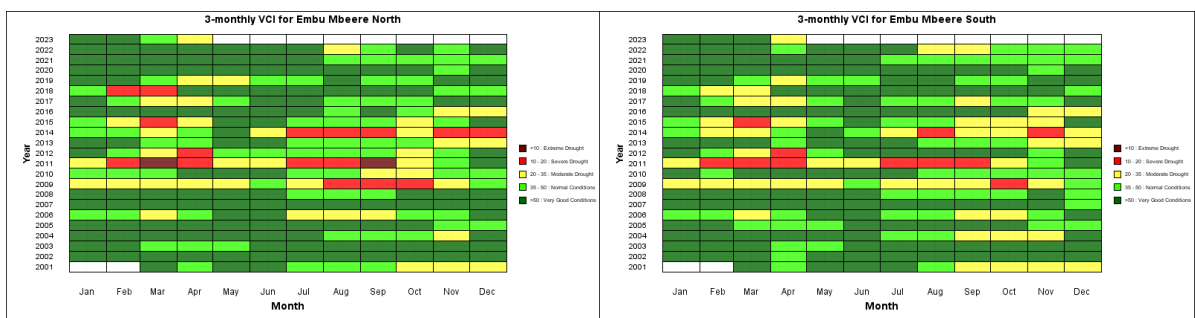


Figure 2: The vegetation condition index (Source: (MODIS))

2.1.2 Pasture Condition

- The pasture conditions ranged from fair to good during the month under review. This is an improvement compared to the month of March with 84.6 percent of the areas reporting poor pasture conditions and 15.4 percent reporting fair pasture condition.
- The improvement and continuous regeneration of the pasture can be attributed to the decent distribution of the MAM rainfall.
- The condition of the pasture continues to improve due to the ongoing rains.

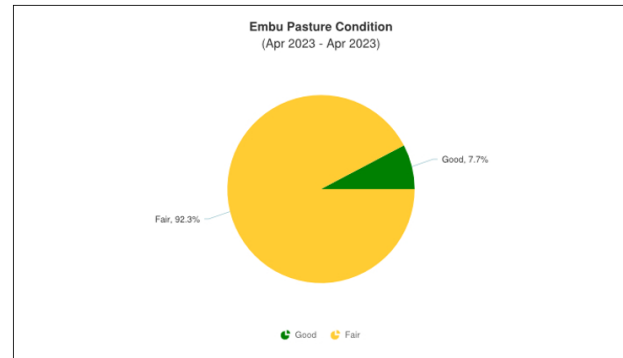


Figure 3: pasture condition across Mbeere region

2.1.3 Browse Condition

- The browse condition ranged from good to fair during the reporting month.
- The browse condition improved during the month as compared to the month of March with 46.2 percent of the areas reporting poor pasture conditions, 46.2 percent reporting fair conditions and 15.4 percent reporting fair pasture condition.
- The browse condition is expected to improve due to the impact of the long rains.

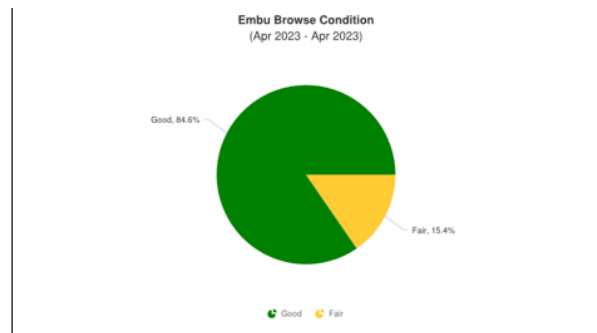


Figure 4: Browse condition across Mbeere region

2.2 WATER RESOURCE

2.2.1 Water Sources

- The main sources of water during the month of April in both livelihood zones were rivers, traditional river wells and boreholes.
- The proportion of people using rivers increased in the month under review due to recharge of the seasonal streams by the rains.
- The current water sources are expected to last 3 months in MMF zone and up to 4 months in the MF zones.

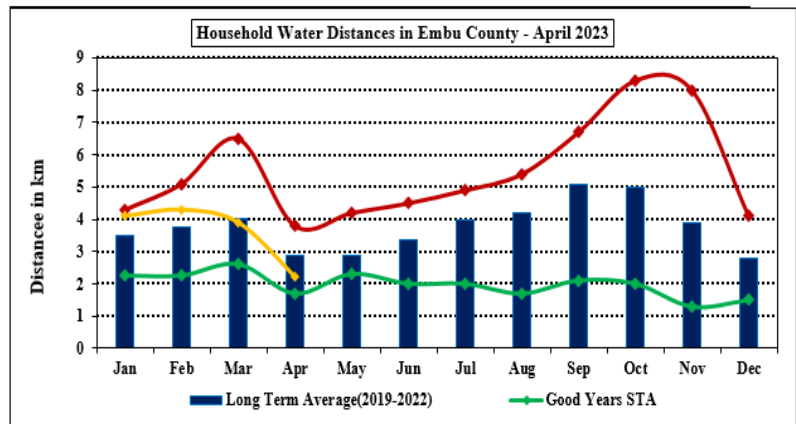


Figure 6: Average distances trekked to water sources by households in Mbeere region

2.2.2 Household Water Access and Utilization

- The average household return distance to water sources decreased from 3.9 km in the month of March to 2.2 km in the month of April.
- The decrease in average distance can be attributed to the recharge of water pans and rivers in addition to use of roof catchment water occasioned by the ongoing rains.

- Households in the mixed farming zones trekked for shorter distance of 1.7 km compared to 2.2 km in the marginal mixed zones.
- The current average return distance to water sources is 2.5 percent lower than the short-term average distance of 2.9 km.

2.2.3 Livestock access to water from grazing areas

- The average livestock return distance to water sources decreased from 5.1 km in March to 3.7 km in the month of April.
- The decrease in distances can be attributed to recharge of rivers, open water sources and regeneration of pasture around them.
- The average trekking distances were lower at 1.3 km in the mixed farming zone as compared to marginal mixed farming zone at 2.4 km.

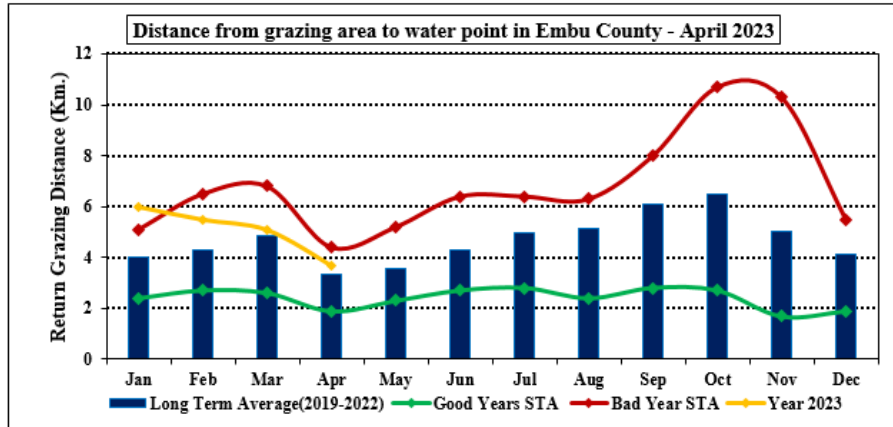


Figure 7: Average Livestock distance from grazing areas in Mbeere region.

- The current average return distance to water sources is 7 percent above the short-term average of 3.32 km.

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The livestock body condition was good to borderline during the reporting month.
- The improvement was from 80 percent good to 83 percent. This can be attributed to the regeneration of forage occasioned by the long rains.
- Body condition for cattle was fair in the marginal zones and fair to good in the mixed farming zones while for small stocks it remains fair to good in both livelihood zones.
- Livestock body condition is expected to improve more with further forage improvement in all the three sub counties.

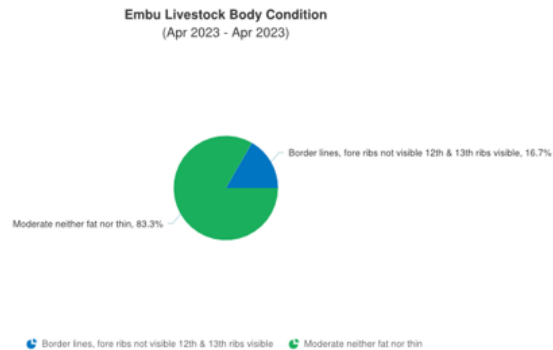


Figure 8: Livestock body condition in Mbeere region

3.1.2 Livestock Diseases

- There were no livestock diseases reported during the month of April, though cases of livestock diarrhoea due to lush pastures were reported in both livelihood zones.

3.1.3 Milk Production.

- The average daily milk production in the sampled households increased from 0.2 litres in the month of March to 0.5 litres in the month of April. The low production of milk is attributed to poor pasture conditions before the rains.

- The current milk production is 55 percent lower than the short-term average of 1.0 litre per household per day.
- It is expected that production of milk will improve as the rainfall season progress as pasture and water will be readily available.

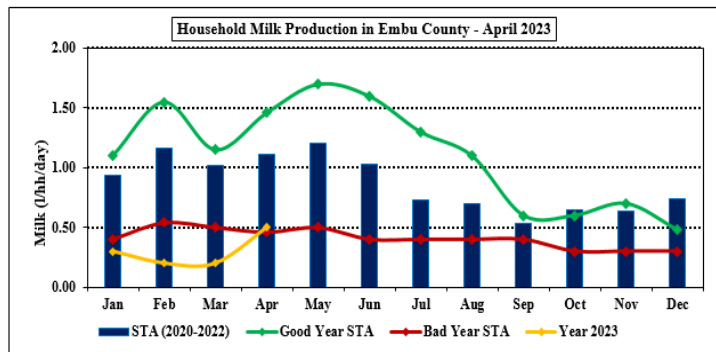


Figure 9: Milk production in Mbeere region

3.2 Rain-Fed Crop Production

3.2.1 Stage and Condition of food Crops

- The crops are in good condition due to the ongoing rains, whose spatial and temporal distribution is good across the county.
- The crops are in different stages of growth in both livelihoods. In the mixed farming livelihood zones maize is at knee length while beans at three leaf stage. In the Marginal mixed zones maize is below knee length and the green grams at two leaf stage.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Market Price for Cattle

- The average price of a medium size mature bull increased by 6 percent from Kshs 35,800 in March to Kshs 38,000 in the reporting month.
- The increase in price can be attributed to the continuous improvement of cattle body conditions in both livelihood zones.

- Karaba livestock market in the mixed farming zone recorded the highest average prices of Kshs. 45,000 while Ishiara and Kiritiri livestock market in the marginal mixed farming zone recorded average price of Kshs. 29,500 and Kshs. 43,300 respectively.

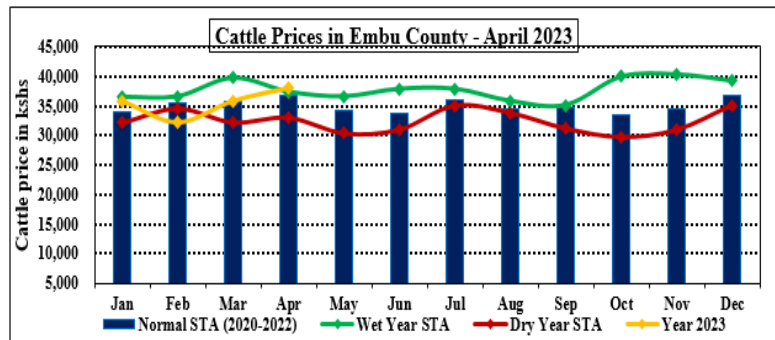


Figure 10: Average cattle prices in Mbeere region

- The variation in average prices across the livelihood zones can be attributed to the variation in body conditions and the traded volumes.
- The current average price was Higher compared to the short-term average price of Kshs 36,800.

4.1.2 Goats Prices.

- The average goat price increased from Kshs 5,600 in March to Kshs 5,700 in April for a medium sized male goat.

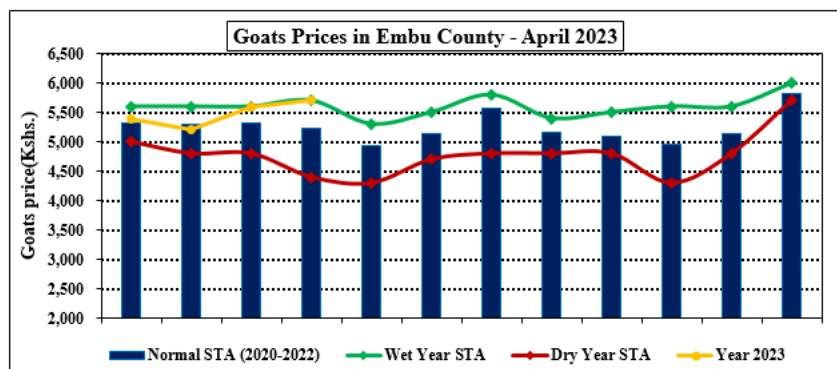


Figure 10: Average goat prices in Mbeere region

- The increase in price can be attributed to improvement of goat body condition due to the availability of forage.
- Karaba livestock market in the mixed farming zone recorded the average price at Kshs. 5800 while highest price was observed in Ishiara livestock market in the marginal livelihood zone at Kshs. 5900.
- The variation in average prices across the different markets is attributable to variation in demand and traded volumes in the respective markets.
- The current average price is 10 percent higher than the short-term average of Kshs 5,200 in a similar month.

4.2 FOOD PRICES

4.2.1 Maize Prices

- The average market price of maize reduced from Kshs. 79 in March to Kshs 77 in the reporting month.
- The decreased in maize price can be attributed to the harvest from irrigated farms within and in neighbouring counties.
- Karaba cereal market in mixed farming zone recorded the highest average price at Kshs 90 while Kiritiri market in the marginal mixed zone recorded average price of Ksh. 75.
- The variation in average price across the different markets is attributable to the poor harvests that were realised in Mwea sub county in the previous season.
- The current average price is 71 percent higher than the short-term average of Kshs 45 per kilogram.

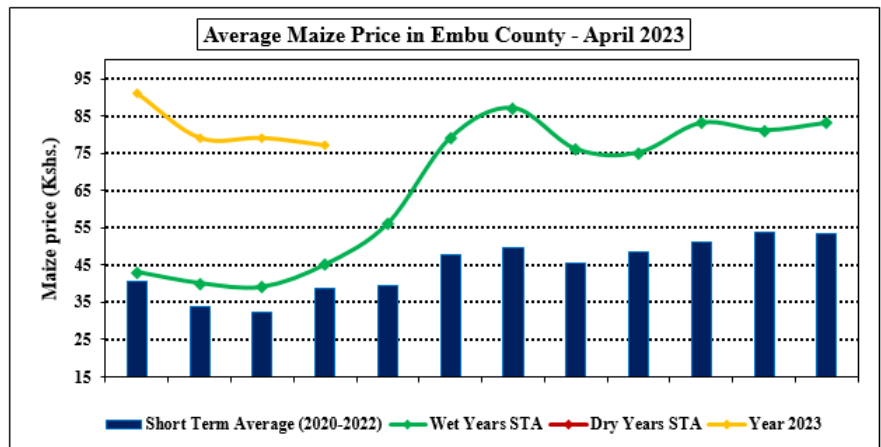


Figure 11: Average maize prices in Mbeere region

4.2.2 Posho (Local Maize Meal)

- The average price of one kilogram of *posho* (locally milled flour) high at Ksh. 95 in the month of April.
- The stability of posho prices is attributed to the reduction of maize prices in the markets.
- Karaba cereal markets recorded highest average prices of Ksh. 110 while Ishiara market recorded average prices of Ksh. 95.
- The variation in *posho* prices is attributed to the differentiation in maize prices across the livelihood zones and the high costs of transportation and milling.
- The current average price of posho is 66 % higher than the short-term average of Ksh 57.

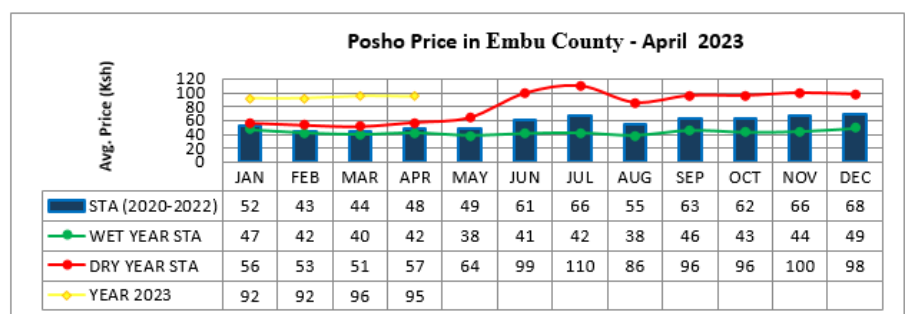


Figure 13: Average posho prices in Mbeere region

4.2.3 Beans Price

- The average price of one kilogram of beans increased by 7 percent from Ksh. 140 in March to Ksh. 152 in the month under review.
- The increase in beans prices can be attributed to the increased reliance on the market since farmers used the household stocks as seeds.
- Ciangera and Ishiara cereals markets in the marginal mixed farming livelihood zone recorded high average prices of Kshs. 175 and kshs. 178 respectively while Karaba market in the mixed farming zones recorded average price of Kshs 150.
- The variation is due to reliance of beans as a main crop in the mixed farming zone as compared to the marginal zones
- The current average price of beans is 83% higher than the short-term average price of Ksh 83.

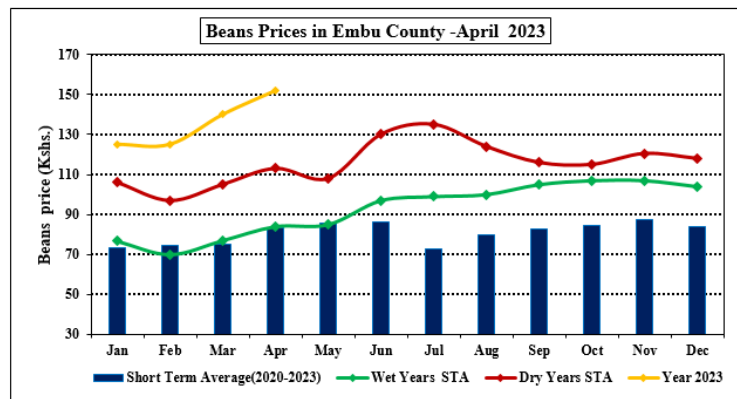


Figure 14: Average beans prices in Mbeere region

4.2.4 Green Grams Price

- The average price of one kilogram of green grams increased from Kshs 140 in March to Kshs 145 in the month of April.
- The increase of the prices is due to increased reliance on the market after planting.
- The current average price of green grams is 12% higher than the short-term average price of Ksh 130.

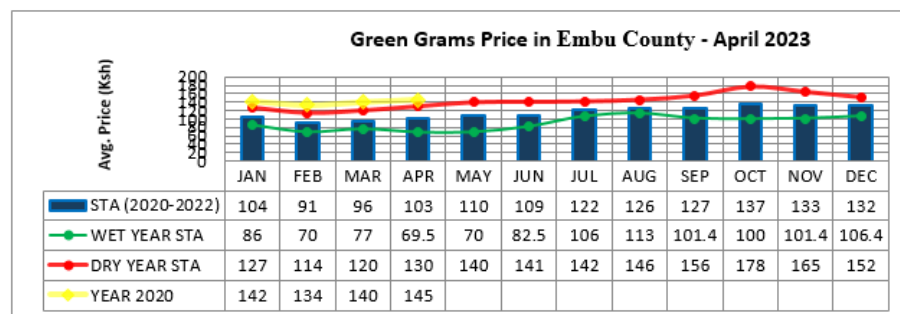


Figure 15: Average green grams' prices in Mbeere region

4.3 Terms of Trade (ToT)

- The Terms of trade marginally increased from 71 to 75 kilograms of maize bought from sale of one medium sized male goat in the month under review.
- This is attributable to the slight increase in average goat prices and the drop in maize prices during the reporting month.

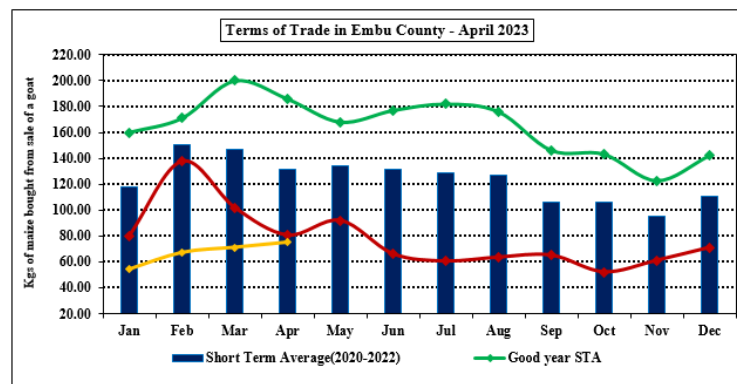


Figure 16: Terms of Trade (Goat Vs maize price) in Mbeere region

- The current terms of trade are 52 percent lower than the short-term average of 131 kilograms of maize bought from sale of one medium sized male goat.

FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

- The average milk consumption at household level increased from 0.2 litres in March to 0.5 litres to per household per day when compared to the month of February.
- The increased milk consumption is attributed to improved livestock body which has helped in milk production. The current milk consumption is significantly lower than the short-term average of 1.46 litres per household per day.

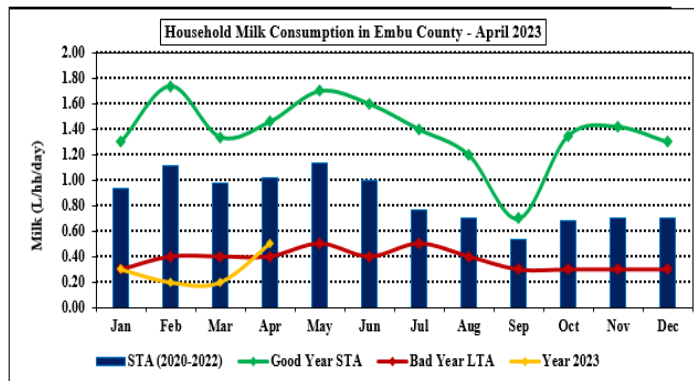


Figure 17: Milk Consumption in Mbeere region

5.2 Nutritional Status of Children

- During the month under review, the children under risk improved to zero percent from 1percent of the sampled children were at risk of malnutrition in March.
- The improvement of nutrition status of the sampled children can be attributed to increased milk consumption in the households and the availability of vegetables.

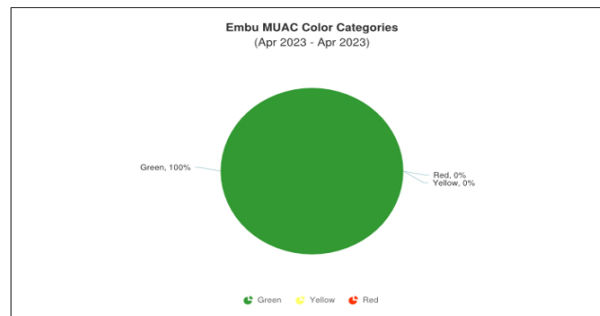


Figure 18: Mid upper arm circumference measurements for children in Mbeere region

5.3 Food Consumption Score

- During the month under review, 33 percent of the sampled households were at borderline food consumption category and 67 percent with acceptable food consumption.
- Food consumption score improved for the households that faced severe food deficits. This is due to availability of vegetables due to the ongoing rains.
- The households in the mixed farming zone consumed meals diversified meals in terms of food groups and at more frequencies compared to households in the marginal mixed farming zones.

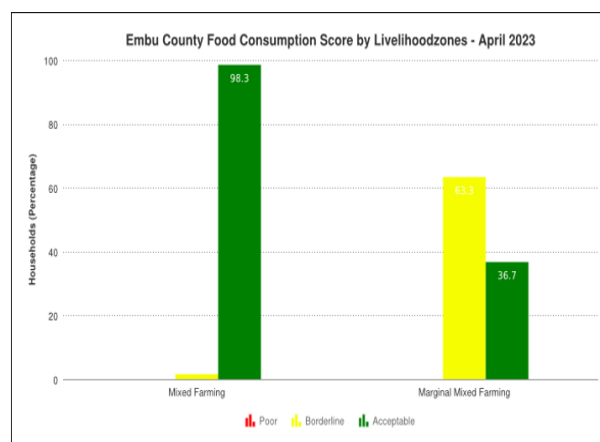


Figure 19: Household food consumption in Mbeere region

5.4 Coping Strategy Index

- The Coping Strategy Index is a derivative of the strategies that households adopt when they lack food or money to buy food.
- The mean coping strategy index decreased from 14.07 in the month of March to 11.41 in the month of April.
- The decrease can be attributed to increased household purchasing power in the marginal mixed farming zone.
- The coping index of households in marginal mixed farming zones was higher at 15.9 as compared to that of households in mixed farming zones with 7 in the reporting month.

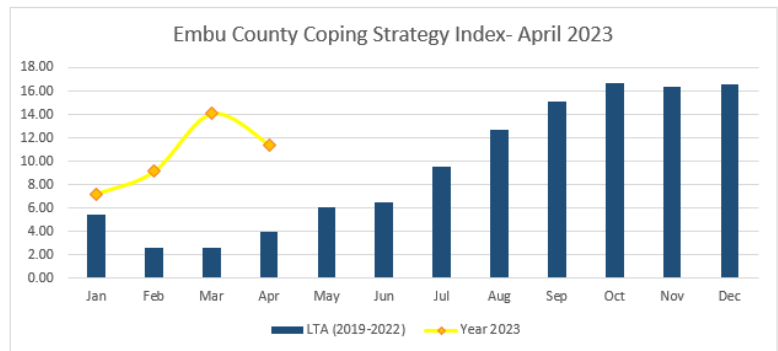


Figure 20: coping strategy index in Mbeere region

5.5 Implication of the above Indicators to Food Security

- The ongoing rains have led to start of regeneration for forage and water access for both households and livestock
- Food prices remain high and thus negatively affecting the households mainly in the marginal zones where poor harvests were recorded in the previous season due to its poor performance.
- The livestock prices marginally increased thereby leading to slight improvement in the terms of trade benefiting the livestock keepers
- The start of agricultural activities led to availability and access to casual labour and thus having positive impact on the purchasing power of the poor households however coping for such households increased occasioned by severe food deficits.

6.0 CURRENT INTERVENTION MEASURES

6.1 Food interventions

- A total of 7,147 food hampers received through National Steering Committee on Drought Response. Each hamper contained 22 kg of assorted food items
- Food hampers by the Hindu community of Embu. 240 households benefited from the initiative. Each hamper contained 25 kg of assorted food items.

6.2 Non-Food Interventions

- The locust programme distributed 260 bags animal feeds/supplements and 230 MMBs in each of the following wards: Muminji, Evurore, Kiambere and Makima.

7.0 Food Security Prognosis (Three months)

- Households using some of food stocks as seed affect food stock reserves and therefore a likelihood of households depending on the markets for food stocks. The reduced household food stock is likely to affect the dietary diversity and see the borderline food consumption category rise.

- Increased TOT will empower the household purchasing power since households are depending on the markets for food needs.
- Milk production and consumption is likely to show an improvement trend occasioned by the pasture regeneration and the shorter distances trekked in search of water.
- With good rainfall progress, the fast maturity crop will mature and therefore improve household food security

8.0 SECTOR RECOMMENDATIONS

Sector	Recommended activities	Target area	Responsible
Livestock production and Veterinary Services	<ul style="list-style-type: none"> • Disease surveillance and vaccination, de-worming of key stock 	Mwea, Mbeere north and Mbeere south sub counties	Embu County Government
Agriculture	<ul style="list-style-type: none"> • Capacity building on pest control and management • On-farm soil and water conservation 	Mwea, Mbeere north and south sub counties	Embu County Government
Health and Nutrition	<ul style="list-style-type: none"> • Enhance health monitoring and surveillance at the community level 	Mwea, Mbeere North and Mbeere south sub counties	Embu County Government
Water	<ul style="list-style-type: none"> • Conservation of the farms around water dams to reduce siltation • Training of water user associations 	Mbeere North, South and Mwea Sub counties	Embu County Government Community beneficiaries
Education	<ul style="list-style-type: none"> • Installation of water harvesting and storage tanks in schools with low water storage capacity 	Mbeere North, South and Mwea Sub counties	NDMA Embu County Government, Ministry of Education