



A Vision 2030 Flagship Project



National Drought Management Authority EMBU (MBEERE) COUNTY DROUGHT EARLY WARNING BULLETIN FOR SEPTEMBER 2021

SEPTEMBER DROUGHT EW PHASE	Early Warning Phase Classification		
<p>Drought Status: ALERT</p> <p>Maandalizi ya mapema</p>	LIVELIHOOD ZONE	EW PHASE	TRENDS
	Marginal Mixed Farming	Alert	Deteriorating
	Mixed Farming	Alert	Deteriorating
	County	Alert	Deteriorating
<p>Drought Situation & EW Phase Classification</p> <p>Biophysical Indicators</p> <ul style="list-style-type: none"> The month of September has been dry cold and zero amount of precipitation recorded. The vegetation greenness remains at normal. Pasture and browse conditions continue to deteriorated. <p>Socio-Economic Indicators (Impact Indicators)</p> <p>Production Indicators</p> <ul style="list-style-type: none"> Land preparation and planting is ongoing. Livestock body condition is fair to poor. Milk production decline further in the month <p>Access Indicators</p> <ul style="list-style-type: none"> Terms of trade declined due to the reducing goat prices. Milk consumption declined due to the amount of quantity produced. Distances to water sources increased for both households and livestock. <p>Utilization Indicators</p> <ul style="list-style-type: none"> Proportion of the sampled children were moderately malnourished (0.7%) Out of all sampled households, 2% had poor food consumption and 21% borderline food consumption. Household coping strategy index increased compared to last month. 	Biophysical Indicators	Value	Normal ranges
	Rainfall (% of normal)	0	80-120
	VCI-3 month	45.29	35-50
	VCI-1-month April	46.42	35-50
	Forage Condition	Fair-Poor	Fair
	Production indicators	Value	Normal ranges
	Crop Condition	None	None
	Livestock Body Condition	Fair to Poor	Fair
	Milk Production (in litres)	0.7	0.7
	Livestock Migration Pattern	No	Normal
	Livestock Deaths (from Drought)	No death	No death
	Access Indicators	Value	Normal ranges
	Terms of Trade (ToT)	146	154
	Milk Consumption (in litres)	0.6	0.6
	Household Distance to Water Sources (in km)	6.7	3.2
Livestock Distance to Water Sources (in km)	7.9	4.3	
Utilization indicators	Value	Normal ranges	
Nutrition Status, MUAC (% at risk of malnutrition)	0.7	<0.1	
Coping Strategy Index (rCSI)	4.17	<8.78	

<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 weather conditions during the month of September continued being dry and cold.
- According to World Food programme, no precipitation was recorded in the reporting month.

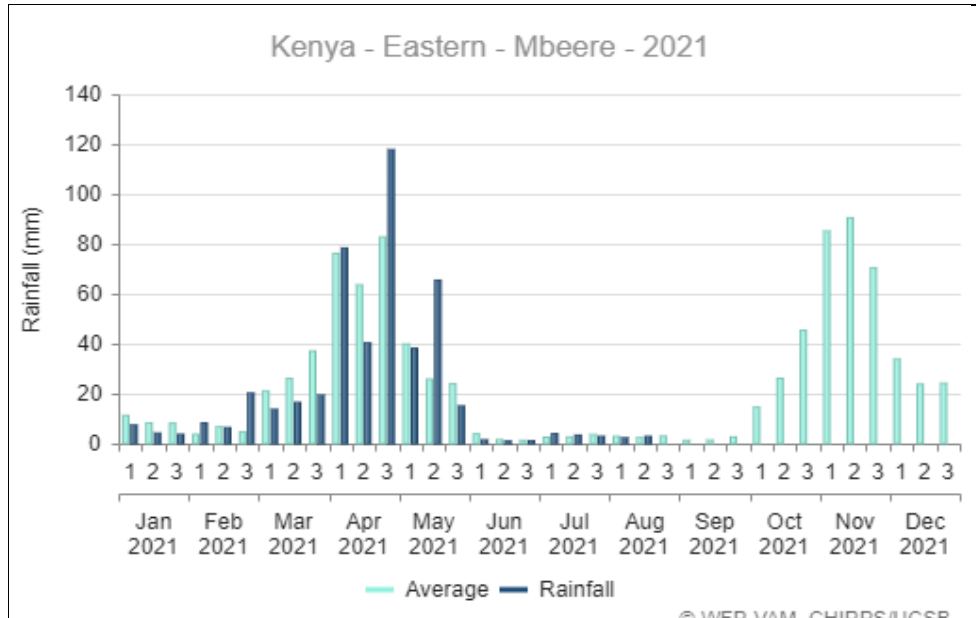


Figure 1: Rainfall performance in Mbeere North and South Sub Counties

1.2 Amount and spatial distribution of rainfall

- No rainfall was recorded in the rainfall stations across both livelihood zones

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The vegetation greenness was normal during the month of September.
- The vegetation condition index remained stable at 45.29 in the current month compared to the previous month.
- Mbeere South sub-county recorded a lower 3-monthly VCI of 43.88 as compared to Mbeere North Sub County that recorded 3-monthly VCI of 48.95 (Figure 2a and 2b).

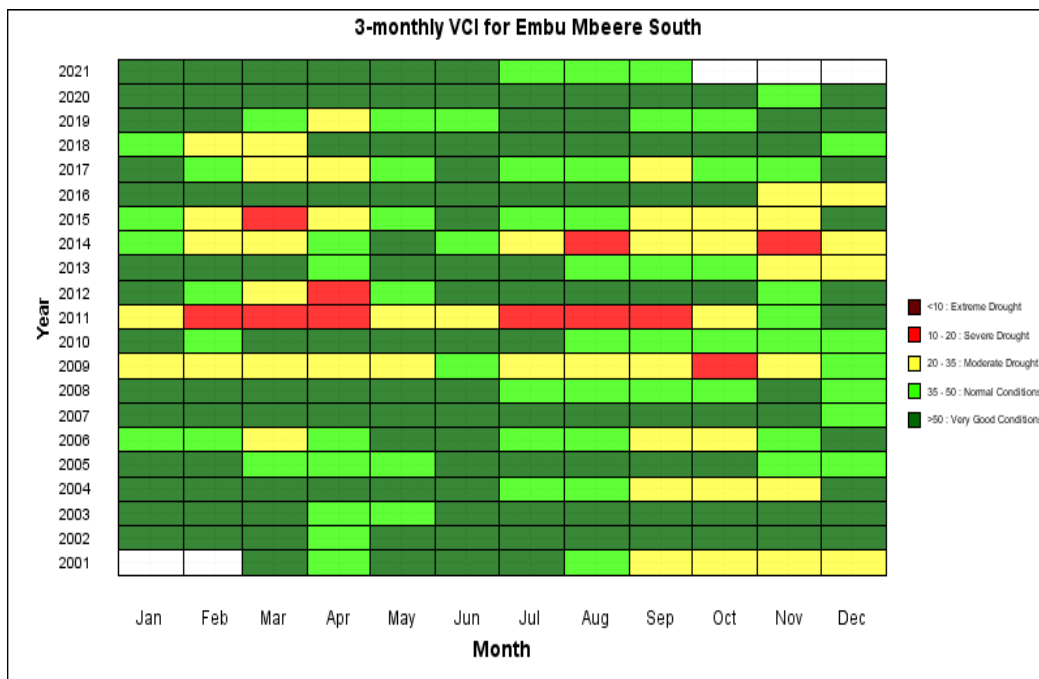


Figure 2a: 3-monthly VCI for Mbeere South sub- county [Source: MODIS]

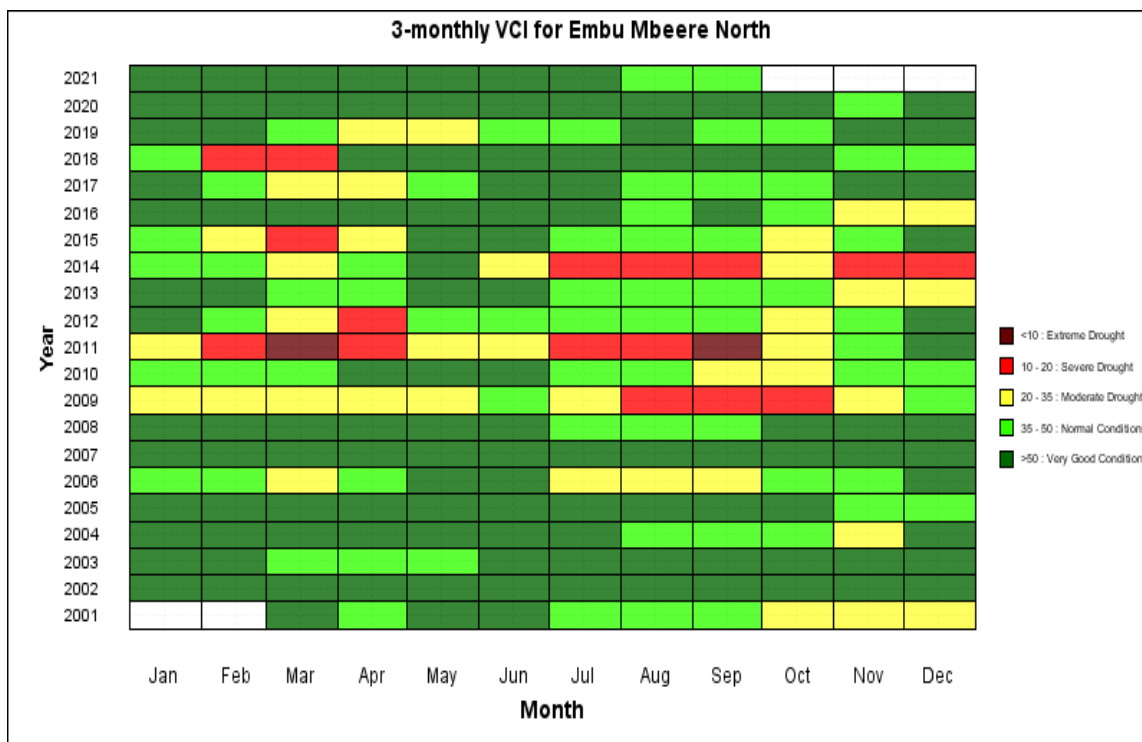


Figure 2b: 3-monthly VCI for North sub- county [Source: MODIS]

2.1.2 Pasture Condition

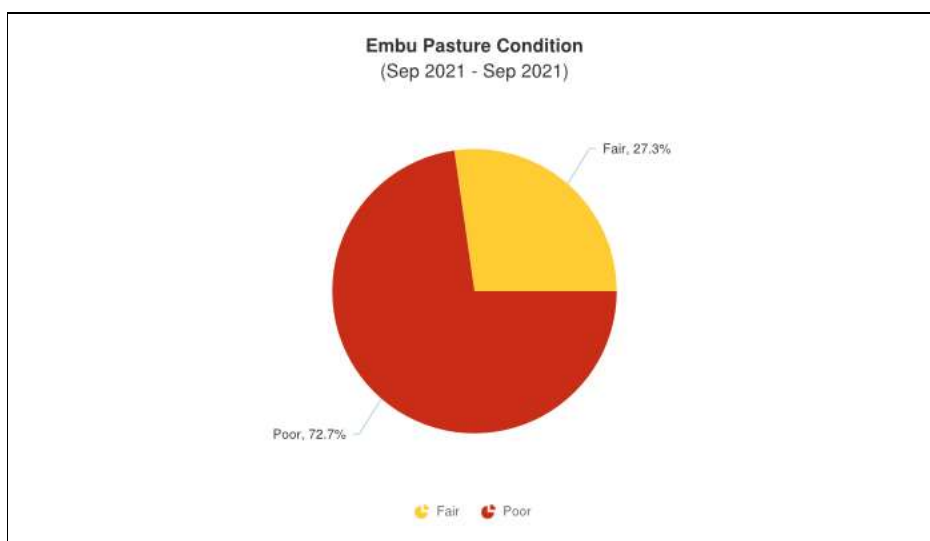


Figure 3: Pasture condition in Mbeere South and North sub counties.

- Pasture conditions were poor to fair across both livelihood zones during the month of September.
- Pasture condition were fair to poor in the mixed farming livelihood zone and while poor in the marginal mixed farming zone.
- The areas with poor pasture condition increased by 63% when compared to the month of August attributable to the current dry weather conditions which has inhibited regeneration.
- Areas experiencing poor pasture conditions are Makima ward (Ndune, Riakanau, Mburutani), Mwea ward, Mavuria ward, Kiambere ward, Muminji wards and some parts of Evurore (Iriaitune, Kamarandi, Mutitu location).
- The current pastures are expected to last 1 month in the mixed farming livelihood zones and less than a month in marginal mixed farming livelihood zones.

2.1.3 Browse Condition

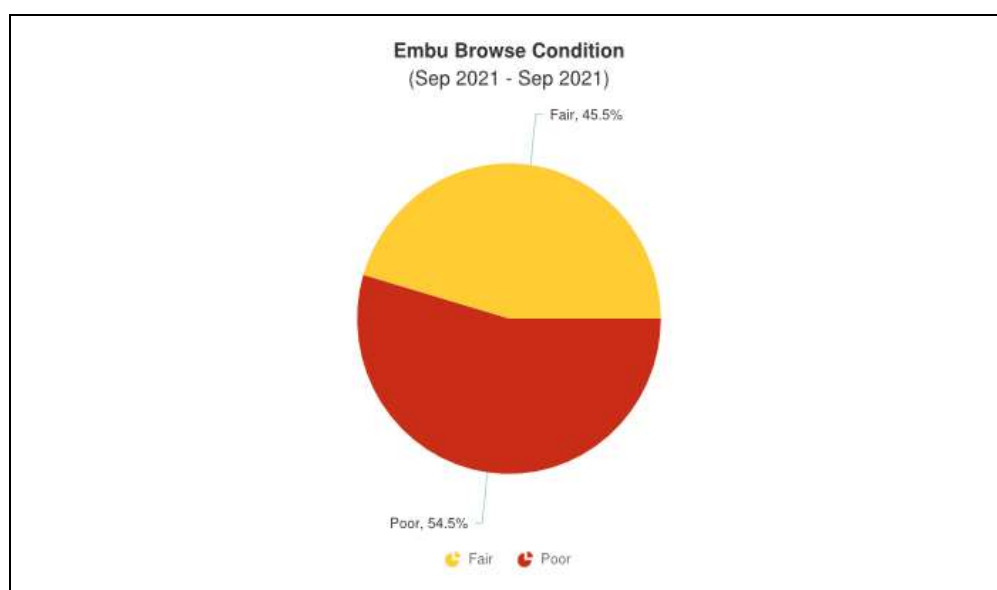


Figure 4: Browse condition in Mbeere North and South sub counties

- The browse condition deteriorated further in the reporting month compared to the previous month.
- The browse conditions were fair to poor across all livelihood zones during the month of September.
- Browse condition was 100% fair in the month of August but in the reporting month 55.5% of it was poor while only 45.5% fair. This could be attributed to the lack of rainfall which has hindered regeneration of browse.
- Depressed browse condition was reported in Makima ward, Kiambere ward, Muminji wards and some parts of Evurore (Iriaitune, Kamarandi, Mutitu location).
- Browse is expected to last for 1 month in the mixed farming zone and one month in the marginal mixed farming zone.

2.2 WATER RESOURCE

2.2.1 Water Sources

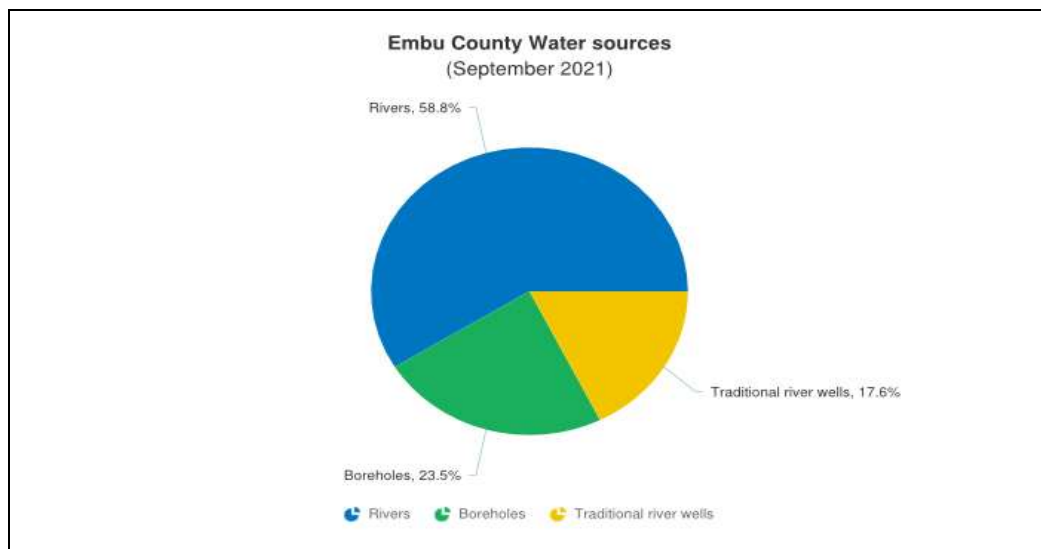


Figure 5: Water sources for Mbeere North and South sub counties

- In the month of September, the water sources for both households and livestock in both livelihood zones were; rivers, traditional river wells and boreholes.
- Rivers are flowing at base level; the earth dams and pans are 10 percent capacity. The reliance on rivers and boreholes increased from 55.6 percent and 16.7 percent in August to 58.8 percent and 23.5 percent respectively.
- This can be attributed to lack of rainfall to recharge the water sources and upstream over drawing by farmers.
- Earth dams and pans can last for 2 in the mixed farming zones and 1 the marginal mixed zones.

2.2.2 Household Water Access and Utilization

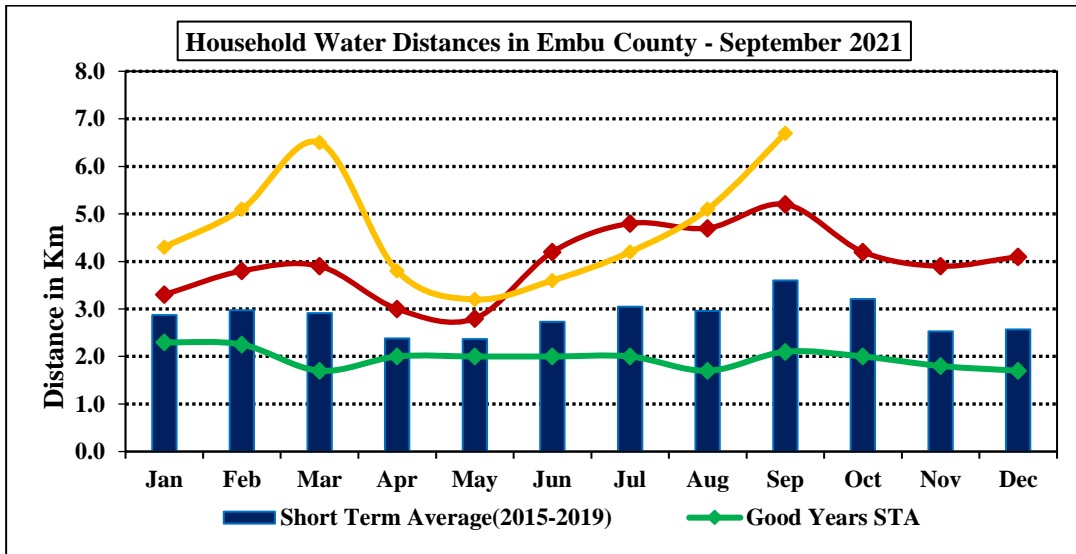


Figure 6: Household average distances to water sources

- The average household return distance to water sources in the month under review increased by 24 percent from 5.1 Km in August to 6.7 Km in September.
- The increase in distance can be attributed to drying of some of the water sources shallow wells pans and dams and reducing water levels sources in rivers. This has made households to seek alternative sources.
- The recorded average return distance to water sources is above by 29 percent compared to the bad year short-term average of 5.2km

2.2.3 Livestock access to water from grazing areas

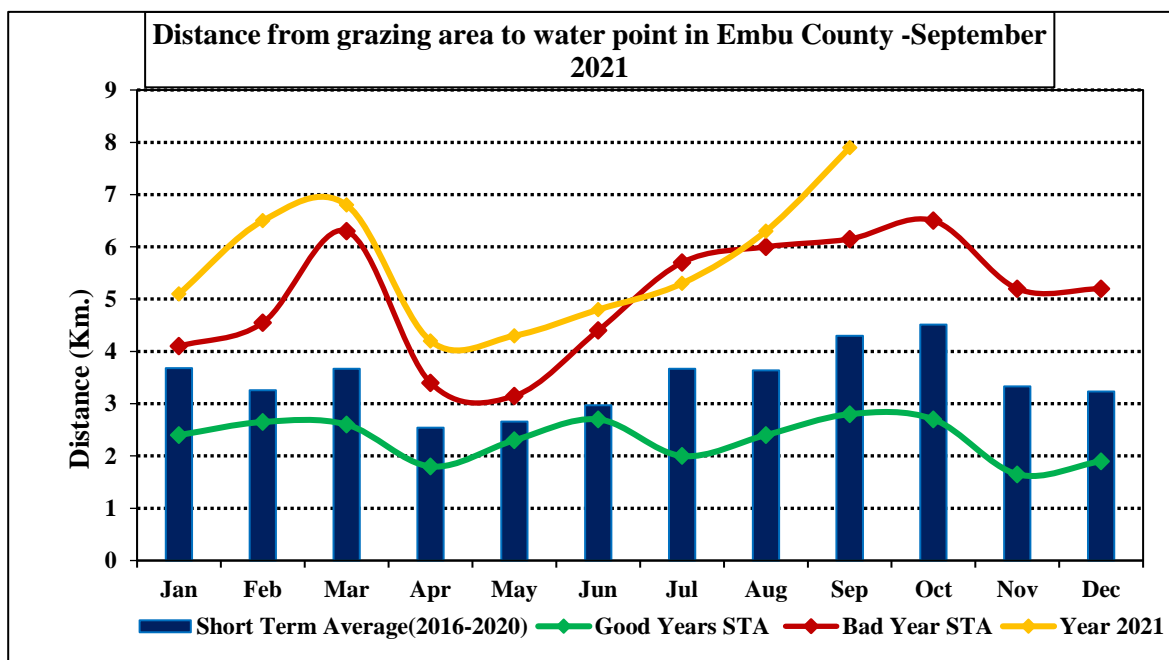


Figure 7: Livestock average return distances to water sources

- The average livestock return distance to water sources from grazing areas increased by 20 percent from 6.3 km in August to 7.9 Km in September.
- The increase in trekking distances can be attributed to diminishing pastures near water source this is forcing animals to trek farther in search of pasture and the water sources near them.
- The recorded average return distance is higher by 27.4 percent compared to the bad year short-term average distance of 6.2 km

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

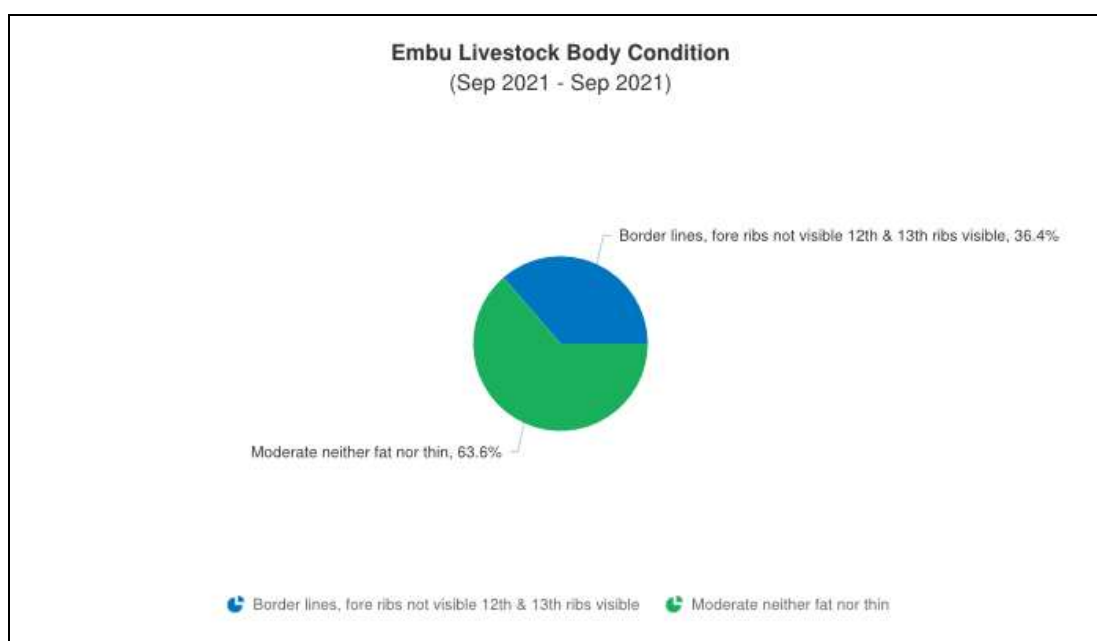


Figure 8: Livestock body condition in Mbeere sub counties

- The livestock body condition was moderate to borderline across all zone during the month under review.
- Shoa's body condition was fair while cattle body condition was fair to poor.
- In Kiambere ward and some areas in Evurore ward the cattle were emaciated with some cases of mortality reported.
- There were signs of fast deterioration of body condition of livestock compared to last month. This can be attributed to fast decline in pasture and browse situation and increasing distances to watering points.
- The deteriorating body condition will lead to poor market prices for all stock which will have negative impacts on food security. Livestock keepers are advised to start off loading weak animals to avoid this foreseen situation through commercial destocking.
- The livestock conditions were below normal when compared to the previous year.

3.1.2 Livestock Diseases

- Cases of FMD were reported in mixed farming livelihood zone during the month under review.
- Vaccination and treatment were done on demand by farmers with dairy livestock in the mixed farming livelihood zone.

3.1.3 Milk Production

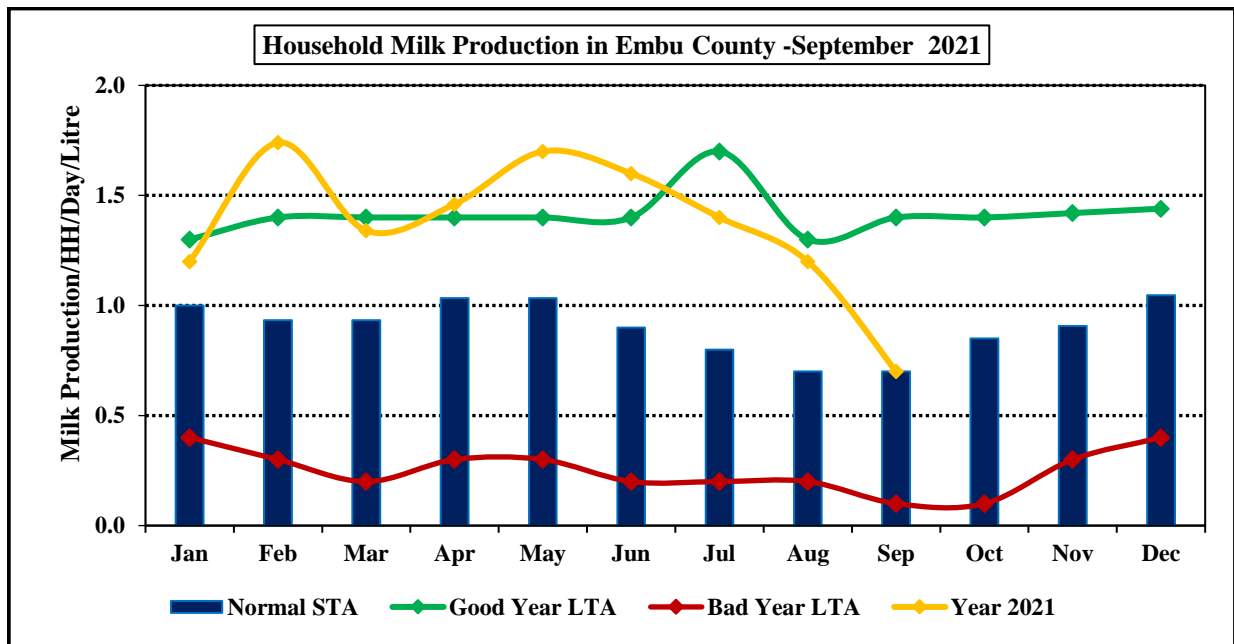


Figure 9: Milk production in Mbeere North and South sub counties

- The average household daily milk production declined by 71 percent from 1.2 litres in August to 0.7 litres in September.
- The decline in milk production can be attributed to the decline in pasture and browse, increased trekking distances which have affected the livestock body condition thus decrease in production in both quantity and quality.
- The current milk production is as the short-term daily household average of 0.7 litres.

3.2 Rain-Fed Crop Production

3.2.1 Stage and Condition of food Crops

- Farmers continue to prepare land for short rains season planting
- Main crops planted during the season are beans, maize, sorghum, green grams and cowpeas.
- Few farmers were engaged with early planting of crops.
- 60 percent of the arable land has been prepared and planted.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Market Prices for Cattle

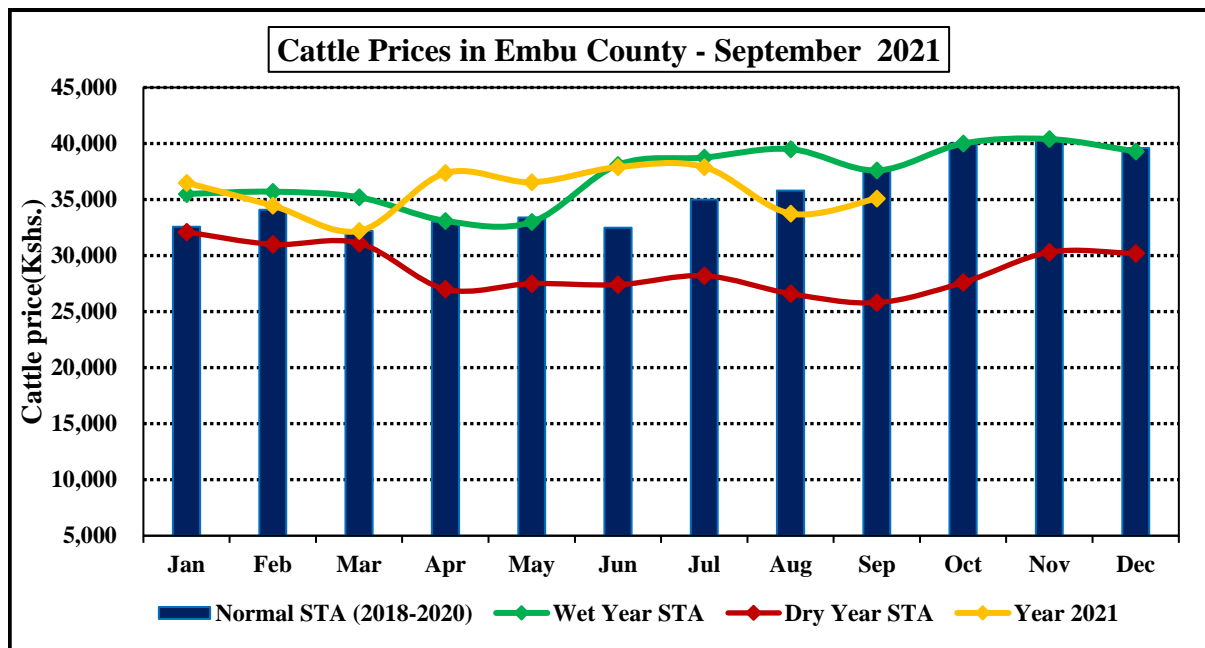


Figure 10: Average Market prices for cattle in Mbeere sub counties

- The average price of a medium size mature bull increased by 12 percent from Ksh 33,750 in August to Ksh 35,100 in September.
- The increase in prices can be attributed to the low volumes in the market.
- Karaba livestock market recorded the highest average price of Ksh 43,333, Kiritiri and Ishiara livestock market recorded average price of Ksh.35,500, Ciangera Ksh 34,000 while Kanyuambora livestock market recorded the lowest average price of Ksh. 28,333.
- The average price recorded price was lower by 6.6 percent than the short-term average price of Ksh 37,600.

4.1.2 Goats Prices

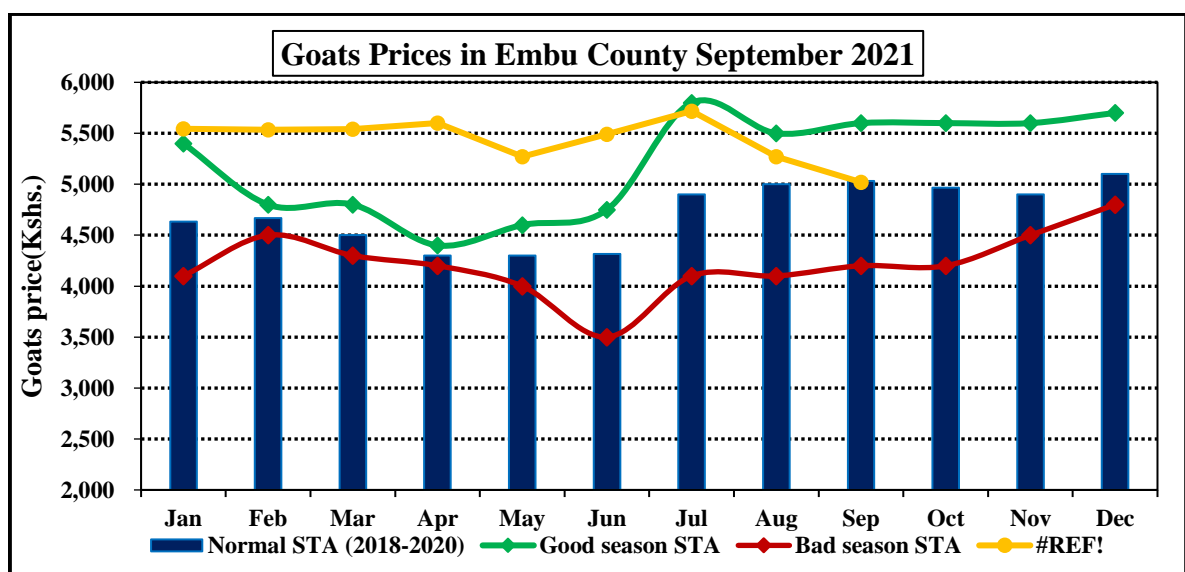


Figure 11: Average market prices for goats in Mbeere sub counties

- The average goat price decreased by 5 percent from Ksh 5270 in the month of August to Ksh 5,020 in the month of September.
- The decrease in price can be attributed increased volumes since the depleting pasture and browse is affecting the body conditions thus forcing to destock.
- Karaba livestock market recorded the highest average price of Ksh 6,000, Kiritiri at Ksh 4,250, Ishiara livestock market recorded average price of Ksh. 4750, Ciangera Ksh 4,800 while Kanyuambora livestock market recorded an average price of Ksh. 4,830.
- The difference in the prices is due to variation in volumes traded in the respective markets.
- The recorded price was 19 percent higher than the bad year short-term average of Ksh 4,200.

4.2 FOOD PRICES

4.2.1 Maize Prices

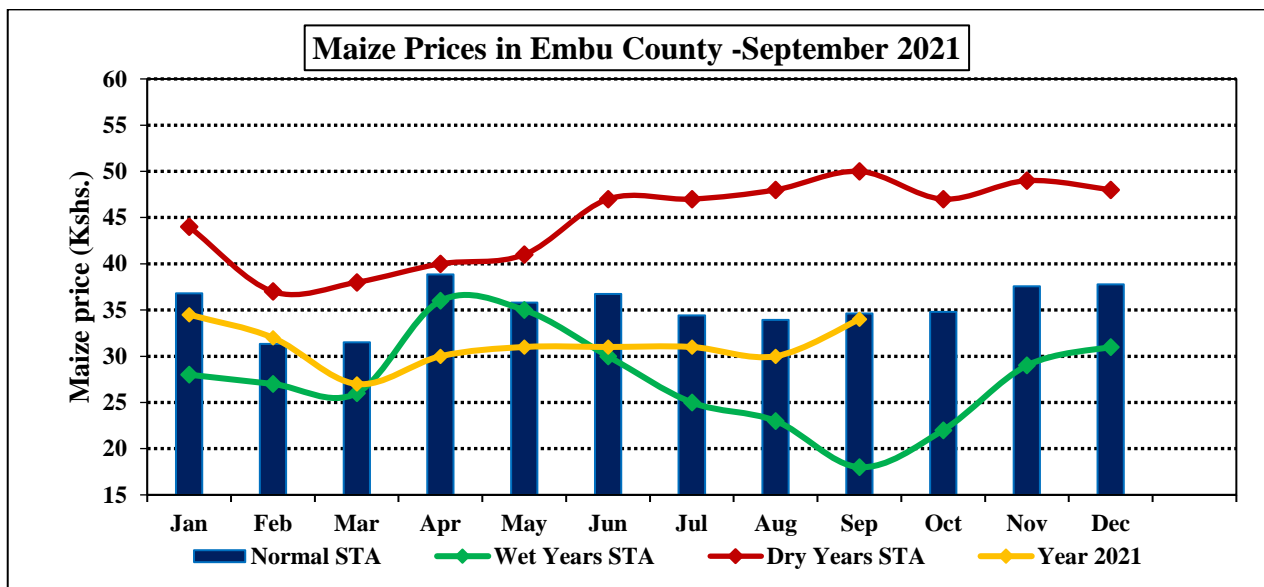


Figure 12: Average market prices for maize in Mbeere sub counties

- The average market price for maize increased by 11.7 percent from Ksh 30 per kilogram in August to Ksh 34 in September.
- The price increase could be attributed to the following reasons. Increased reliance on market due to; Depleting levels of food stock due to poor harvest and using the food stock as seeds.
- Kiritiri cereals market recorded highest price of maize at Ksh 40 per kilogram, Karaba market recorded Ksh 33 per kilogram, Ishiara cereal market recorded Ksh 35 per kilogram, Ciangera cereal market recorded Ksh 37 per kilogram while Kanyuambora recorded the lowest average price of Ksh 30 per kilogram.
- The average maize price was 13 percent lower than the short-term average of Ksh 34.

Posho (Local Maize Meal)

- The average price of *posho* decreased by 10.4 percent from Ksh. 43 in August to Ksh. 48 in the month of September.
- The increase in price can be attributed to the increase of maize stock prices in the market.
- Ishiara market recorded the highest average price of Ksh.52 per Kg. Karaba, Kiritiri and Ciangera market recorded an average price of Ksh 50 per kg while Kanyuambora livestock market recorded the lowest average price of Ksh. 40 per kg.

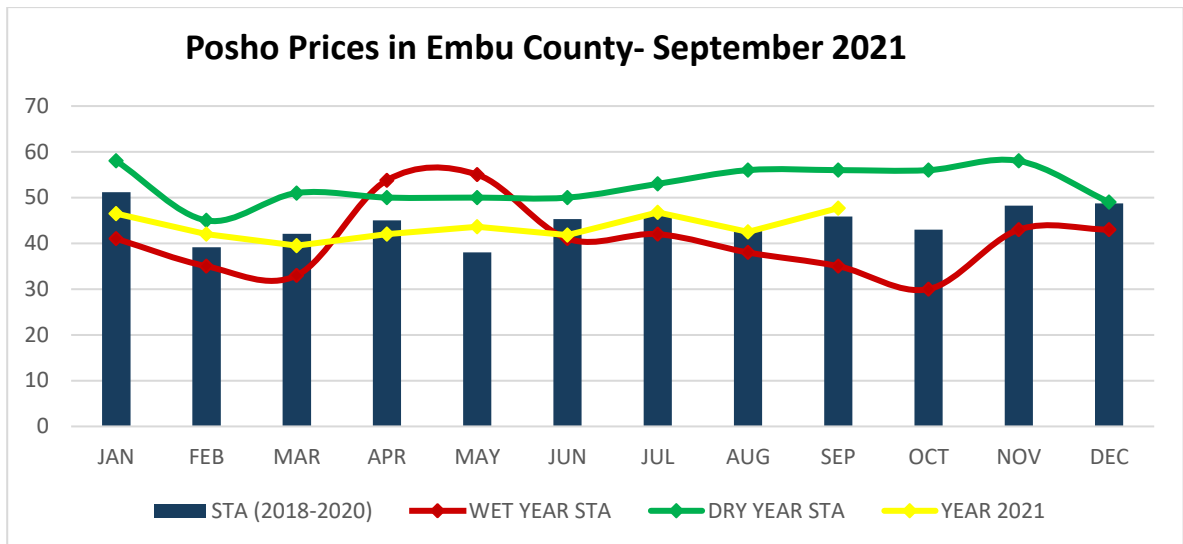


Figure 13: Average market prices for Posho in Mbeere sub counties

- The current average price is the same as the short-term average price of Ksh. 43 per kilogram.

4.2.2 Beans Prices

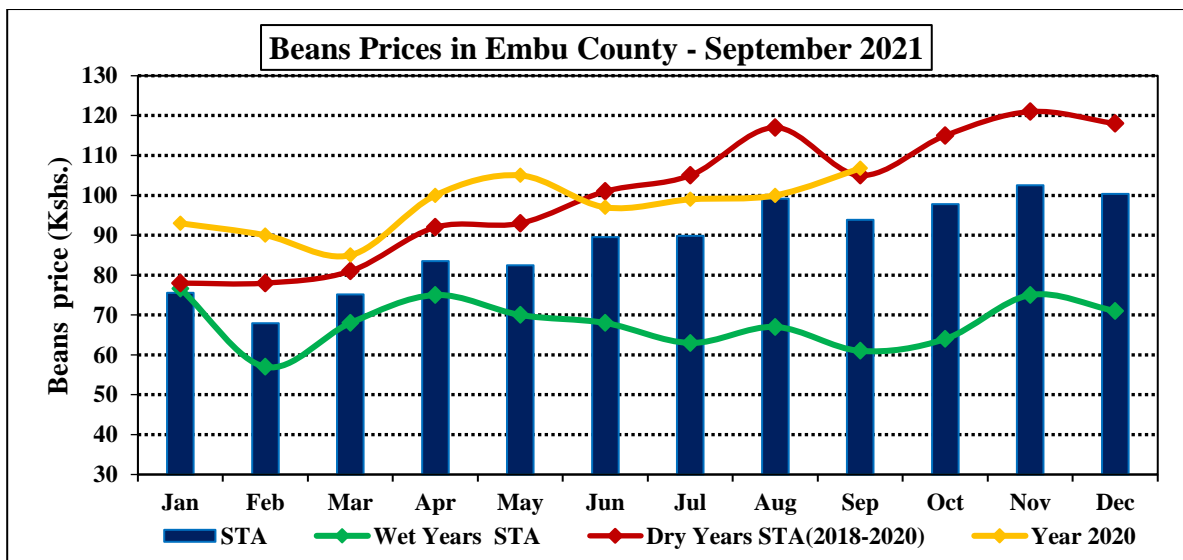


Figure 14: Average market prices for beans in Mbeere sub counties

- The average price of beans increased by 6.5 percent from Ksh 100 in the month of August to Ksh 107 in the month September.
- The price increase could be attributed to the following reasons. Increased reliance on market due to; Depleting levels of food stock due to poor harvest and using the food stock as seeds.
- Kiritiri cereals market recorded highest price of beans at Ksh.138 per kilogram, Karaba market recorded Ksh 97 per kilogram, Ciangera cereal market recorded Ksh 130 per kilogram, Ishiara cereal market recorded Ksh 120 per kilogram while Kanyumbora recorded the lowest average price of Ksh 80 per kilogram.
- The recorded price of beans was 14 percent higher than the short-term average price of Ksh 94 per kilogram.

4.2.3 Green Grams Prices

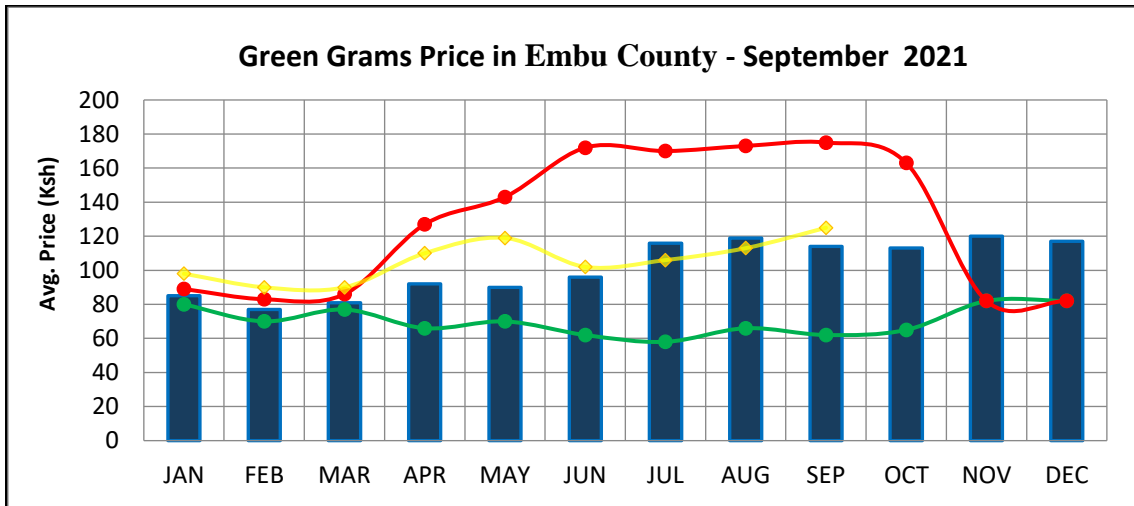


Figure 15: Average market prices for green grams in Mbeere sub counties

- The average price of green grams increased by 9.6 percent from Ksh 113 per Kg in the month of August to Ksh 125 in the month of September.
- The increase in price can be attributed to the poor harvest experienced by household thus increasing the demand on the markets.
- The average price recorded was 8.8 percent lower than the short-term average of Ksh114.

4.3 Terms of Trade (ToT)

Terms of trade determine the purchasing power of the households by providing an estimate of the number of kilograms of maize bought from sale of one goat.

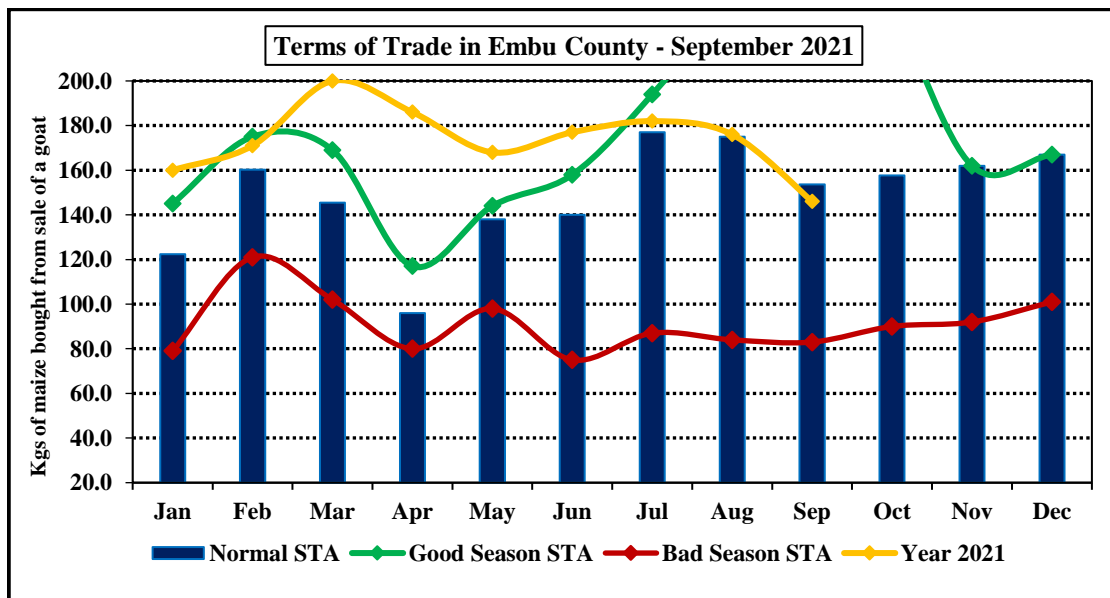


Figure 16: Terms of trade in Mbeere sub counties

- The Terms of trade decreased by 20 percent from 176 in August to 146 kilograms of maize bought from sale of one live goat in September.
- The decrease in the terms of trade during the month under review can be attributed to a drop in goat prices and increase in maize prices.
- The current terms of trade recorded are higher by 5 percent than the short-term average of 154.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

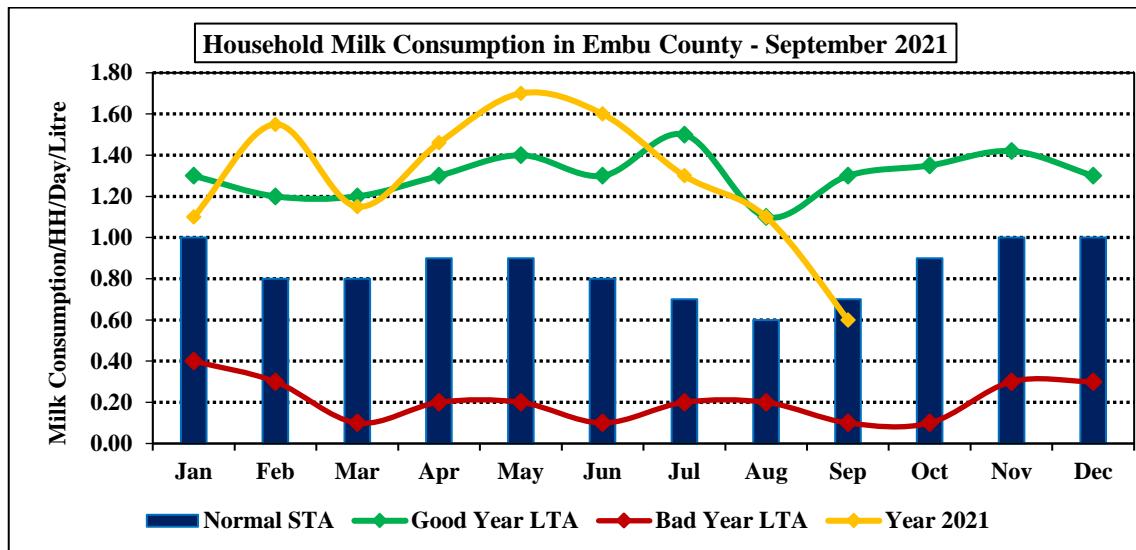


Figure 17: Household milk consumption in Mbeere North and South sub counties

- During the month under review, average household daily milk consumption declined by 80 percent from 1.1 litres recorded in August to 0.6 litres recorded in August.
- The decline in milk consumption can be attributed to decreased production.
- The current household milk consumption is same as the short-term average of 0.6 litres per household per day.

5.2 Nutritional Status of Children

The Mid Upper Arm Circumference (MUAC) is a pointer indicator for malnutrition among children under five years.

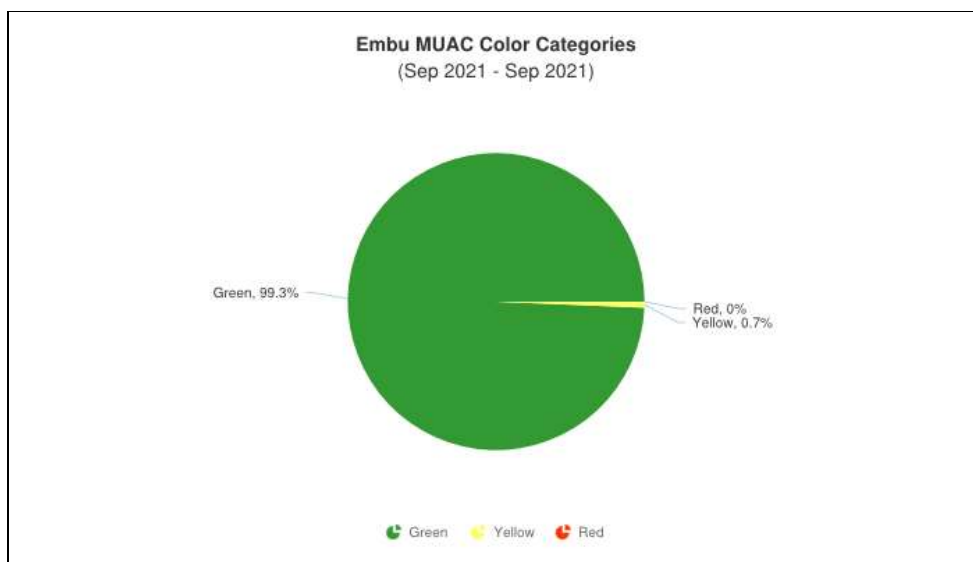


Figure 18: Nutritional status of sampled children in Mbeere sub counties (n=323)

- During the month under review 99.3 percent of sampled children recorded normal MUAC measurements (measurements at the green band)
- This may be attributed to reduced frequency and portion of meals due to diminishing food stocks.

5.3 Food Consumption Score

The Food Consumption Score (FCS) gives the dietary diversity and the relative nutritional importance of different food groups consumed by households over a period of 7 days.

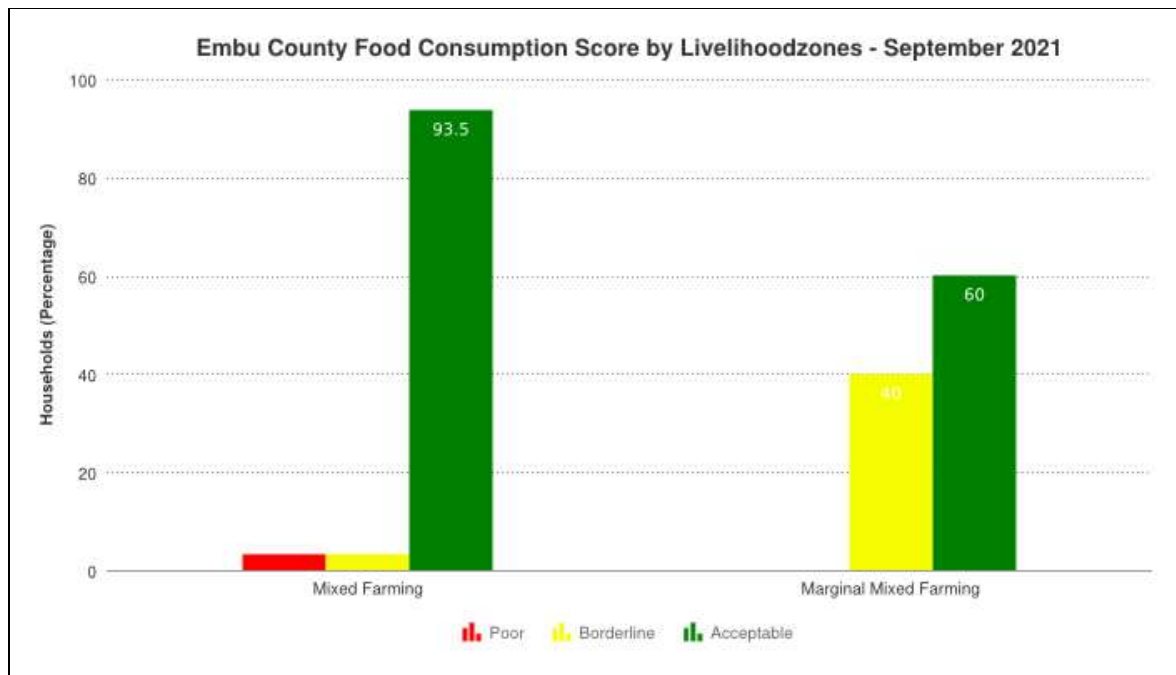


Figure 19: Household food consumption (120 households)

- Household food consumption recorded during the month under review sampled households recorded 77 % acceptable food consumption, 21% borderline and 2 percent poor food consumption category.
- The household food consumption deteriorated from August from 9 percent borderline to 21 percent borderline and 2 percent poor.
- The decline in the food consumption can be attributed to the diminishing food stocks and purchasing power in households in both livelihood zones.
- Households in the mixed farming livelihood zone had a better food consumption score at 3.3 % borderline compared to marginal mixed farming livelihood zone with 40 % in borderline food consumption.
- This variation between livelihood zones can be attributed to the variation in current household stocks, where some areas in the mixed marginal zones experienced totally depleted their food stocks.

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.

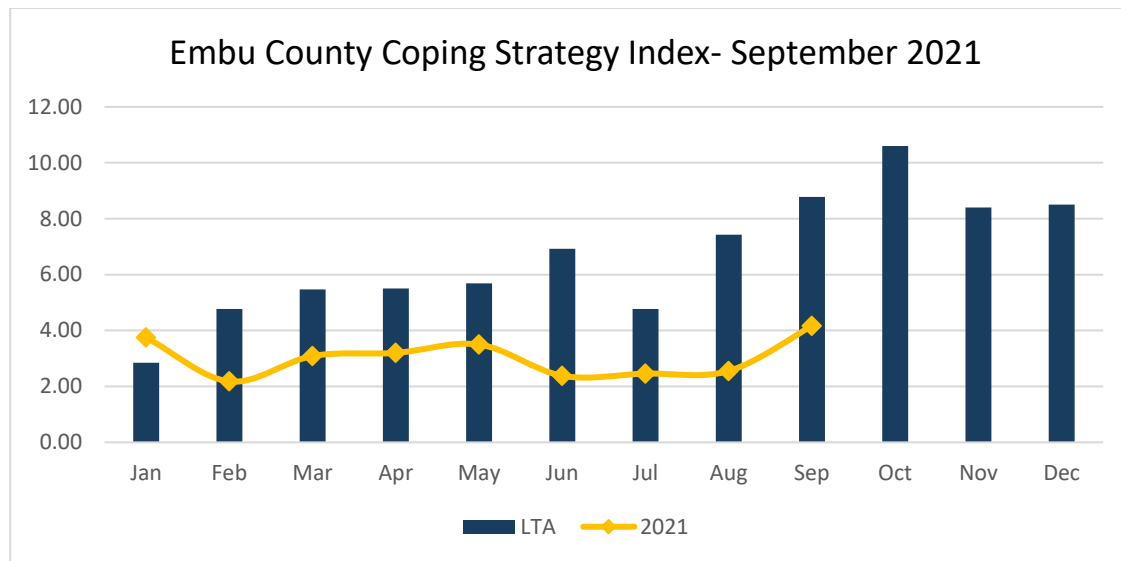


Figure 20: Coping Strategy Index for households in Mbeere sub counties

- The mean coping strategy index slightly increased by 38.8 percent from 2.55 in the month of August to 4.17 in the month of August.
- The decline can be attributed to reduced purchasing due to hard economics and reduced farm activities.
- Households in the mixed farming livelihood zone reported low coping strategy index of 2.1 while those in the marginal mixed farming livelihood zone recorded coping index of 3.3.

5.5 Implication of the above Indicators to Food Security

- Increased distances to grazing fields and water points, poor and depleted pasture and browse conditions in both sub counties, will impact negatively on the livestock body condition and consequently on milk production. The affected body condition will also affect the calving and kidding rates.
- The increased household distances to water sources impacted negatively on households through spending of more time in search of water
- The depleted household food stock led to reliance on the markets and therefore increased the household expenditure on food commodities.
- The reduction in terms of trade negatively affected the livestock keepers through reduced purchasing power.

6.0 CURRENT INTERVENTION MEASURES

6.1 Food Interventions

No food interventions were reported in the month under review across both sub counties.

6.2. Non-Food Interventions

Intervention	Implementer	Status of implementation	Beneficiaries
Community MUAC monitoring and referral	NDMA	Routine	Targeted households in both sub counties
<ul style="list-style-type: none">• Routine Human Disease Surveillance• Routine health and nutrition services for children, pregnant and lactating mothers	Embu County government	Routine	All health facilities within Mbeere
Routine agricultural extension	Embu County government	Routine	Farmers in Mbeere North and South sub counties
Routine livestock production extension and support to farmers	Embu County government	Routine	Farmers in Mbeere North and South sub counties

7.0 Food Security Prognosis (Three months)

- Food prices in the market will continue rising, since households have no food stocks due to the bad harvest and will continue relying more on the markets.
- Increased food prices are likely to affect household food availability, especially with reduced incomes and reduced purchasing power.
- Depleted and poor pasture and browse and increased water distances for livestock will likely impact negatively on the livestock body conditions and production.
- Reduction in livestock prices will likely continue and hence lower the terms of trade further and consequently the purchasing power of households.

8.0 SECTOR RECOMMENDATIONS

SECTOR	RECOMMENDED ACTIVITIES	TARGET AREA	RESPONSIBLE
AGRICULTURE	<ul style="list-style-type: none"> • Procurement and supply of drought tolerant seeds • Promotion of good farming practices • Procurement and distribution of relief food 	<p>Farmer groups in both sub counties</p> <p>Food insecure households (42,000 people)</p>	<p>County Department of Agriculture</p> <p>GOK</p>
EDUCATION	<ul style="list-style-type: none"> • Supply of water harvesting tanks to needy schools • Water trucking 	Needy schools in Mbeere North and Mbeere South sub counties	NDMA
LIVESTOCK AND VETERINARY	<ul style="list-style-type: none"> • Breed improvement • Treatment of livestock diseases • Voluntary destocking • Livestock feed supplementation 	Evurore, Makima, Mavuria Muminji and Kiambere wards	County Department of Livestock Production NDMA
HEALTH AND NUTRITION	<ul style="list-style-type: none"> • Conduct Health Outreaches in the marginal mixed farming zones in order to preposition for surge kit activation 	Evurore, Makima, Mavuria Muminji and Kiambere wards	County Department of Health
WATER	<ul style="list-style-type: none"> • Rehabilitation of strategic boreholes • Water trucking to the hotspots for livestock and domestic use 	Evurore, Makima, Mavuria Muminji and Kiambere wards	Embu county government NDMA