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

JUNE DROUGHT EW PHASE	Early Warning Phase Classification		

Drought Status: NORMAL

Shughuli za kawaida

LIVELIHOOD ZONE	EW PHASE	TRENDS
Marginal Mixed Farming	Normal	Stable
Mixed Farming	Normal	Stable
County	Normal	Stable

Drought Situation & EW Phase Classification
Biophysical Indicators

- With the cessation of the long rains, the month of June has been dry, cold coupled with frost bite and mist.
- The vegetation greenness remains above normal
- Pasture and browse condition deteriorated.

Socio-Economic Indicators (Impact Indicators)
Production Indicators

- Crop condition at fair across both livelihood zones.
- Livestock body condition is good to borderline
- Milk production was above normal.

Access Indicators

- Terms of trade remain favourable and above normal
- Milk consumption remain above normal.
- Distances to water sources increased for both households and livestock.

Utilization Indicators

- Only 0.3 percent of the sampled children ware moderately malnourished
- Out of all sampled households, only 14% had borderline food consumption.
- Household coping strategy index remains stable compared to last month.

Biophysical Indicators	Value	Normal ranges
Rainfall (% of normal)	160	80-120
VCI-3 month	60.2	35-50
VCI-1-month April	43.1	35-50
Forage Condition	Fair	Fair

Production indicators	Value	Normal ranges
Crop Condition	Fair	Good
Livestock Body Condition	Good - borderline	Good
Milk Production (in litres)	1.6	1.0
Livestock Migration Pattern	No	Normal
Livestock Deaths (from Drought)	No death	No death

Access Indicators	Value	Normal ranges
Terms of Trade (ToT)	177	140
Milk Consumption (in litres)	1.6	0.8
Household Distance to Water Sources (in km)	3.8	2.7
Livestock Distance to Water Sources (in km)	4.8	3

Utilization indicators	Value	Normal ranges
Nutrition Status, MUAC (% at risk of malnutrition)	0.3	<0.1
Coping Strategy Index (rCSI)	3.5	3.0-6.0
Food Consumption Score (% at Acceptable)	86	≥ 80

▪ Short rains harvests ▪ Short dry spell ▪ Reduced milk yields ▪ Increased HH Food Stocks ▪ Land preparation	▪ Planting/Weeding ▪ Long rains ▪ High Calving Rate ▪ Milk Yields Increase	▪ Long rains harvests ▪ A long dry spell ▪ Land preparation ▪ Increased HH Food Stocks ▪ Kidding (Sept)	▪ 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.

- With the cessation of the long rains, the month of June has been dry, cold coupled with frost bite and mist.
- The first dekad recorded 1.4 mm of precipitation while the second dekad recorded 0.9 mm of rainfall.
- According to WFP-VAM, average precipitation recorded reduced from 51.8 mm in the month of May to an average of 1.15 mm during the month under review.
- The recorded average of 1.15 mm was 56 percent lower compared to the monthly WFP – VAM average of 2.65 mm.
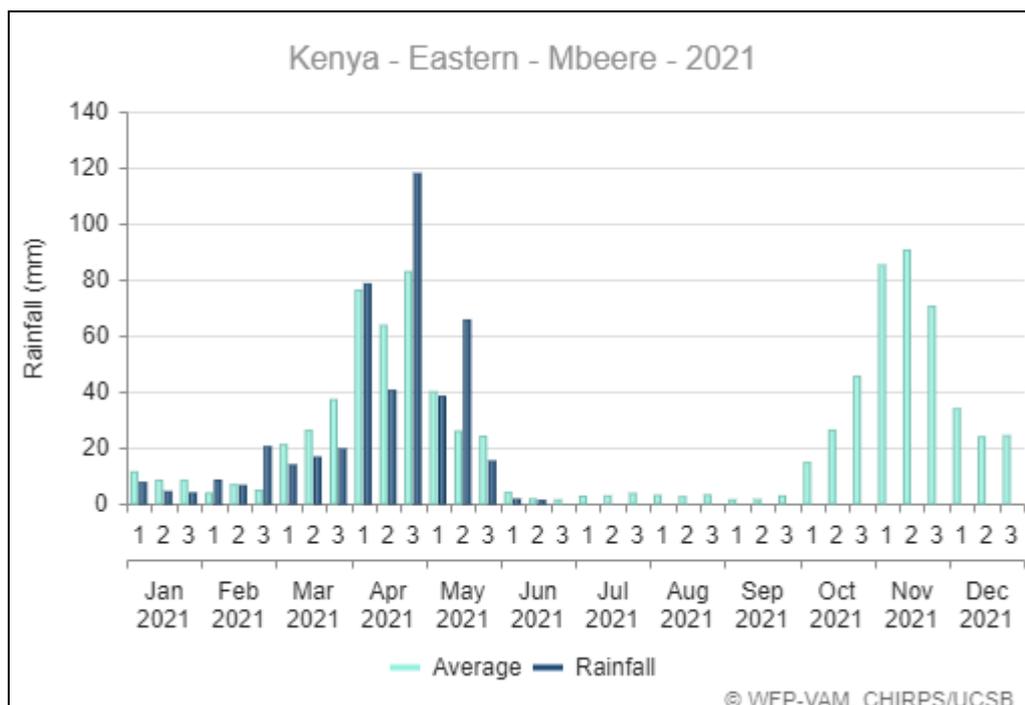

Figure 1: Rainfall performance in Mbeere North and South Sub Counties

1.2 Amount and spatial distribution of rainfall

- During the month of June there was no recorded rainfall in the rain gauge stations.
- The month has been dry, cold coupled with frostbite and mist.

2.0 IMPACTS ON VEGETATION AND WATER
2.1 VEGETATION CONDITION
2.1.1 Vegetation Condition Index (VCI)

- The vegetation greenness remained above normal in the month under review
- During the month of June, the vegetation condition index declined by 6 percent from 63.7 recorded in the month of May to 60.2 in the current month, this is can be attributed to the cessation of the long rains and the dry cold weather affecting the vegetative cover.
- Mbeere South sub-county recorded a lower 3-monthly VCI of 55.41 as compared to Mbeere North Sub County that recorded 3-monthly VCI of 64.02 (Figure 2a and 2b).
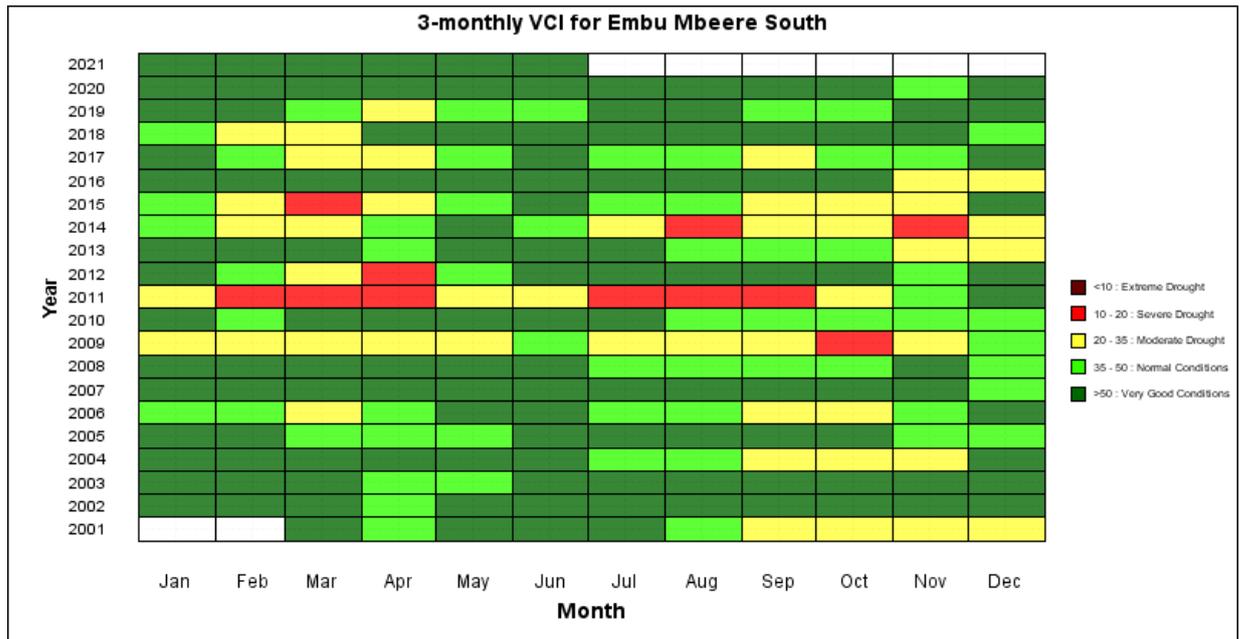

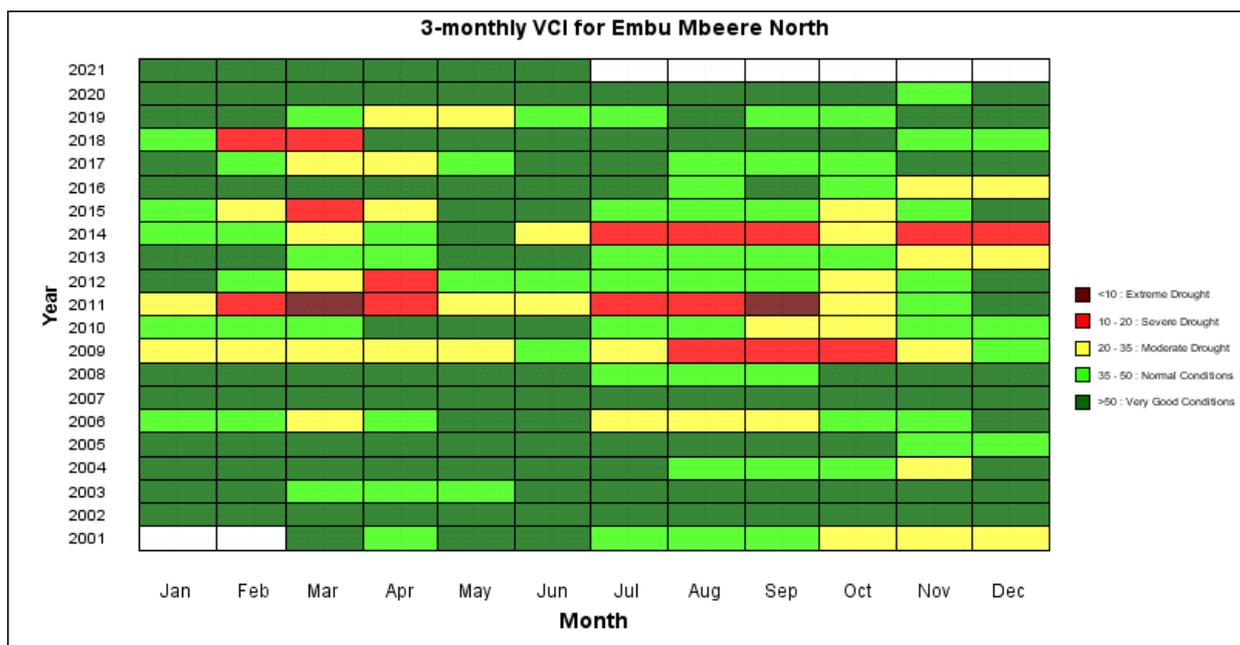*Figure 2a: 3-monthly VCI for Mbeere South sub- county [Source: MODIS]*

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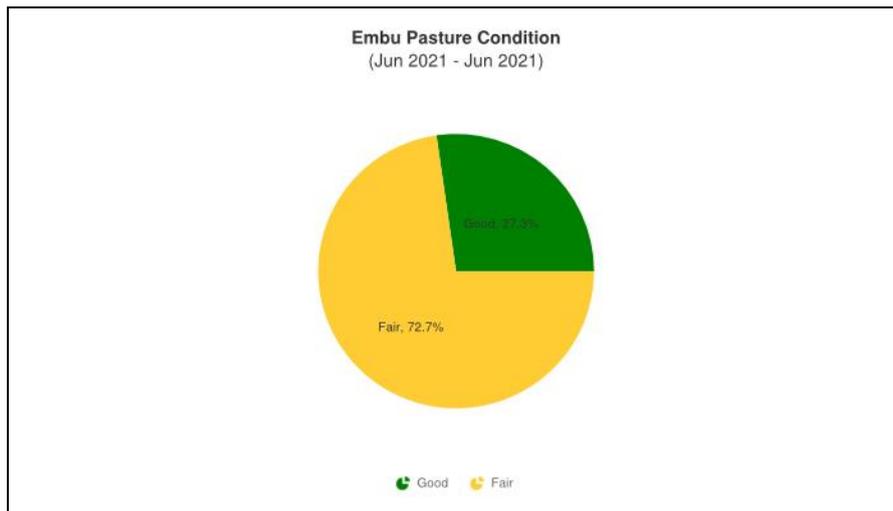
2.1.2 Pasture Condition

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

- Pasture condition deteriorated in both livelihood zones in the month under review.
- The proportion of communities with good pasture decreased from 63.6 to 27.3 percent. This could be attributed to multiple factors, early cessation of long rains, the current weather conditions which is dry, windy, cold coupled with frost bite. The weather has dried the pasture and the wind is blowing away the dry matter.
- The depressed pasture condition reported vary   some spots in Kiambere ward, Makima ward and the worst is in Evurore (Kamarandi)
- The available pasture is expected to last for 2-3 months in both livelihood zones.
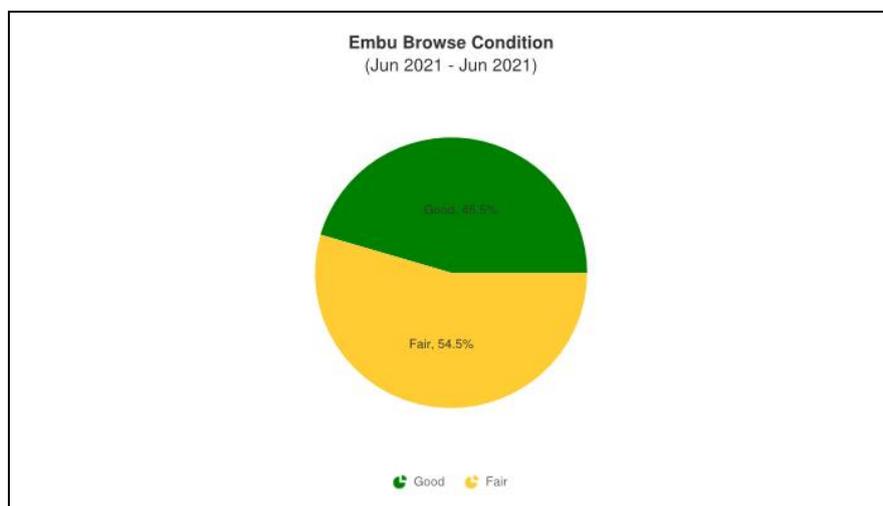
2.1.3 Browse Condition

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

- The browse condition also deteriorated compared to the previous month of May.
- The proportion of communities that reported good pasture condition declined from 72.7 to 45.5 percent while those with fair pasture condition increased from 27.3 to 54.5 percent. This could be attributed to the current weather condition which is dry, windy.
- Depressed browse condition was reported in areas on Kiambere and Evurore ward (Kamarandi)which received depressed late rainfall.

- The available browse is expected to last for 3-4 months in both marginal mixed farming zone and mixed farming zone.
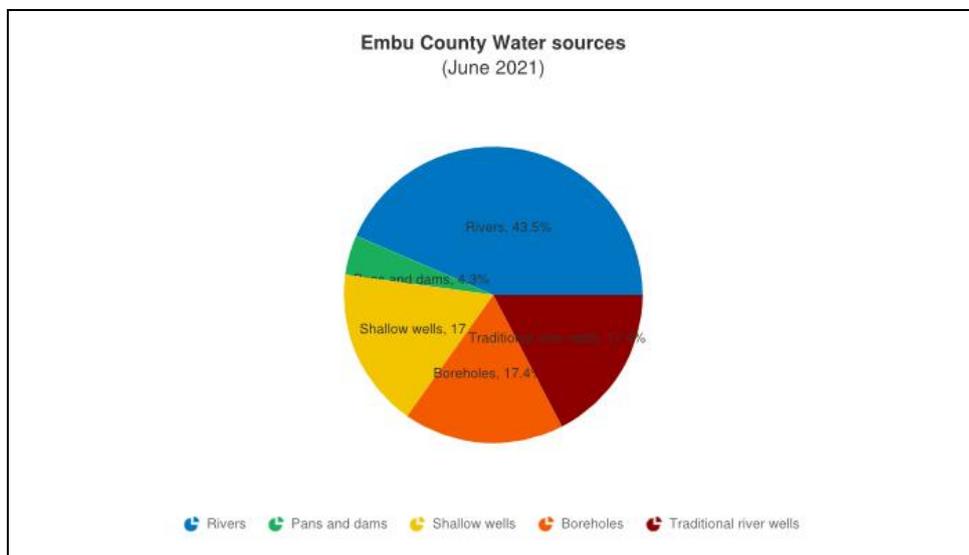
2.2 WATER RESOURCE
2.2.1 Water Sources

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

- The current water sources of water for both households and livestock across both livelihood zones are; rivers, traditional river wells, boreholes and shallow wells.
- Rivers are flowing slightly below normal level since there is no recharge which pans and dams are 70 percent full and can last for 3 to 4 months.
- The proportion of household's relying on rivers decreased by 9 percent compared to month of May to 43.5 % as many livestock keepers preferred watering in nearby pans and dams near the pasture fields which is at 4.3 percent.
- Drying of water roof water catchment has resulted in house hold seeking alternative sources such shallow wells, boreholes and traditional river wells. The number of households relying on then has increased from 15.8 percent in April to 17.4 percent in June.

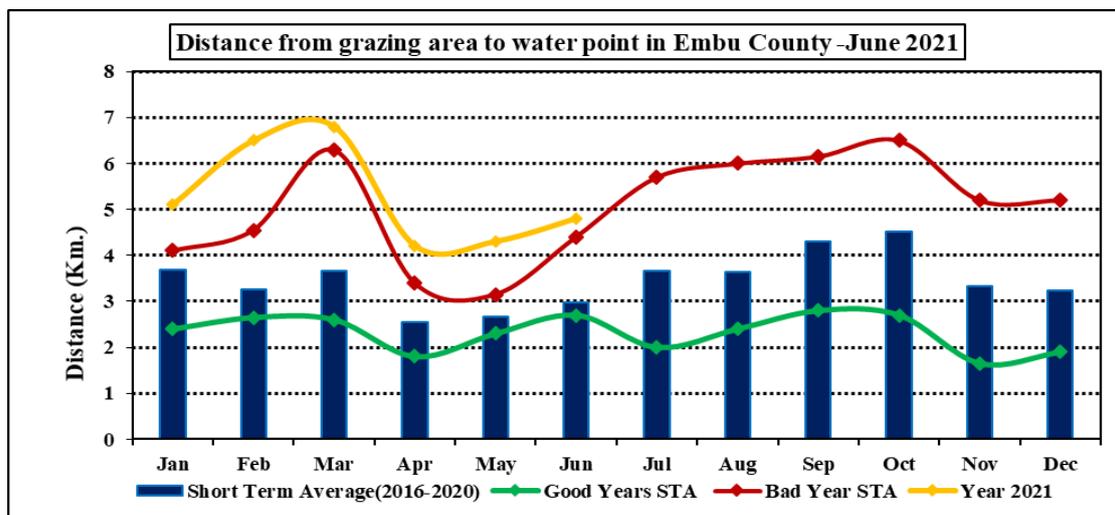### 2.2.2 Household Water Access and Utilization

Figure 6: Household average distances to water sources

- The average household return distance to water sources increased by 11 percent from 3.2 km in May to 3.6 Km in June
- The increase in distance can be attributed to cessation of the short thus no recharge on water sources mainly affecting roof top catchment. This has made households to seek alternative sources.
- The recorded average return distance to water sources is higher by 33 percent compared to the short-term average of 2.7 km

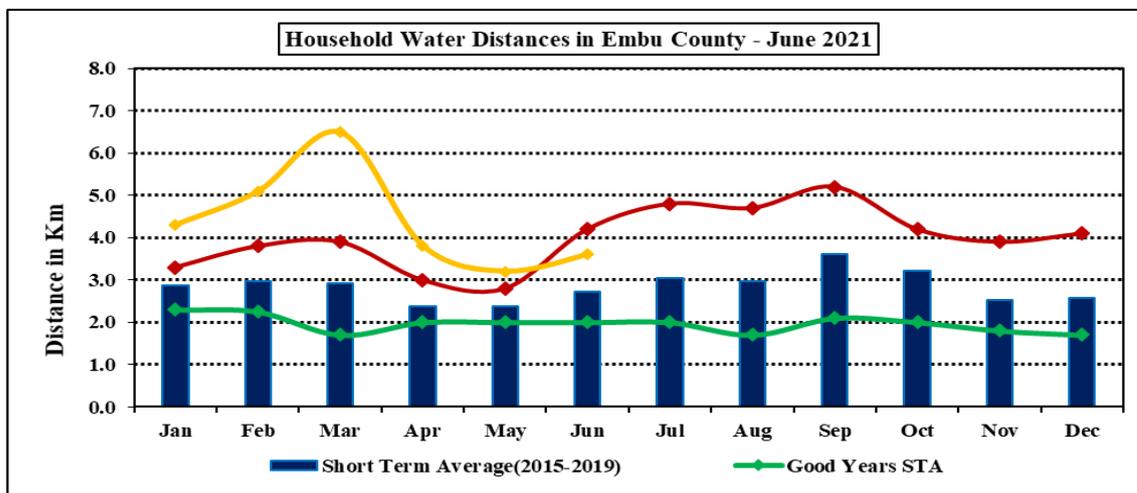### 2.2.3 Livestock access to water from grazing areas

Figure 7: Livestock average return distances to water sources

- The average livestock return distance to water sources from grazing areas increased by 10 percent from 4.3 km in Mazy to 4.8 Km in June.
- 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 37.5 percent compared to the short-term average distance of 3 km

3.0 PRODUCTION INDICATORS
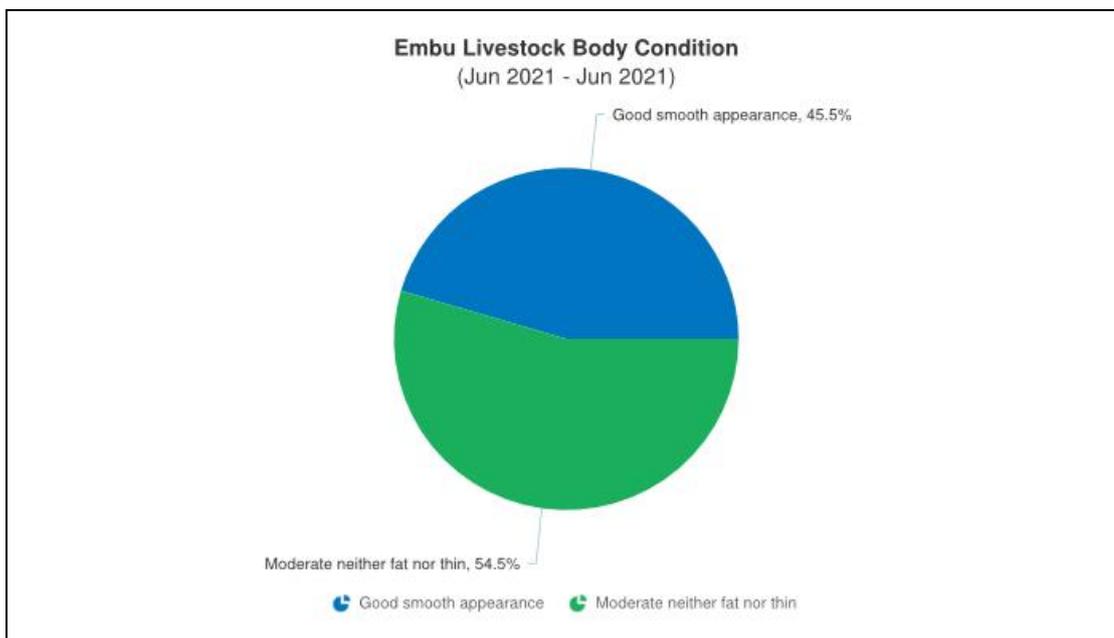## 3.1 LIVESTOCK PRODUCTION
3.1.1 Livestock Body Condition

- The current livestock body condition is good to moderate.
- Areas of lower Evurore ward and Kiambere ward recorded moderate livestock body condition
- The body condition is expected to deteriorate further in cattle and sheep as the pasture condition deteriorate due to the cessation of long rain and the impact of the dry cold weather on pasture while that of goats is expected to remain good in both livelihood zones for 2-3 months

3.1.2 Livestock Diseases

- New castle disease (NCD) and fowl pox in poultry was reported across both sub counties with many mortalities reported.
- Spots cases of LSD and FMD have been reported in Itira and Kamarandi, no vaccination has been done so far except for individual farmer initiatives to treat.
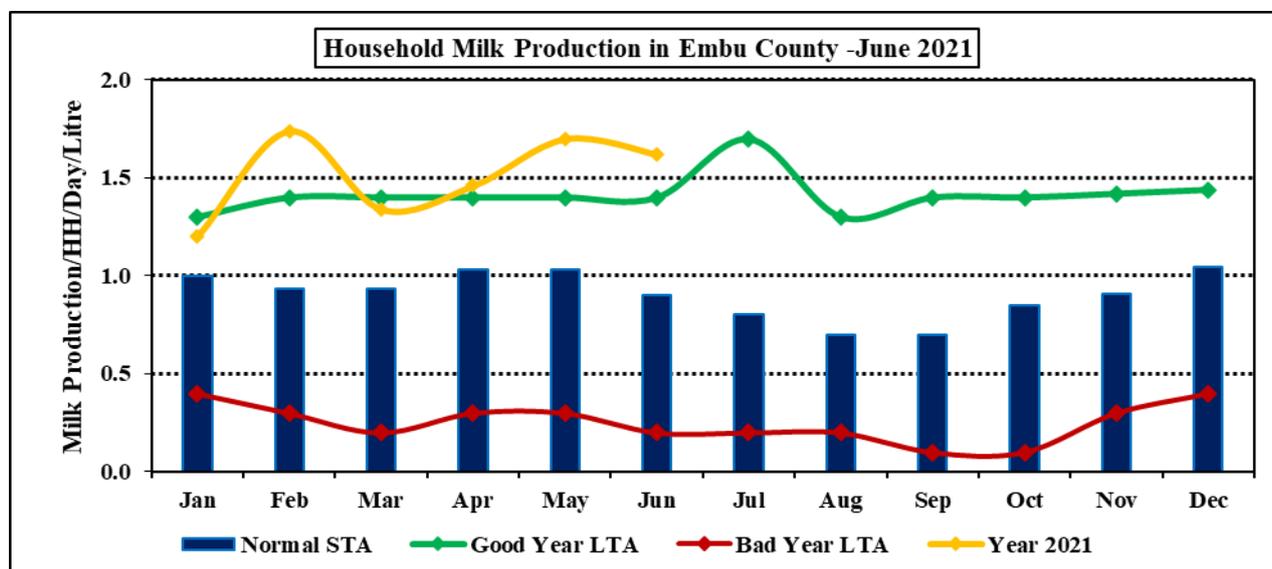
3.1.3 Milk Production

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

- The average household daily milk production declined by 12.6 percent from 1.7 litres in May to 1.6 litres in June.
- The decline in milk production can be attributed to the decline in pasture and browse, increased trekking distances which are affecting the livestock production in both quantity and quality.
- The current milk production is higher than the short-term daily household average of 0.9 litres.

3.2 Rain-Fed Crop Production
3.2.1 Stage and Condition of food Crops

- Main crops planted during this season include beans, maize, green grams and cowpeas.
- Harvesting is ongoing for beans, cow peas and green grams crop in both livelihood zones. The yield is in poor quality and quality in the marginal mixed areas since the rainfall was unevenly distributed and ceased early.
- Maize plant is yet to be harvested but their conditions vary. Kanyuambora upper Evurore conditions are good, Mwea ward fair while Makima and Kiambere poor.
- Crop condition is at good in mixed farming zone but fair to poor in parts of marginal mixed framing zone livelihood zone

- Maize crops in both zones experienced slight fall army worm (FAW) infestation while in Kiambere legumes suffered aphid attacks.

4.0 MARKET PERFORMANCE
4.1 LIVESTOCK MARKETING
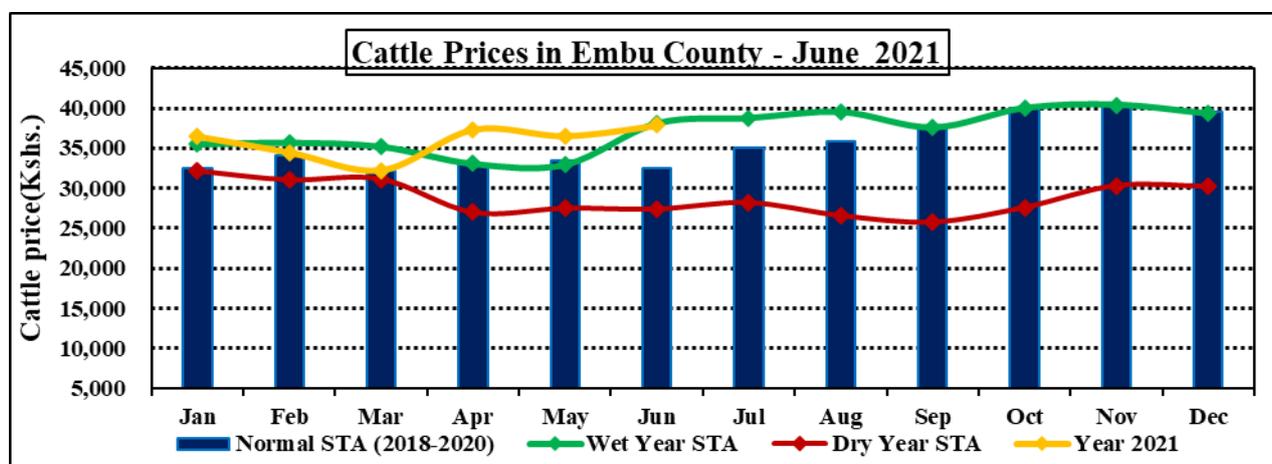### 4.1.1 Market Prices for Cattle

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

- The average price of a medium size mature bull increased by 3.7 percent from Ksh 36, 500 in the month May to Ksh 37,900 in June.
- The increase in price can be attributed to low volumes of livestock in the markets since farmers have ample food stock due to the harvest thus aren't destocking livestock for sustenance.
- Karaba livestock market recorded the highest average price of Ksh 50,000, Kiritiri market Ksh 35,000, Ishiara livestock market recorded average price of Ksh.35,500, Ciangera Ksh 38,000 while Kanyuambora livestock market recorded the lowest average price of Ksh. 29,300.
- The average price recorded price was higher by 16.6 percent than the short-term average price of Ksh 32,500.
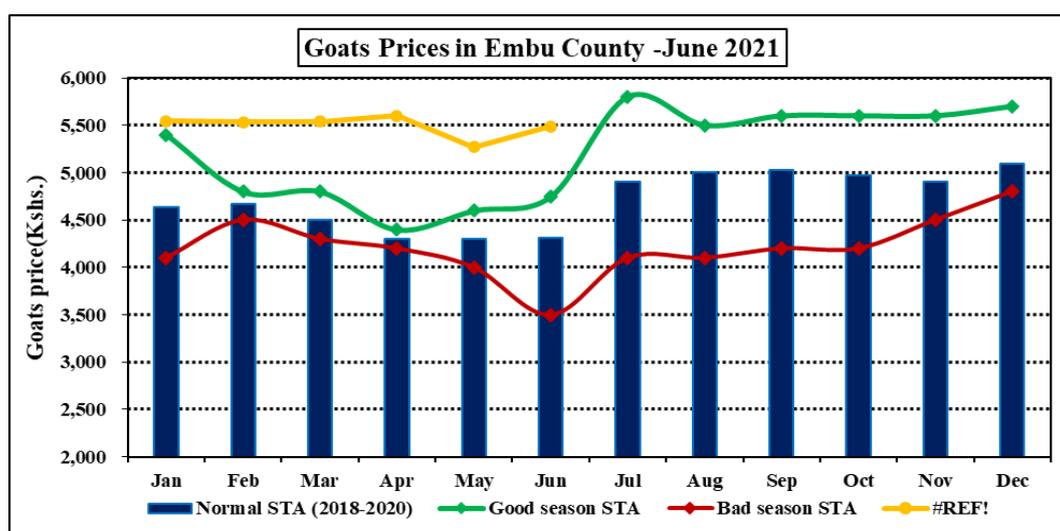
4.1.2 Goats Prices

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

- The average goat price increased by 3.4 percent from Ksh 5, 300 in the month of April to Ksh 5,490 in the month of June.

- The increase in price can be attributed to low volumes of livestock in the markets since farmers have ample food stock due to the harvest thus aren't destocking livestock for sustenance.
- Karaba livestock market in recorded the highest average price of Ksh 6,167, Ishiara, Kanyuambora and Ciangera markets recorded average price of Ksh. 5,400, Ksh 5,500, Ksh 5,600 respectively while Ishiara market recorded the lowest price of Ksh 4,500.
- The difference in the prices is due to variation in volumes traded in the respective markets
- The recorded price was 27.6 percent higher than the short-term average of Ksh 4,317.
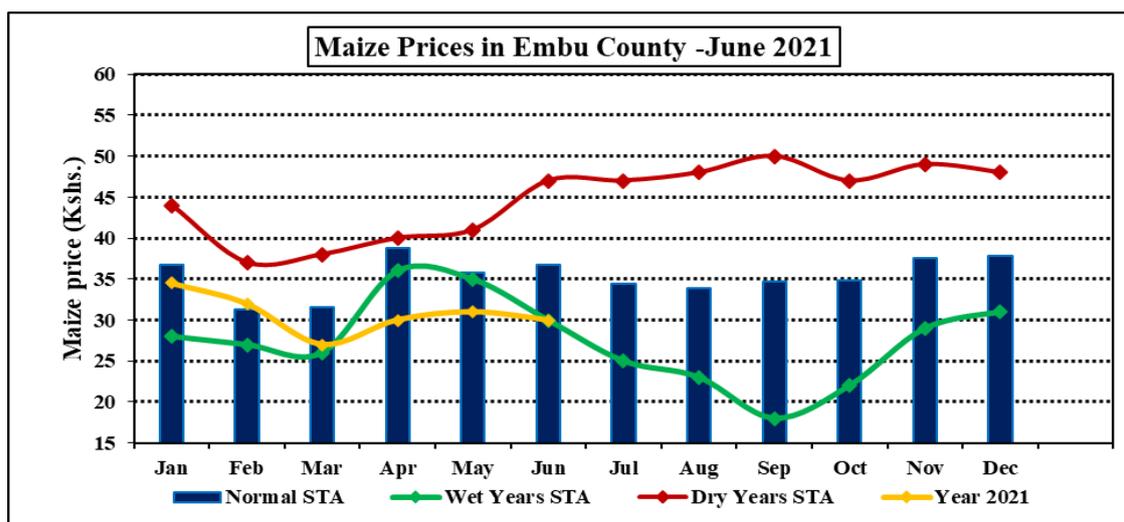
4.2   FOOD PRICES
4.2.1 Maize Prices

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

- The average market price for maize declined from Ksh 31 per kilogram in the month of May to Ksh 30 in the month under review.
- This could be attributed to farmers having green parcel maize, thus less reliance on the market.
- Kiritiri cereals market recorded highest price of maize at Ksh.35 per kilogram while the rest of the markets Karaba, Ishiara, Kanyuambora recorded an average price of Ksh 30 per kilogram.
- The average maize price was 14 percent lower than the short-term average of Ksh 36.

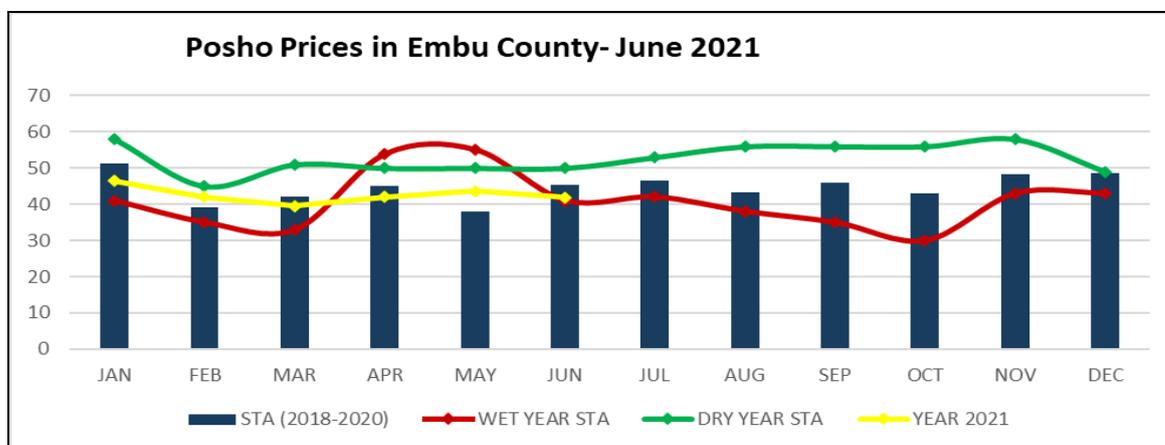**Posho (Local Maize Meal)**

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

- The average price of *posho* declined from Ksh. 44 in May to Ksh. 42 recorded in the month of June.
- The decline in price can be attributed to the fall of price in one kg of maize in the market.
- The current average price is 16 percent lower than the short-term average price of Ksh. 50 per kilogram.
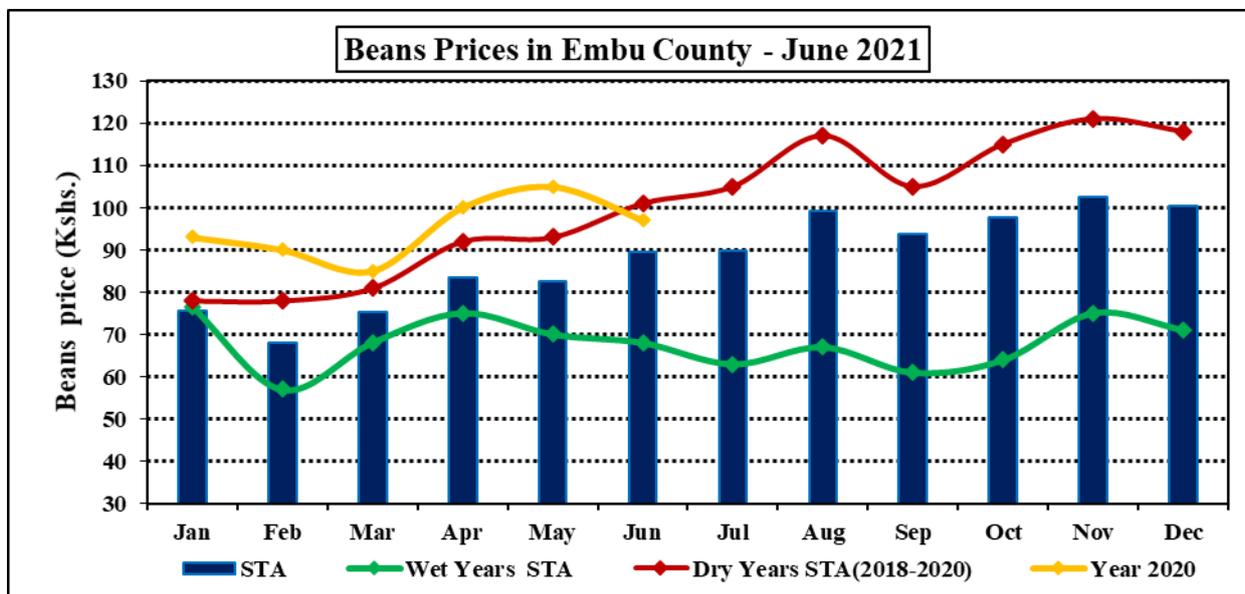
4.2.2 Beans Prices

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

- The average price of beans decreased by 9.3 percent from Ksh 106 in the month of May to Ksh 97 in the month June.
- The decrease of beans price in the market can be attributed to households experiencing beans harvest thus less reliance on the market.
- The recorded price of beans was 7.7 percent higher than the short-term average price of Ksh 90 per kilogram.
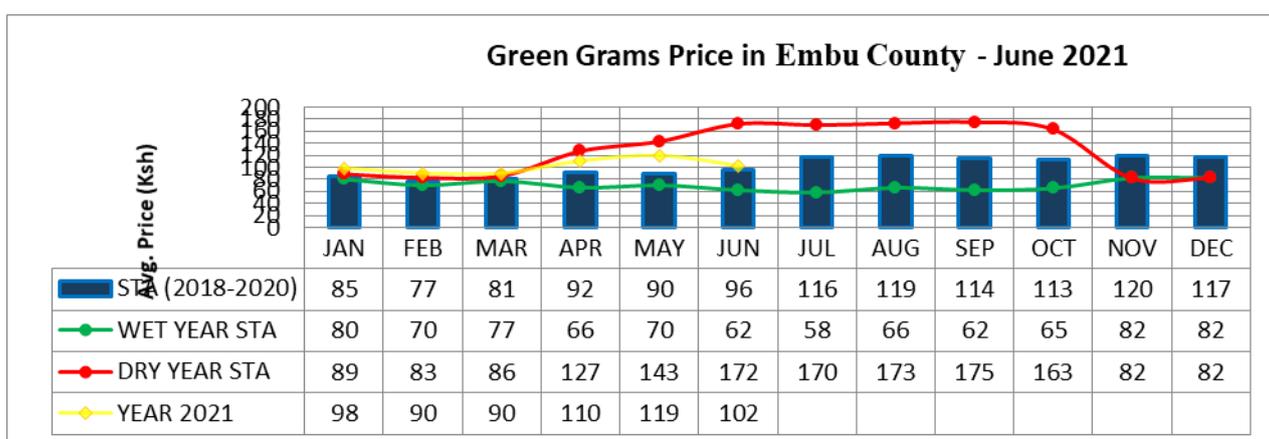
4.2.3 Green Grams Prices

Green Grams Price in Embu County - June 2021

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
STA (2018-2020)	85	77	81	92	90	96	116	119	114	113	120	117
WET YEAR STA	80	70	77	66	70	62	58	66	62	65	82	82
DRY YEAR STA	89	83	86	127	143	172	170	173	175	163	82	82
YEAR 2021	98	90	90	110	119	102						

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

- The average price of green grams decreased by 7 percent from Ksh 119 per Kg in the month of May to Ksh 102 in the month of June.
- The decrease in price can be attributed to the harvest experienced by household, thus less reliance o the market.
- The average price recorded was 26 percent higher than the short-term average of Ksh 81.

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.
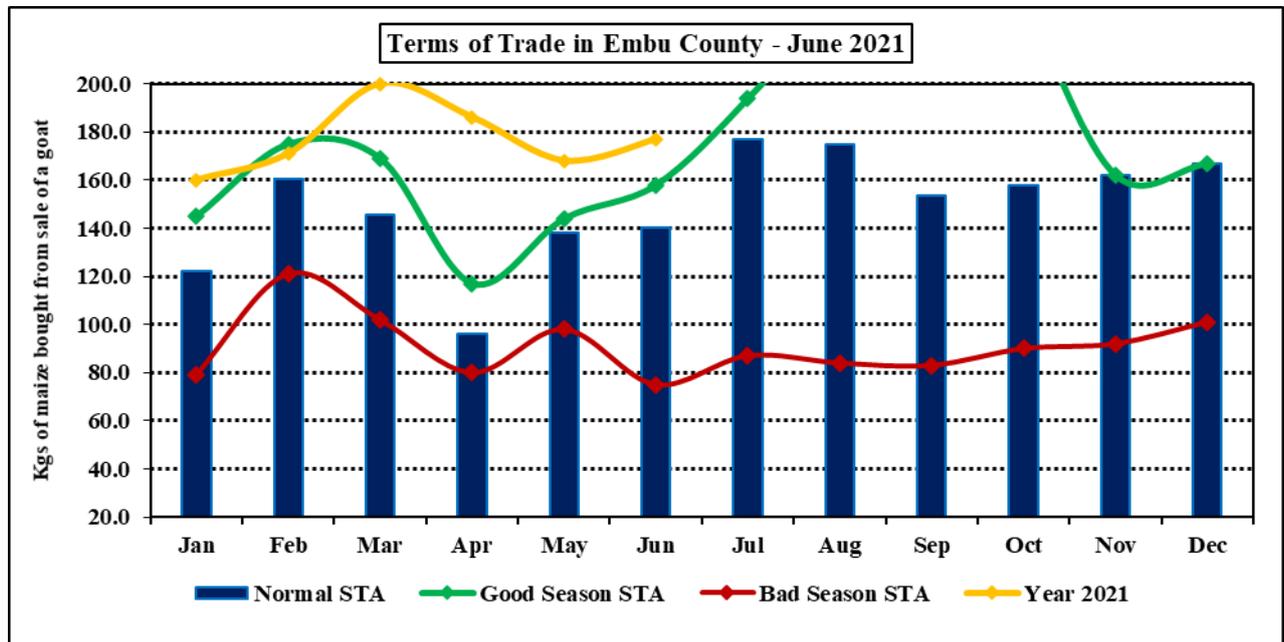

Figure 16: Terms of trade in Mbeere sub counties

- The Terms of trade increased by 5 percent from 168 in May to 177 kilograms of maize bought from sale of one live goat in the month under review.
- The increase in the terms of trade during the month under review can be attributed to slight increase in goat prices and decrease in maize prices.
- The current terms of trade recorded are 26 percent higher than the short-term average of 140.

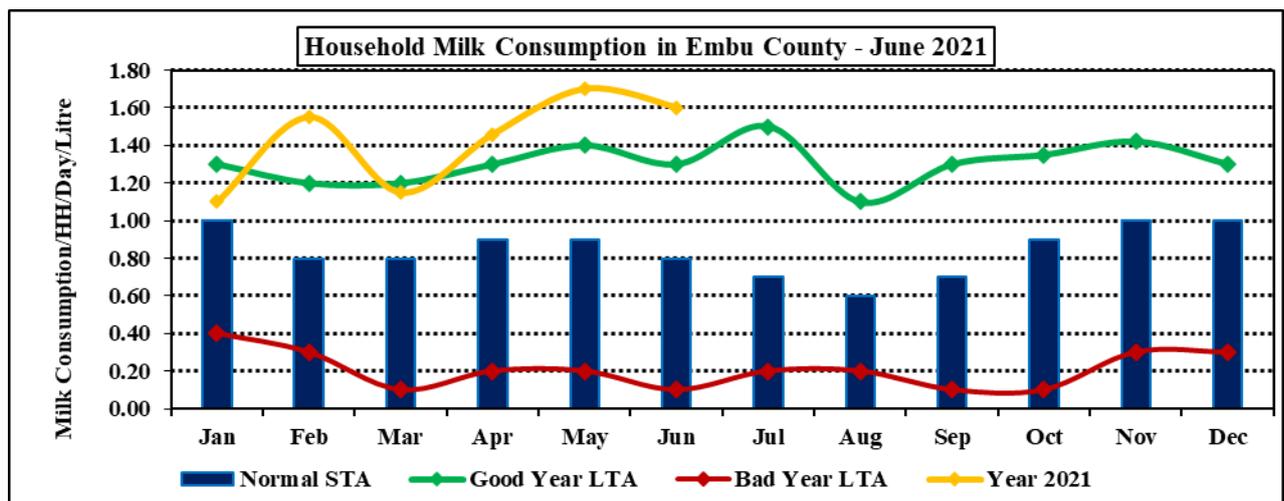## 5.0   FOOD CONSUMPTION AND NUTRITION STATUS
5.1   Milk Consumption

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

- Average household daily milk consumption declined by 6.25 percent in June from to 1.7 litres recorded in May to 1.6 litres during the month under review.
- The increase in milk consumption can be attributed to decline in production.

- The current household milk consumption is higher than the short-term average of 0.8 litres per household per day.

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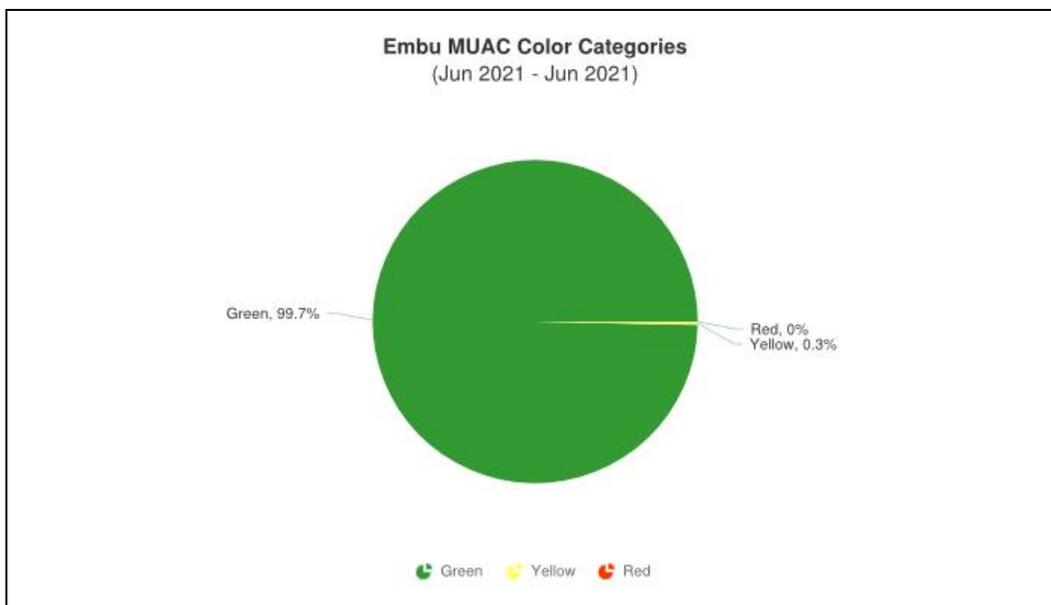The Mid Upper Arm Circumference (MUAC) is a pointer indicator for malnutrition among children under five years.

Figure 18: Nutritional status of sampled children in Mbeere sub counties(n=317)

- During the month under review 99. 7 percent of sampled children recorded normal MUAC measurements (measurements at the green band) while 0.3 percent recoded moderate acute malnutrition (yellow 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.
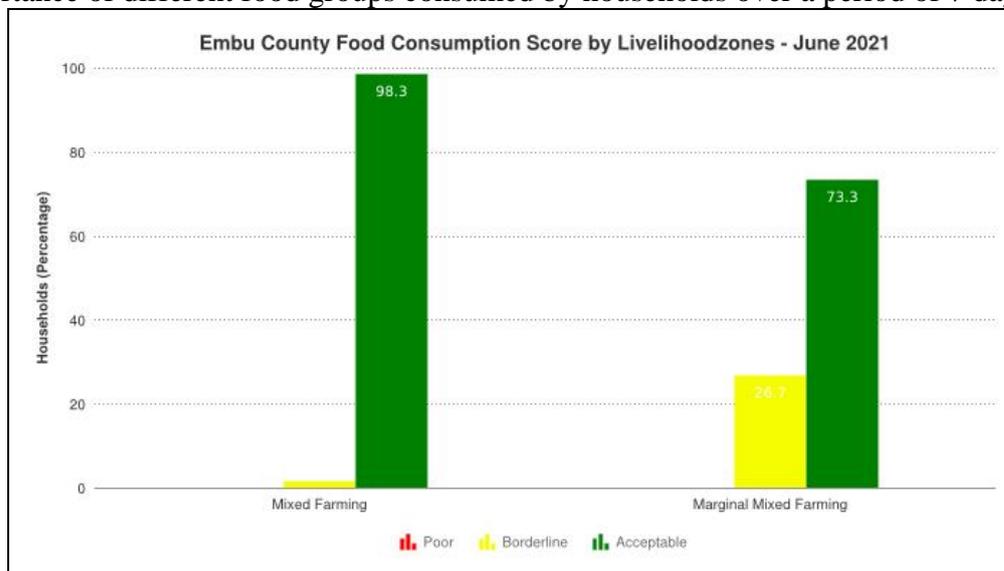
Figure 19: Household food consumption (120 households)

- Household food consumption recorded during the month of June with 86% recording acceptable food consumption, 14 % recording borderline food consumption category.
- The household food consumption improved compared to May with 7% improvement acceptable food consumption from 79 % to 86 % and 6 % reduction from 20% to 14 % recording on the borderline food consumption category.
- The stability can be attributed to start of harvesting and use of cow peas, beans and green maize for some households in both livelihood zones.
- Households in the mixed farming livelihood zone had a better food consumption score at 98.3% acceptable and 1.7 percent borderline compared to marginal mixed farming livelihood zone with 73.3% of the households in acceptable food consumption, 26.7 % in borderline food consumption .
- This variation between livelihood zones can be attributed to the variation in current household stocks and the purchasing power.

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.
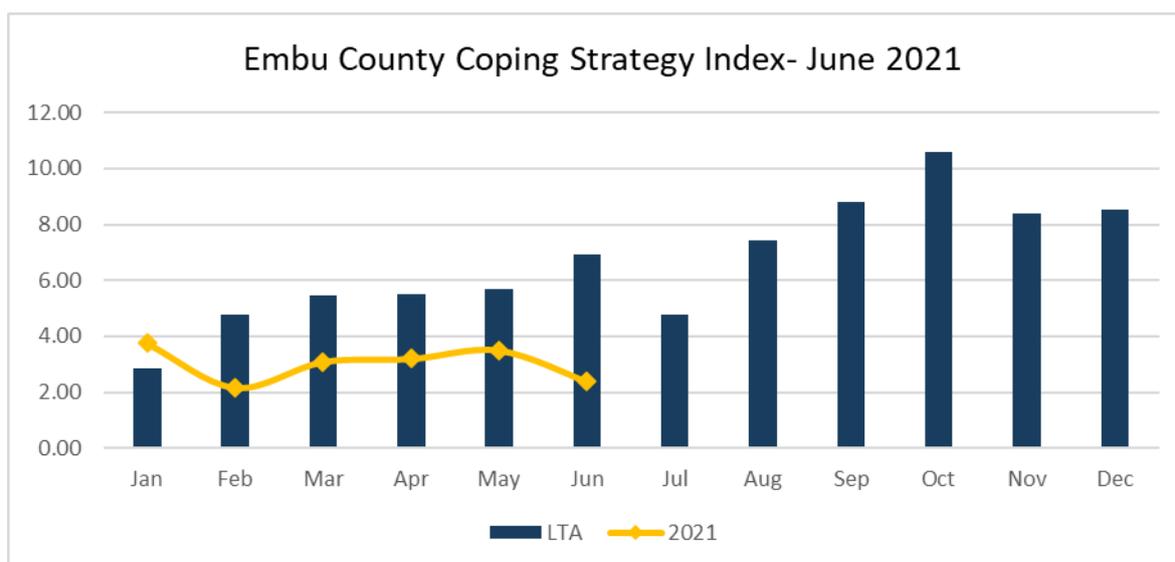

Figure 20: Coping Strategy Index for households in Mbeere sub counties

- The mean coping strategy index declined by 47 percent from 3.5 in the month of May to 2.38 in the month of June.
- The stability can be attributed to availability of farm casual labour due to the ongoing harvesting of green maize and cow peas and green grams.
- 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 2.7.

5.5   Implication of the above Indicators to Food Security

- The deterioration in forage condition in both sub counties has had negative impact on the livestock body conditions and hence milk production.
- The availability of farm labour improved the household purchasing power and hence reduced severe household coping.

- The decrease in maize, beans and green grams prices is due to the ongoing harvest, households have food stocks thus less reliance on the market.
- Increase in goat prices and stability of maize prices led to increase in terms of trade and hence the increased purchasing power of the households that rely on sale of animal in order to get cereals.

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	ongoing	Targeted households in both sub counties
• Routine Human Disease Surveillance • Routine health and nutrition services for children, pregnant and lactating mothers	Embu County government		All health facilities within Mbeere
Routine agricultural extension	Embu County government	Ongoing	Farmers in Mbeere North and South sub counties
Routine livestock production extension and support to farmers	Embu County government	Ongoing	Farmers in Mbeere North and South sub counties
Survey and design of KCEP CRAL supported investment projects	NDMA	ongoing	Targeted KCEP CRAL project wards-Kyeni South, Kagaari South, Kiambere, Muminji, Makima and Evurore

7.0 Food Security Prognosis (Three months)

- The market prices of food commodities may show a decreasing trend on market reliance with the ongoing harvest.
- The distances to water sources for both households and livestock will increase in the next coming months, since they will be no rains to recharge water sources.
- The household food consumption is likely to remain largely acceptable due to replenishment of households' stocks due to the ongoing harvesting.
- Household coping is expected to decrease significantly due to reduced dependence on markets for food needs and increased household purchasing power

8.0   SECTOR RECOMMENDATIONS

SECTOR	RECOMMENDED ACTIVITIES	TARGET AREA	RESPONSIBLE
AGRICULTURE	• Promotion of adoption of drought resilient crops • Training on post-harvest management • Market linkage for green grams value chain • Promotion of food conservation and storage at household level	Farmer groups in both sub counties	County Department of Agriculture
LIVESTOCK AND VETERINARY	• Breed improvement • Mass vaccination along the stock routes • Deworming and multi-vitamin supplementation • Treatment of livestock diseases • Capacity building on disease control measures	Evurore, Muminji and Kiambere wards	County Department of Livestock Production and Veterinary services
HEALTH AND NUTRITION	• Conduct SMART survey • Conduct Health Outreaches in the marginal mixed farming zones in order to preposition for surge kit activation	Embu County	County Department of Health