

National Drought Management Authority

EMBU (MBEERE) COUNTY

DROUGHT EARLY WARNING BULLETIN FOR JUNE 2020



A Vision 2030 Flagship Project



JUNE EARLY WARNING PHASE

Drought Status: **NORMAL**

☀️

Shughuli za kawaida

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Mixed Farming (MF)	Normal	stable
Marginal Mixed Farming (MMF)	Normal	stable
County (Mbeere Only)	Normal	stable
Biophysical Indicators	Value	Normal
Rainfall (% of Normal)	100	80-120
VCI-3 Month	69	>50
Forage condition	Fair/Good	Good
Production Indicators	Value	Normal
Crop Condition (maize)	Harvesting	Harvesting
Livestock Body Condition	Fair/Good	Good
Livestock Migration Pattern	None	None
Livestock deaths	None	None
Access Indicators	Value	Normal
Terms of Trade	140	72-120
Households distance to water (km)	2.6	4.0-4.8
Livestock return distance to water (km)	3.2	3.5-6.5

Drought Situation & EW Phase Classification

Biophysical Indicators

Rainfall: Insignificant rains were recorded in both sub counties of Mbeere

Vegetation Condition: The vegetation condition deteriorated slightly during the month under review though remained above normal .

Water sources: the sources are normal and water expected to last for 2-3 months in marginal farming zone and 3-6 months in mixed farming zone.

Socio Economic Indicators (Impact Indicators)

Production indicators: Harvesting of beans, pignon peas, green grams and cowpeas was complete in both sub counties while harvesting of maize was ongoing in both sub counties. Livestock body condition remain good for all species across both sub counties except in few spot areas of the marginal mixed farming zone such as Mutitu and parts of Kirie occasioned by the dry spell.

Access indicators: Average return distance to water sources for both households and livestock increased further due to the minimal rains recorded in both sub counties. The prices of cereals stabilized in the current month as harvested crop reduced the demand from households. The Terms of Trade remain stably high as the prices of cereals and livestock also stabilized in the reporting month of June.

Utilization: Household coping was low due to the food availability in households coupled with high purchasing power occasioned by favourable terms of trade. The household food consumption (HFC) was largely acceptable with 70% of the sampled households reporting acceptable consumption while only 30% were in borderline food consumption.

County Seasonality Calendar

Short rains harvests Short dry spell Reduced milk yields Increased HH Food Stocks Land preparation			Planting/Weeding Long rains High Calving Rate Increased milk production			Long rains harvests A long dry spell Land preparation Increased HH Food Stocks Kidding (Sept)			Short rains Planting/weeding Increased milk production		
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1.0 CLIMATIC CONDITIONS

1.1 Rainfall Performance

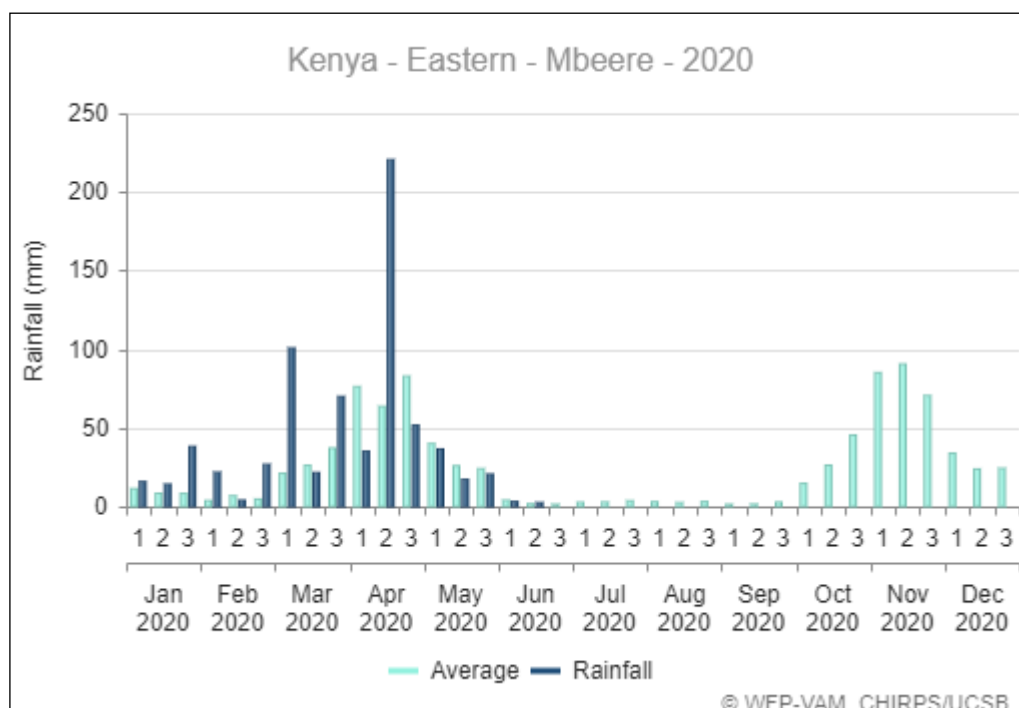


Figure 1: Rainfall estimates in Mbeere North and South Sub Counties

- The dekadal distribution of the rains was poor with 3.9 mm of rainfall recorded in the first dekad and 2.7 mm in the second dekad.
- Minimal precipitation was recorded in both sub counties for an average of two days during the month under review.

1.2 Amount and spatial distribution of rainfall

- The average amount of rain recorded reduced further by 90% in the current month compared to May to only 2.6 mm for the first two dekads of the month.
- The spatial distribution of the rains was poor during the month under review with only the sections of the mixed farming zone receiving minimal precipitation.
- The amount received during the month was however normal at this time of the year.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The vegetation greenness remain above normal.
- The combined 3-month Vegetation Condition Index (VCI) reduced further by 18% in June compared to the previous month to 69.0. This is attributable to the insignificant rainfall recorded in both sub counties.
- Mbeere South Sub County recorded 3-month vegetation condition index of 68.0 which was lower than for the previous month occasioned by some locations which recorded fair pasture conditions.

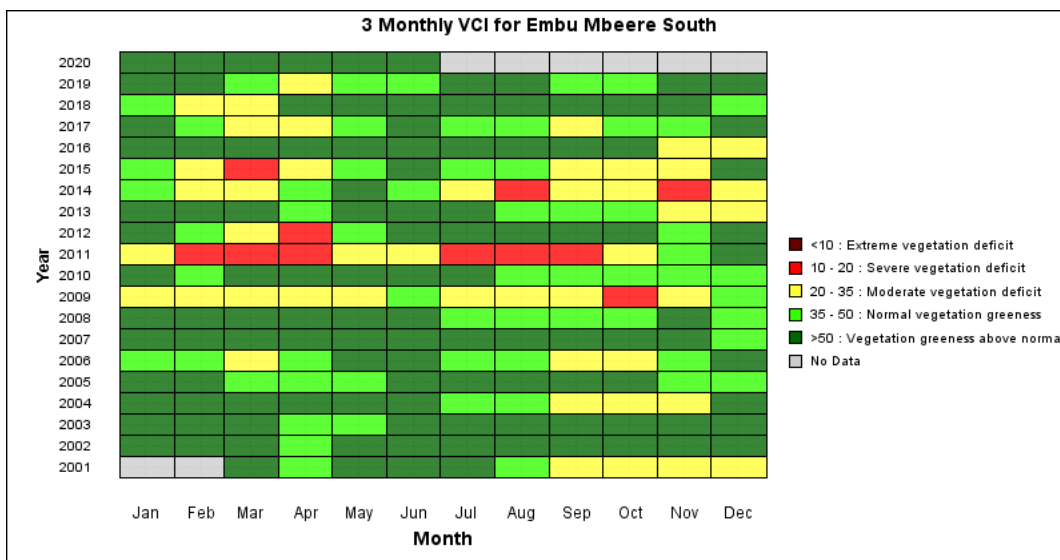


Figure 2a: Three-monthly VCI for Mbeere South sub- county [Source: MODIS]

- Mbeere North sub county recorded a vegetation condition index of 69.9 in the period under review.
- Some areas recorded fair pasture conditions due to fast deterioration occasioned by high household tropical livestock units (TLUs)

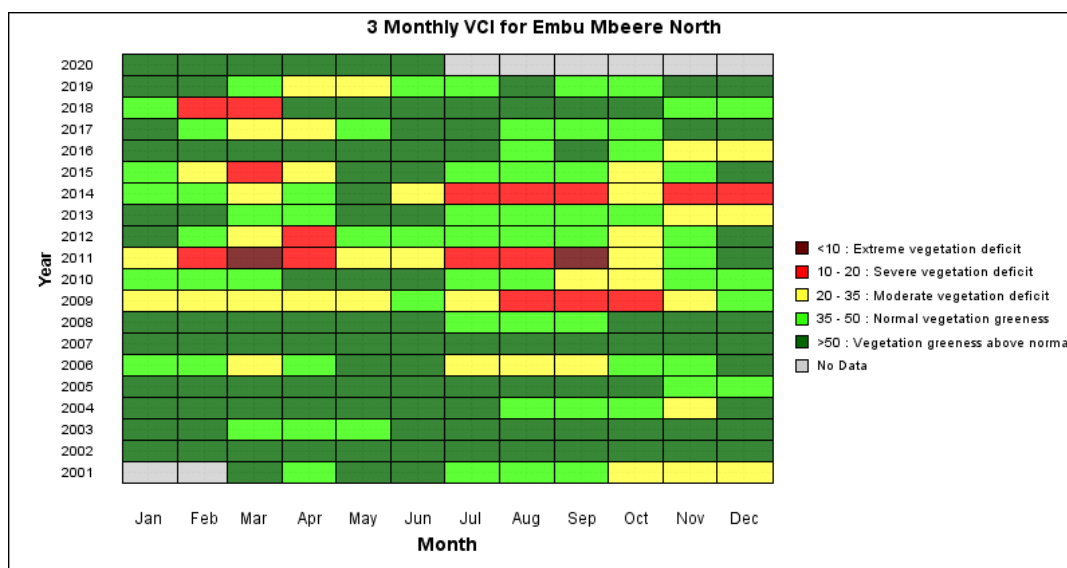


Figure 2b: Three-monthly VCI for Mbeere North sub county [Source: MODIS]

2.1.2 Pasture Condition

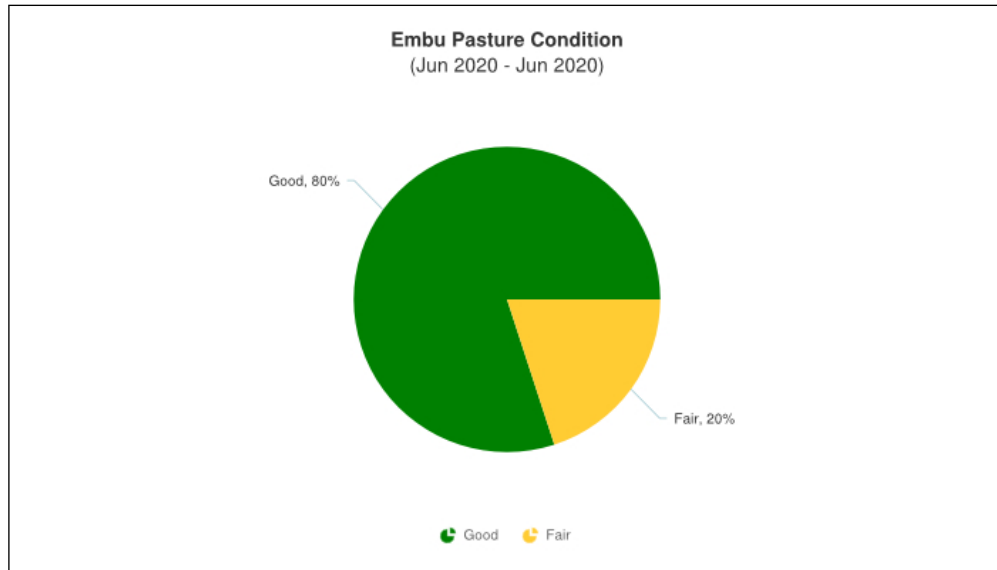


Figure 3: Pasture condition in Mbeere South and North sub counties

- The pasture condition remains good in the mixed farming livelihood zone while some pockets in the marginal mixed farming zone recorded fair pasture conditions.
- The pasture condition was fair in areas of Kirie, Mutitu, Kamarandi, Mutuobare, and Kanyueri in Evurore ward due to fast deterioration occasioned by insignificant precipitation and high TLUs.
- The available pasture is expected to last for 1-3 months in marginal mixed farming zone and 3-6 months in the mixed farming livelihood zone.
- The crop residues continue to be stocked across both sub counties for livestock use when pasture is depleted.

2.1.3 Browse Condition

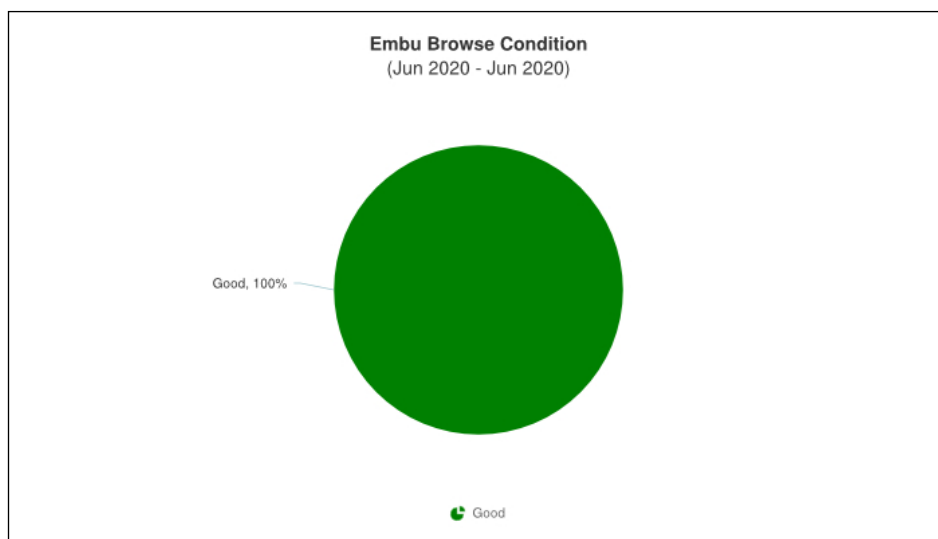


Figure 4: Browse condition in Mbeere North and South sub counties

- The browse condition remains good across both livelihood zones
- The good condition is sustained due to the ability of browse to withstand the current dry weather condition
- The browse condition is normal at this time of the year occasioned sufficient regeneration during the long rains season.
- The available browse is expected to last for 4 to 6 months across both livelihood zones.

2.2 WATER RESOURCE

2.2.1 Water Sources

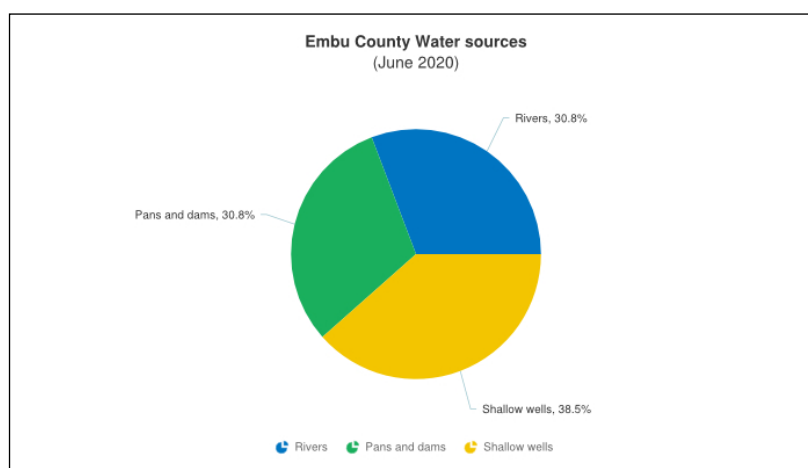


Figure 5: Water sources for Mbeere North and South sub counties

- The three main water sources in the month under review for both livestock and domestic use across the two livelihood zones remain water pans and dams, rivers and shallow wells/boreholes.
- The households mainly relied on sources closer to them for domestic water while the livestock were taken to rivers which are far away from the communities.
- The quality of the water in surface and ground sources remain good due to reduced siltation occasioned by minimal rains.

2.2.2 Household Water Access and Utilization

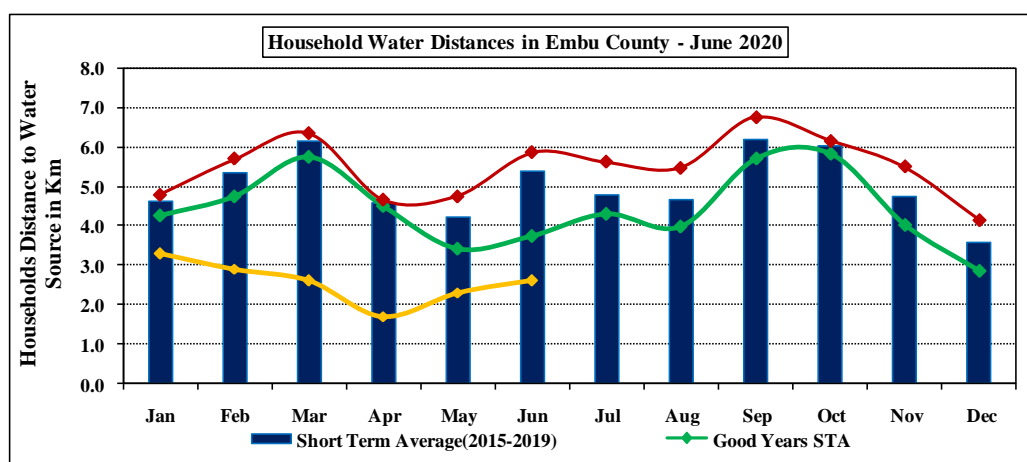


Figure 6: Household average distances to water sources

- The average household return distance to water sources increased slightly by 13% compared to the previous month to 2.6 km.
- The increase is attributable households in hotspot areas of the marginal mixed farming zone relying on water from boreholes and rivers which are far away.
- Households in the marginal mixed farming zone recorded slightly higher average return distance of 2.9 km to water sources compared to those in the mixed farming zone that trekked for an average return distance of 2.3 km to fetch water.
- The differentiation across the livelihoods is occasioned by the type of sources relied upon, Tana river was a major source for households in the marginal mixed farming zone
- The recorded average return distance is 32% lower than the average distance recorded during the good years of 3.8 km at this time of the year.

2.2.3 Livestock access to water from grazing areas

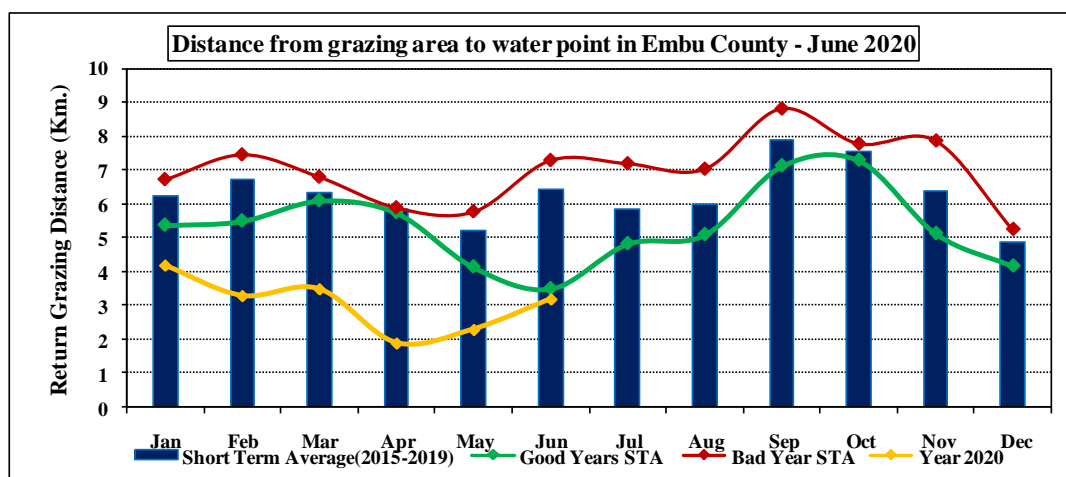


Figure 7: Livestock average return distances to water sources

- The average return distance to water sources from grazing areas increased further from 2.3 km recorded in the month of May to 3.2 km in the month under review.
- The increase in distance is attributable to the minimal rains experienced across both sub counties hence overreliance on rivers and livestock water pans.
- Livestock in both livelihood zones trekked for equal distance of 3.2 km to water sources as compared to average return distances recorded the previous month of 2.4 km in marginal farming zones and 2.0 km recorded in the mixed farming zone.
- The current average return distance is 9% lower than the average distance recorded in the good years in Mbeere region.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The body condition for cattle in some areas of marginal mixed farming zones is fair.
- The body condition for both cattle and shoats remain good currently in the mixed farming zone and the marginal mixed framing zone due to availability of forage as livestock benefited from the crop residues from harvested crop.
- The livestock body condition is normal at this time of the year and is expected to remain good to fair for the next 2-3 months.

3.1.2 Livestock Diseases

- Suspected cases of Foot and Mouth Disease and Lumpy Skin Disease were reported in Nthawa ward of Mbeere North
- The county department of veterinary services continues with routine disease surveillance.

3.1.3 Milk Production

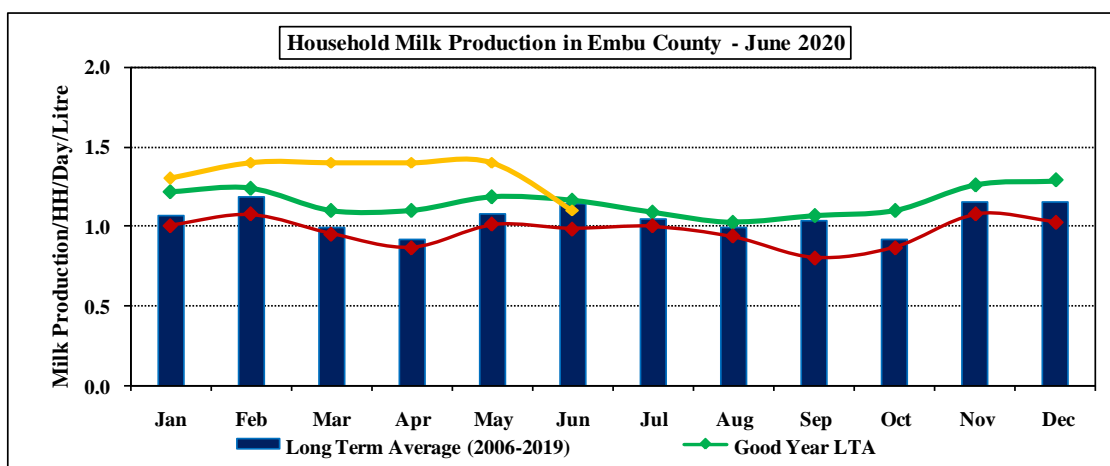


Figure 8: Milk production in Mbeere North and South sub counties

- The average daily household milk production reduced from 1.4 litres per household to 1.0 litres per household in the reporting month.
- The decrease in milk production is attributable to deterioration in the pasture condition in some parts of the marginal mixed farming zone such as Mutitu, Kirie and Kiambere.
- Households in mixed farming zone produced an average of 1.0 litres of milk per day while those in marginal mixed farming zone produced 0.5 litre of milk per day.
- The differentiation in household milk production across the livelihood zones is due to improved breed and good husbandry practices in mixed farming zone as compared to the marginal mixed farming zone.
- The milk production was however normal at this time of the year as the dry spell starts.

3.2 Rain-Fed Crop Production

3.2.1 Stage and Condition of food Crops

- Harvesting of maize is ongoing in both sub counties.
- Harvesting of green grams, beans and cowpeas, pigeon peas is completed across both sub counties.
- The quantity of green grams and beans harvested is low due to the erratic pattern of rainfall received in the region during earlier stages of development.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

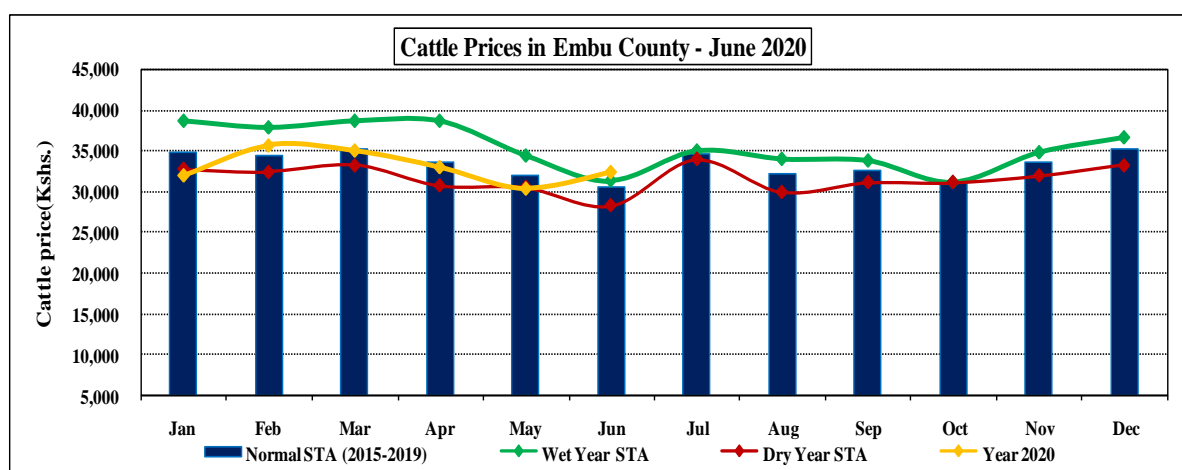


Figure 9: Average Market prices for cattle in Mbeere sub counties

- The average price of a mature medium size bull increased by 7 percent in June to Ksh 32,500.

- The slight increase in price is attributed to low livestock supply across both sub counties occasioned by reduced market operations and farmers reluctance to sell occasioned by the lack of food stress in households.
- Ishiara livestock market recorded the highest average price for cattle of Ksh. 33,000 while Kiritiri and Makutano markets both recorded average cattle price of Ksh 32,000.
- The average price recorded during the month under review is 6 percent lower than the 5-year average price.

4.1.2 Goats Prices

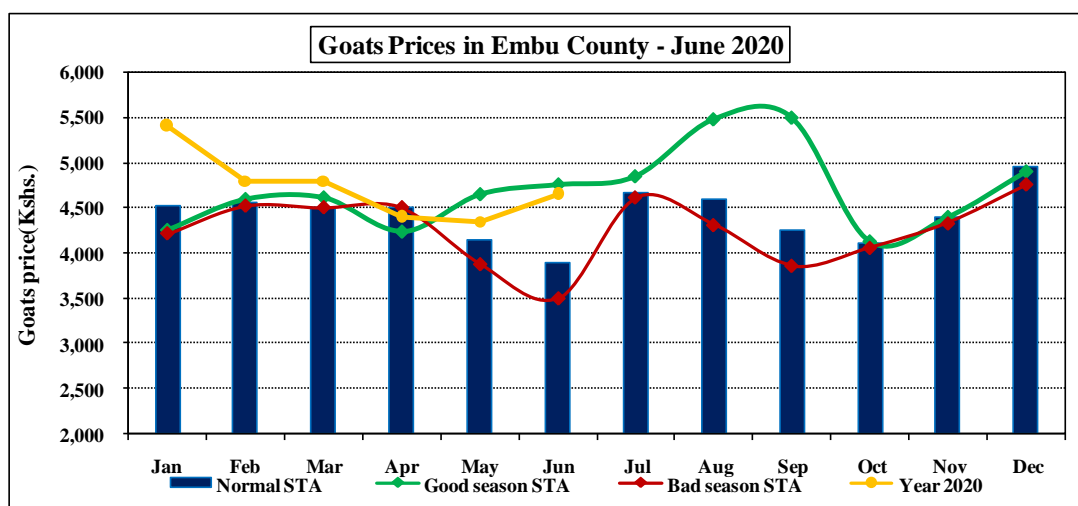


Figure 10: Average market prices for goats in Mbeere sub counties

- The average market price for a medium sized two-year goat increased slightly from Ksh 4,300 recorded in May to Ksh 4650 in the current month.
- The increase is attributed to reduced livestock market operations occasioned by the guidelines related to the corona pandemic thereby reducing the supply of animals in markets across both livelihood zones.
- Ishiara and Kiritiri livestock markets in marginal mixed farming zone recorded average price of Ksh. 4,500 and Ksh. 4750 respectively while Makutano livestock market in mixed farming zone recorded Ksh. 4,800.
- The current price slightly lower than the recorded good year average in a similar month of the year.

4.2 FOOD PRICES

4.2.1 Maize Prices

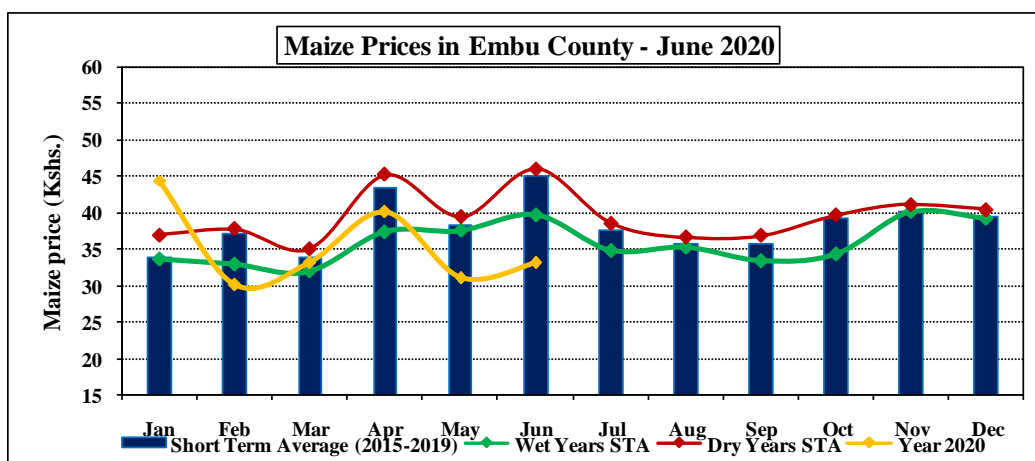


Figure 11: Average market prices for maize in Mbeere sub counties

- The average market price for maize remained stable in the month under review compared to the previous month at Ksh 33.
- The stability is attributable replenishing of household stocks from the harvest of maize.
- One kilogram of maize retailed at Ksh. 30 in Ishiara market while Kiritiri and Makutano cereal markets recorded an average price of Ksh. 35 and Ksh. 37 respectively.
- The recorded average maize price per kilogram is lower than the short term average.

4.2.2 Posho (Local Maize Meal)

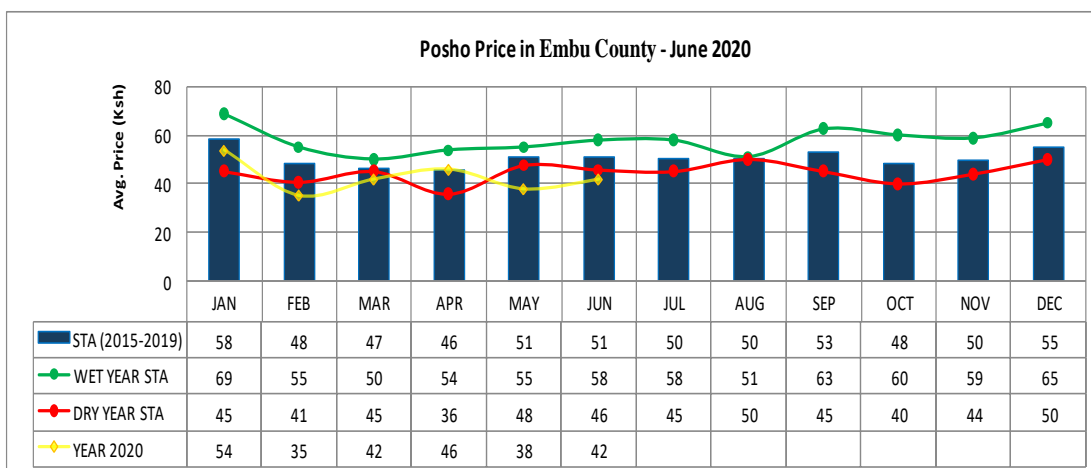


Figure 12: Average market prices for Posho in Mbeere sub counties

- The average price of ‘posho’ across remained stable in both livelihood zones
- The stability is occasioned by the availability of maize stock at households hence reduced demand for the commodity.
- The recorded average ‘posho’ price lower than the average short term average.

4.2.3 Beans Prices

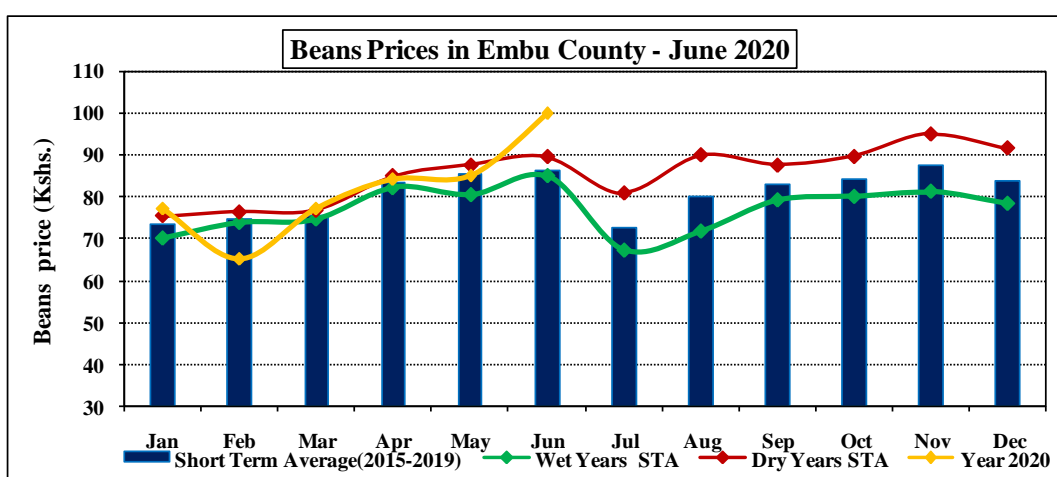


Figure 13: Average market prices for beans in Mbeere sub counties

- The average price of beans increased significantly from Ksh. 85 in May to Ksh. 100 in the current month.
- The increase is attributable to low production of beans during the long rains season period and hence dependence on markets by households.
- One kilogram of beans retailed at Ksh. 100 in Makutano and Kiritiri cereals markets while in Ishiara market, the prices stood at Ksh. 103.
- The recorded price is 16 percent higher than the the short term average price.

4.2.4 Green Grams Prices

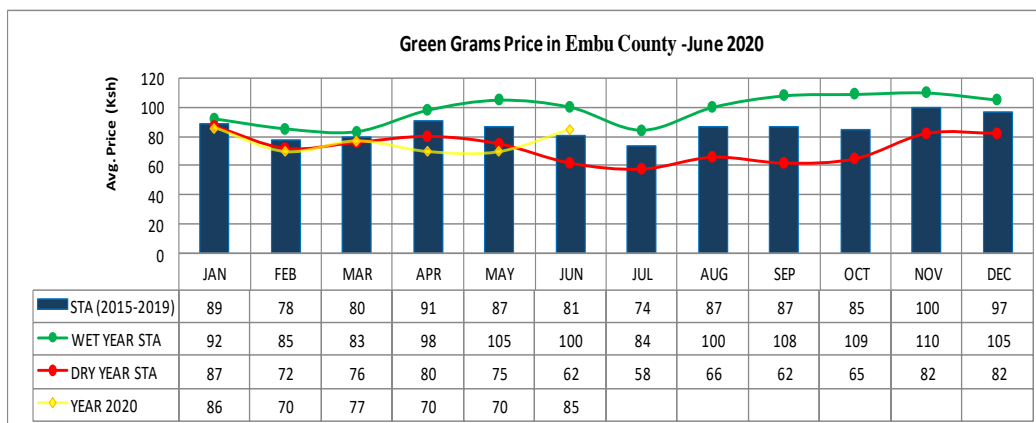


Figure 14: Average market prices for green grams in Mbeere sub counties

- The average price of green grams increased by 21 percent to Ksh. 85 per kilogram
- The increase is attributable diminishing household and market stocks due to poor performance of the long rains crop caused by erratic rainfall patterns at the initial stages of development.
- One kilogram of green grams retailed at Ksh 90 in Makutano cereals market while it was Ksh. 75 and Ksh. 85 in Kiritiri and Ishiara cereals markets respectively.
- The current average price is 5% higher than the short-term average of Ksh 81 per kilogram.

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.

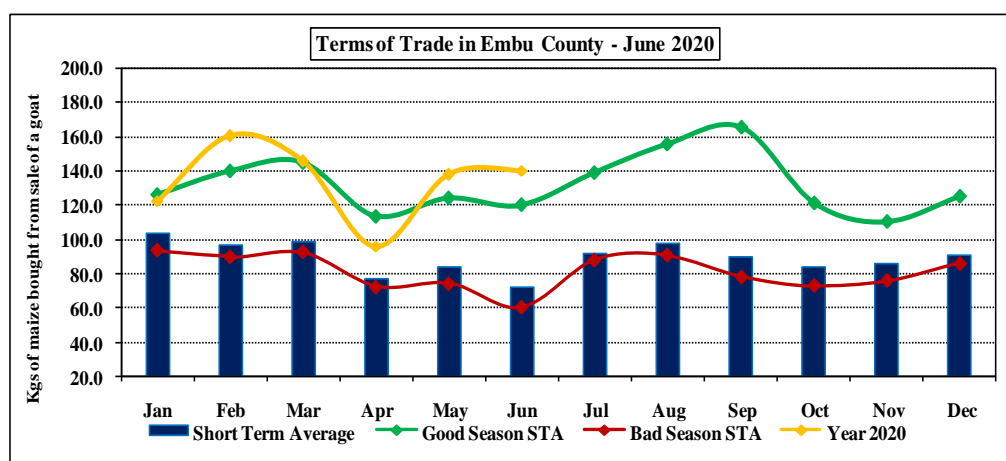


Figure 15: Terms of trade in Mbeere sub counties

- The Terms of Trade remained stable in June compared to the previous month at 140 kilograms of maize bought from sale of one goat.
- The stability is attributable to stable maize and livestock prices.
- Mixed farming zone recorded higher terms of trade in the month of June at 144 kilograms for sale of one goat as compared to marginal mixed farming zone with 140 kilograms of maize for sale of one goat.
- The differentiation across the livelihood zones is attributable to differences in the market prices of livestock and cereals in major markets of Ishiara, Kiritiri and Makutano.
- The current Terms of Trade are 17 percent higher than the ToT recorded during good seasons in Mbeere region.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

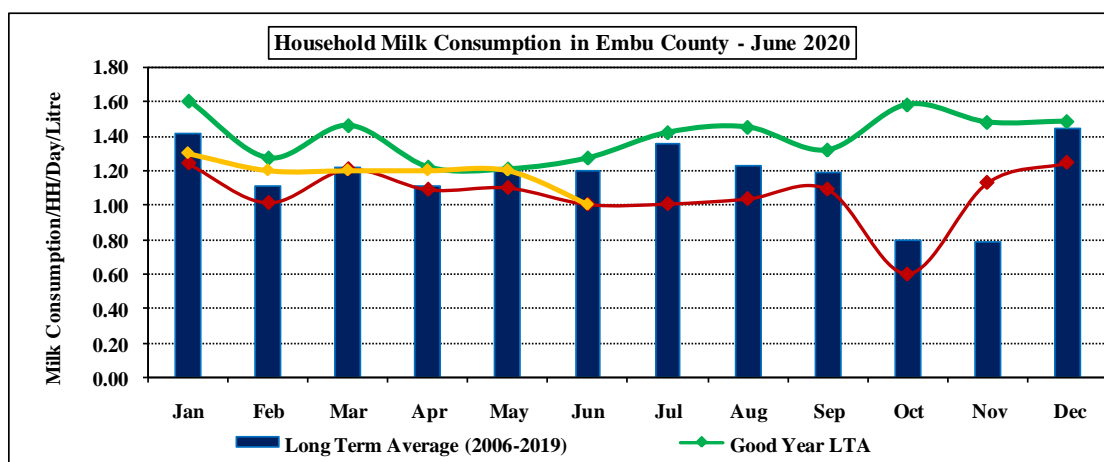


Figure 16: Household milk consumption in Mbeere North and South sub counties

- Milk consumption decreased from 1.2 litres consumed at household level per day in the month of May to only 1 litre daily in the month under review..
- The reduction in milk consumption is attributable to reduction in milk production occasioned by feed stree in some areas across the livelihood zones.
- Households in mixed farming livelihood zone consumed 0.7 litres daily as compared to 0.5 litre consumed daily by households in marginal mixed farming zone.
- The current average milk consumption is lower than the normal long-term average of 1.2 litres per household daily.

5.2 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.

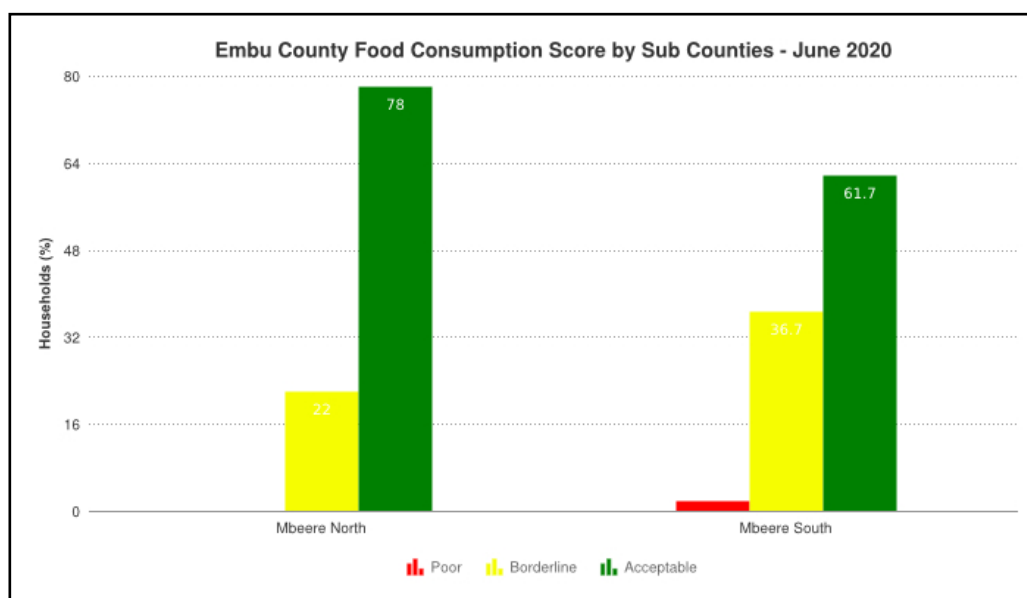


Figure 17: Household food consumption

- The proportion of households in acceptable food consumption category during the month under review is 70 percent while 29 percent of the households recorded borderline food consumption.

- Many of the sampled households reported reduced food stress occasioned by the long rains harvests.
- Few households in Mbeere South sub county recorded poor food consumption in the reporting month majorly attributed to household povety levels and feeding habits.
- Acceptable household food consumption is normal at this time of the year.

5.3 Coping Strategy Index

The Coping Strategy Index is derived from the strategies that households adopt when they lack food or money to buy food.

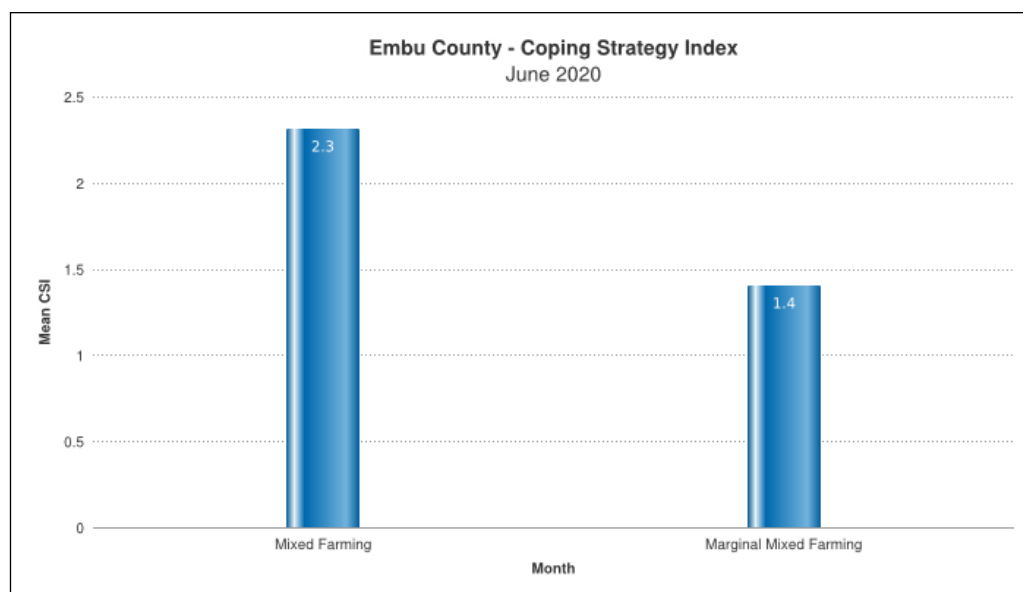


Figure 18: Household Coping

- The mean coping strategy index remain low at 1.87 in the month of June.
- Low coping is attributable to availability of food at households across both livelihood zones occasioned by the recent harvests..
- Mixed farming livelihood zone recorded a higher coping strategy index of 2.3 while marginal mixed farming livelihood zone recorded a coping strategy index 1.4.
- The recorded coping strategy index is normal at this time of the year.

5.5 Implication of the above Indicators to Food Security

- The harvest from the long rains crop replenished the household food stocks and hence there was reduced food stress and consequently low coping by the community..
- The stability in forage conditions sustained fair to good livestock body conditions and hence productivity.
- The stability in maize price and the slight increase in livestock prices led to further improvement in terms of trade and hence increased household purchasing power.
- The lack of rainfall across both sub counties impacted negatively of water access for both livestock and domestic use.

6.0 CURRENT INTERVENTION MEASURES

6.1 Food Interventions

No food interventions reported in the month under review.

6.2. Non-Food Interventions

Intervention	Implementer	Beneficiaries
<ul style="list-style-type: none"> • Training farmer groups on post harvest handling • Support for Itira/Kagumori water pan • Financing of livelihood activities in dairy, green grams and local poultry value chains • Support for of Rupingazi-Weru irrigation scheme 	<p>County Department of Agriculture</p> <p>NARIG Project</p> <p>NARIG Project</p> <p>NARIG Project</p>	<p>Targeted farmer groups and individuals</p> <p>Mumimji ward</p> <p>40 farmer groups financed(5.9M in Nthawa ward, 5.65M in Muminji ward, 6.22M in Evurore ward)</p> <p>Mbeti south-St.Lukes school for the deaf</p>
<ul style="list-style-type: none"> • Treatment of FMD and LSD • Routine Promotion of good animal husbandry practices • Routine livestock diseases surveillance • Upgrading of local goats in Kiambere ward 	<p>County Department of Livestock Production and Veterinary Services</p> <p>NDMA</p>	<p>Nthawa ward</p> <p>Across both sub counties</p> <p>KIambere ward in Mbeere South sub county</p>
<ul style="list-style-type: none"> • Training of health workers on COVID 19 pandemic • Community sensitization on COVID 19 • Routine Human Disease Surveillance • Routine screening and management of malnutrition in all health facilities • Routine Vitamin A and Zinc Supplementation and deworming in all health facilities • Iron Folate Supplementation for pregnant women at all health facilities • Community MUAC monitoring for the acute and moderate malnutrition 	<p>County Department of Health Services (CDOH)</p> <p>CDOH</p> <p>CDOH</p> <p>CDOH</p> <p>CDOH</p> <p>CDOH</p> <p>NDMA/CDOH</p>	<p>Targeted Public health officers</p> <p>Community units</p> <p>Mothers and children who visited health facilities in both sub counties</p> <p>Households in sampled sentinel areas</p>
<ul style="list-style-type: none"> • Connection of solar power for borehole pumping and provision of water tanks to schools 	<p>NDMA</p>	<p>Ceria day secondary school and Ceria primary school in Mbeere North sub county</p>

7.0 Emerging issues

- Suspected cases of Foot and Mouth Disease and Lumpy Skin Diseases in Mbeere North sub county.
- The outbreak of Kala-azar disease in Mwingi sub county of Kitui County which borders Kiambere and Evurore wards in Embu County.

7.1 Food Security Prognosis (Three months)

- The replenished household stocks will likely to cushion households from food shortages and engagement in extreme coping strategies.
- The average distance to water sources by households and livestock is likely to keep an upward trend during the short dry period before the short season rains commence.
- The browse condition is likely to remain good for the next three months while that of pasture may deteriorate as the dry spell sets in especially in the marginal mixed farming zone.
- The crop residues will supplement the pasture and positively impact on the body condition of cattle.
- Food commodity prices are expected to reduce further or remain stable for the next three months due to crop harvests across both sub counties.
- The terms of trade may remain stable during the next three months occasioned by expected reduced cereals prices and stability of livestock prices.

8.0 SECTOR RECOMMENDATIONS

Sector	Recommended Activities	Proposed Implementer	Expected Outcome
AGRICULTURE	<ul style="list-style-type: none"> • Scale-up of training on post harvest handling • Spot checks on aflatoxin in traded food commodities • Rehabilitation of food storage facilities • Provision of irrigation water in Kiambere and Muminji wards 	<ul style="list-style-type: none"> • County Department of Agriculture of • Other stakeholders 	<ul style="list-style-type: none"> • Reduced post harvest losses • Quality food in local markets • Increased food reserve • Increased irrigated farming
LIVESTOCK	<ul style="list-style-type: none"> • Conservation of crop residues for animal feed • Breed improvement for small stock • De-worming of livestock and health management 	<ul style="list-style-type: none"> • County Department of Veterinary services • Other stakeholders 	<ul style="list-style-type: none"> • Increase feed reserve • Improved animal health
WATER AND SANITATION	<ul style="list-style-type: none"> • Repair water pipeline systems in Mbeere North and South sub counties. • Provision of household water treatment chemicals • Repair of strategic boreholes • Capacity building of water user committees 	<ul style="list-style-type: none"> • EMBE • EMBEWASCO • County Department of water 	<ul style="list-style-type: none"> • Increased water availability and improved quality • Improved community management of rural water sources
HEALTH AND NUTRITION	<ul style="list-style-type: none"> • Capacity building of community health workers and community health volunteers • Sensitization of community on sanitation and hygiene including proper hand washing practice 	<ul style="list-style-type: none"> • Embu County government • Other stakeholders • NDMA 	<ul style="list-style-type: none"> • Increased capacity of community health workers and volunteers • Reduced spread of diseases

INFRASTRUCTURE	<ul style="list-style-type: none"> • Repair of feeder roads and school toilets affected by excessive rains 	<ul style="list-style-type: none"> • KERRA/Embu County Government • Ministry of Education 	<ul style="list-style-type: none"> • Improved accessibility • Improved sanitation at schools
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