

National Drought Management Authority

EMBU (MBEERE) COUNTY

DROUGHT EARLY WARNING BULLETIN FOR MAY 2018



A Vision 2030 Flagship Project



MAY 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	Normal	Stable
Biophysical Indicators	Value	Normal
Rainfall (% of Normal)	96%	80% -120%
VCI-3Month	69.58	30-50
Forage condition	good	good
Production Indicators	Value	Normal
Crop Condition (Maize)	good	good
Livestock Body Condition	good	good
Milk Production	1.4 litres	1.0-1.5 litres
Livestock Migration Pattern	No migration	No migration
Livestock deaths	No death	No death
Access Indicators	Value	Normal
Terms of Trade	133.5	102
Milk Consumption	1.4	1.0-1.5
Average Water Distance for Households (Km)	4 Km	2.6 Km
Average Grazing-Water point Distance (Km)	5.4 Km	3 Km
Utilization Indicators	Value	Normal
% of children at risk (MUAC)	5.9	4.8
Coping Strategy Index (CSI)	11.68	7-14

Drought Situation & EW Phase Classification

Biophysical Indicators

Rainfall: near normal rainfall was received in both marginal mixed farming and mixed farming zones

Vegetation Condition: The pasture and browse condition is good in both livelihood zones occasioned by sustained regeneration due to the ongoing rains.

Socio Economic Indicators (Impact Indicators)

- **Production indicators:** Harvesting of pulses (green grams, beans and cow peas) is the main agricultural activity in both livelihood zones. Maize crop is in grain filling stage of development. The condition of crops is good.

Livestock body condition is good due to availability of water and pasture. There are no abnormal cases of migration, diseases or death cases reported. The milk production remained stable as compared to the previous month occasioned by improved body conditions.

- **Access indicators:** Average distance to water sources for both households and livestock decreased further during the month due to recharge from the ongoing rains. The Terms of Trade are above normal and remain favorable.

- **Utilization Indicators:** Milk consumption remained stable as compared to the previous month.

The proportion of children under five years at the risk of malnutrition remain stable as compared to the previous month.

The Coping strategy index remained stable but in decreasing trend.

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

- The long rains season started early in the first dekad of March and progressed continuously through the months of April and May.
- The rainfall was received for an average of 20 days in the reporting month.
- Good and evenly distributed rains were recorded in both livelihood zones during the month.

1.2 Amount of Rainfall and Spatial Distribution

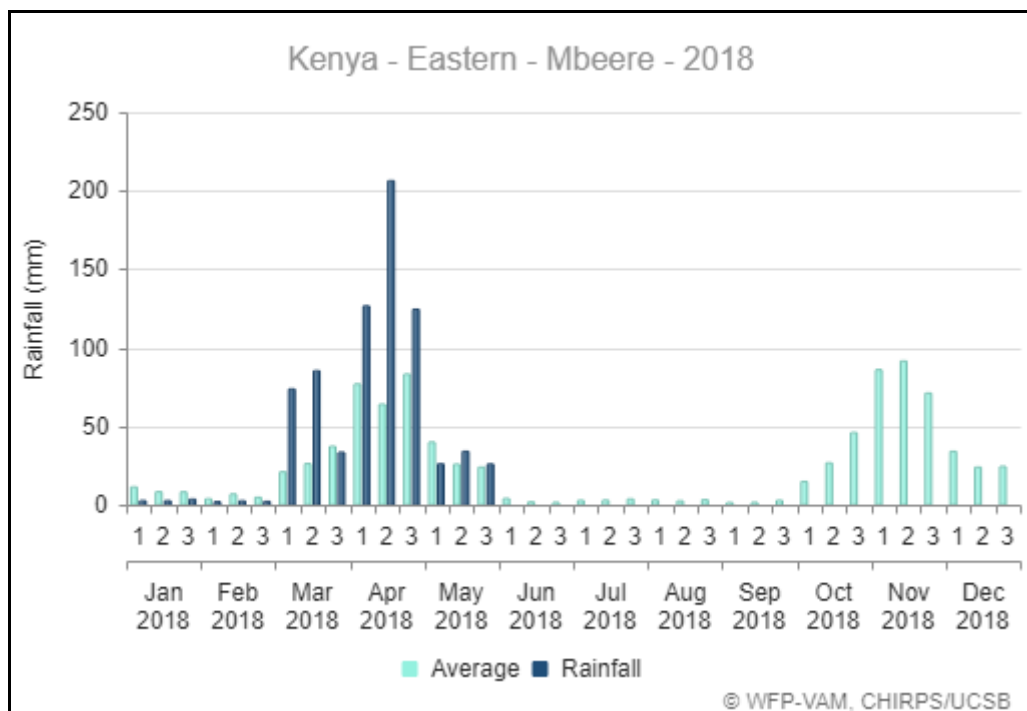


Figure 1: Average amount of rainfall recorded in Mbeere Sub Counties, Embu County

- The two sub counties received an average amount of 28.45 mm of rainfall compared to long term average amount of 29.71 mm for the month of May.
- The marginal mixed farming zone (parts of Mbeere South Sub County) received more rainfall as compared to the mixed farming zone (parts of Mbeere North Sub County).
- The amount recorded in the month under review was slightly above normal for the period under consideration.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- Vegetation condition for Mbeere North and Mbeere South sub counties remains above normal.
- The combined 3-month Vegetation Condition Index (VCI) increased from 59.35 recorded in the previous month to 69.58 in the reporting month.
- Mbeere South Sub County recorded a higher 3-month Vegetation Condition Index of 70.17 as compared to Mbeere North Sub County with Index of 68.79.

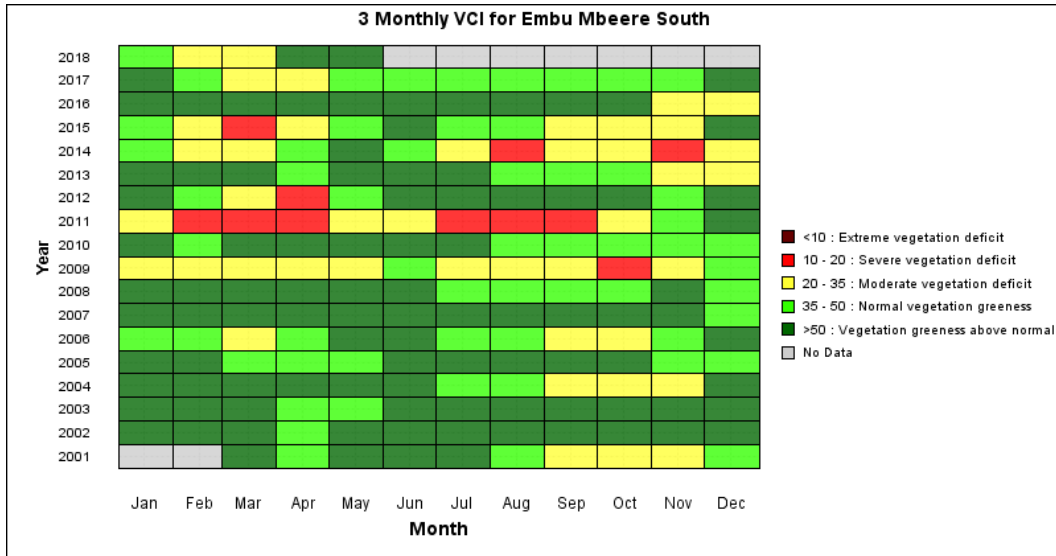


Figure 2: 3-Month VCI for Mbeere South Sub County [Source: Bokku University -Austria]

- The vegetation condition for Mbeere North Sub County remained stable during the month.

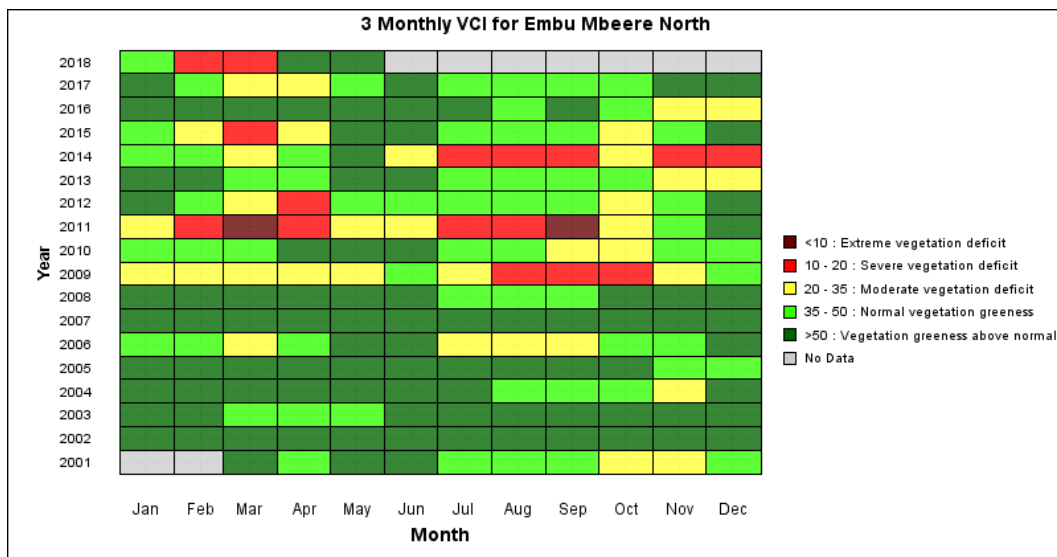


Figure 2: 3-Month VCI for Mbeere North Sub County [Source: Bokku University -Austria]

2.1.2 Pasture Condition

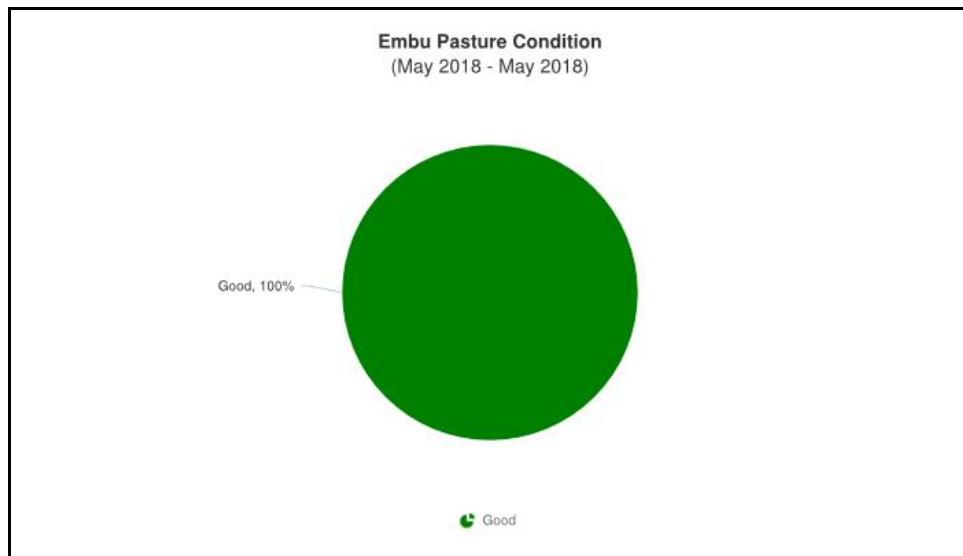


Figure 3a: Pasture Condition for Livelihood Zones in Mbeere sub counties, Embu County

- The pasture condition across both livelihood zones remains good.
- All the pasture fields are fully regenerated due to the above normal rains recorded during the entire long rains season.
- The pasture condition is expected to remain good for the next 2-3 months.
- The pasture condition is above normal at this time of the year.

2.1.3 Browse Condition

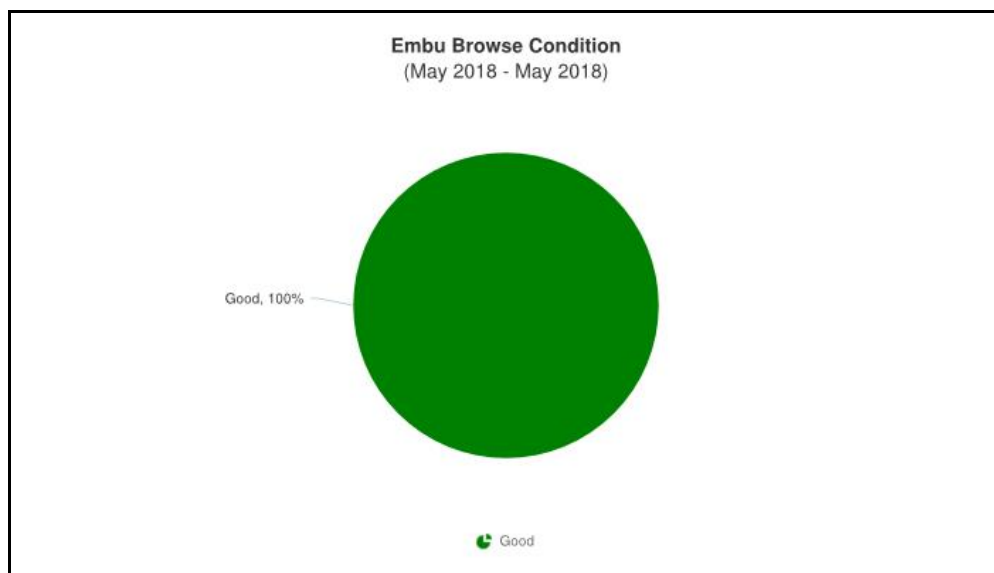


Figure 3b: Browse Condition for Livelihood Zones in Mbeere sub counties, Embu County

- The browse condition remains good in both livelihood zones during the month of May.
- The browse condition has remained good due to the ongoing long rains recorded across both livelihood zones during the month.
- The browse is expected to remain good for the next 2-3 months.
- The browse condition is above normal at this time of the year.

2.2 WATER RESOURCE

2.2.1 Water Sources

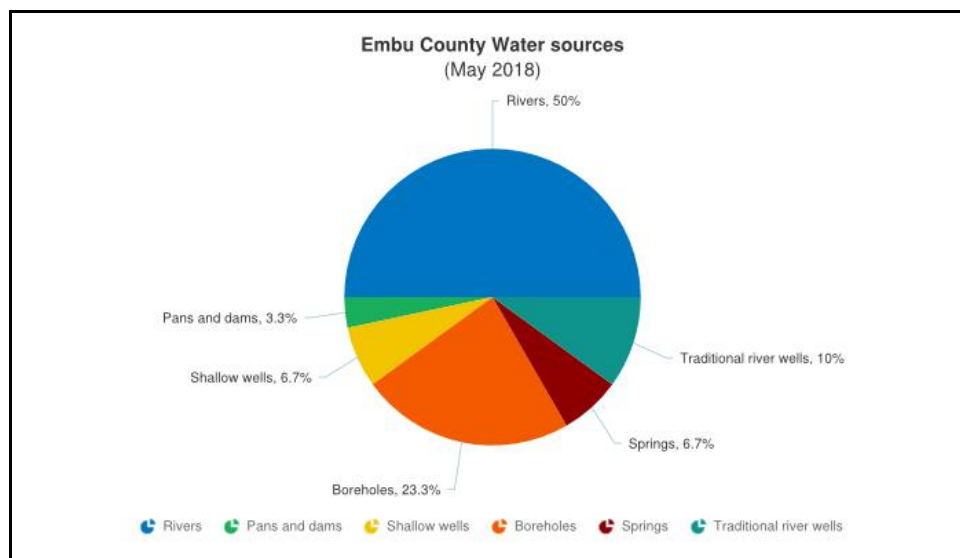


Figure 4: Water Sources for Mbeere North and South sub counties, Embu County

- The main water sources in the month under review for both livestock and domestic use across the two livelihood zones are; rivers, boreholes and pans/dams.
- Households also relied on roof catchment water and piped water during the reporting period.
- The ground water sources recharge is at 90 percent as a result of the rains recorded.
- The water quality is poor as a result of the siltation of the open ground water sources.

2.2.2 Household Water Access and Utilization

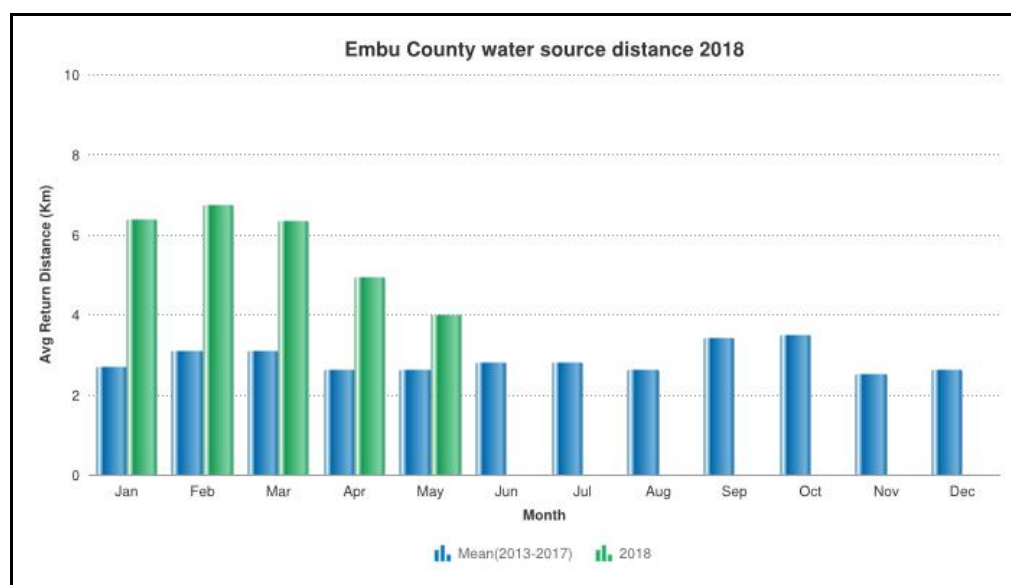


Figure 5: Water Access for Households in both sub counties

- The average distances from the households to water sources decreased further in May to 4Km.
- The decrease is attributed to the ongoing rains received hence recharge of nearby water sources and continued reliance on rain water harvested at households.
- Households in the MF Livelihood Zone trek for longer average distance of 5 km compared to those in MMF Livelihood Zone at 2 km in search for water.
- Water consumption for households is normal in both livelihood zones at 60 litres per person per day.
- The current average distance is above the five-year average distance at this time of the year.
- Few households treat drinking water either by boiling or use of treatment chemicals.

2.2.3 Livestock access to water from grazing areas

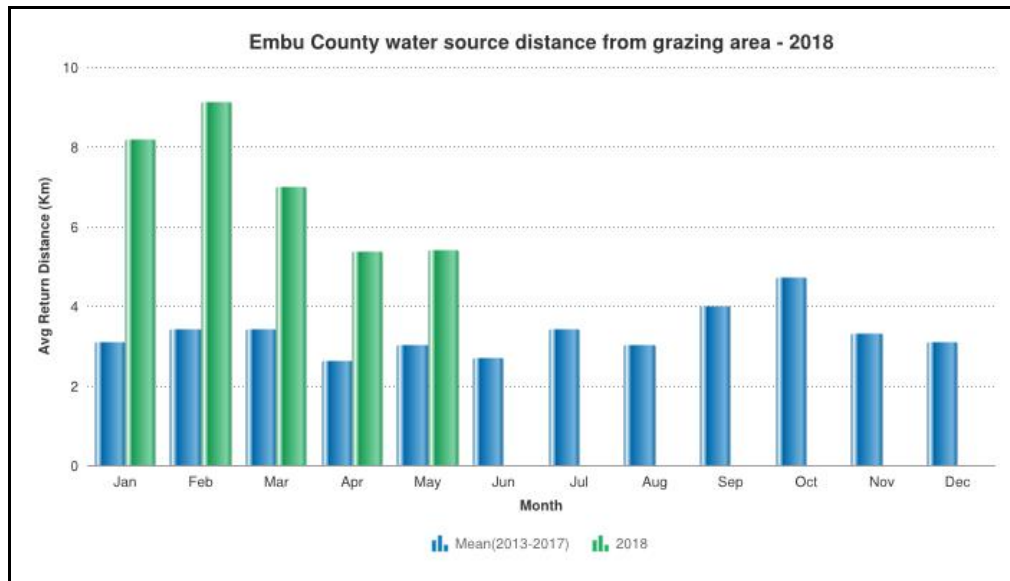


Figure 6: Water Access for Livestock in both sub counties

- The current average distances to water sources from grazing areas remained stable compared to previous month, 5.4 km.
- This is due to ongoing rains in both livelihood zones that recharged ground water sources for livestock and enhanced pasture regeneration.
- Watering of cattle is on a daily basis in both livelihood zones as water is readily available.
- The average distances trekked during the month under review are significantly higher than the five-year average distance at this time of the year, though the distances are expected to reduce further into the long rains season.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The body condition for small stock (sheep and goats) and cattle is good.
- The condition for both small and large stock has remained good as a result of forage regeneration during the long rains season.
- This trend is considered normal in this region at this time of the year

3.1.2 Livestock Diseases

- No livestock diseases reported in both livelihood zones during the reporting period

3.1.3 Milk Production

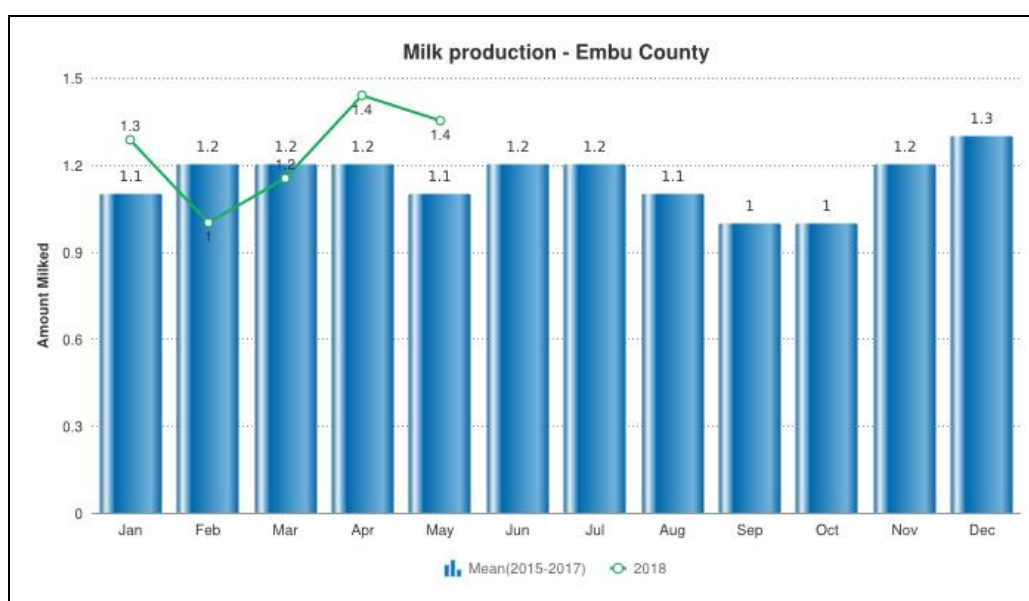


Figure 7: Milk Production in Mbeere North and South sub counties

- The average household milk production across the two livelihood zones remained stable as compared to previous month at 1.4 litres per household per day.
- The stability is due to the availability of water and pasture across both livelihood zones.
- Households in MF livelihood zone produced an average of 1.8 litres of milk per day while those in the MMF livelihood zone produced 1 litres of milk per day.
- The variation of milk production across the livelihood zones was occasioned by differentiation in breed.

3.2 Rain-Fed Crop Production

3.2.1 Stage and Condition of food Crops

- Green grams, beans and cow peas are ready for harvesting while maize crop is in grain filling stage of development across both livelihood zones.
- The condition of crops is good and the households expect to get good harvest.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

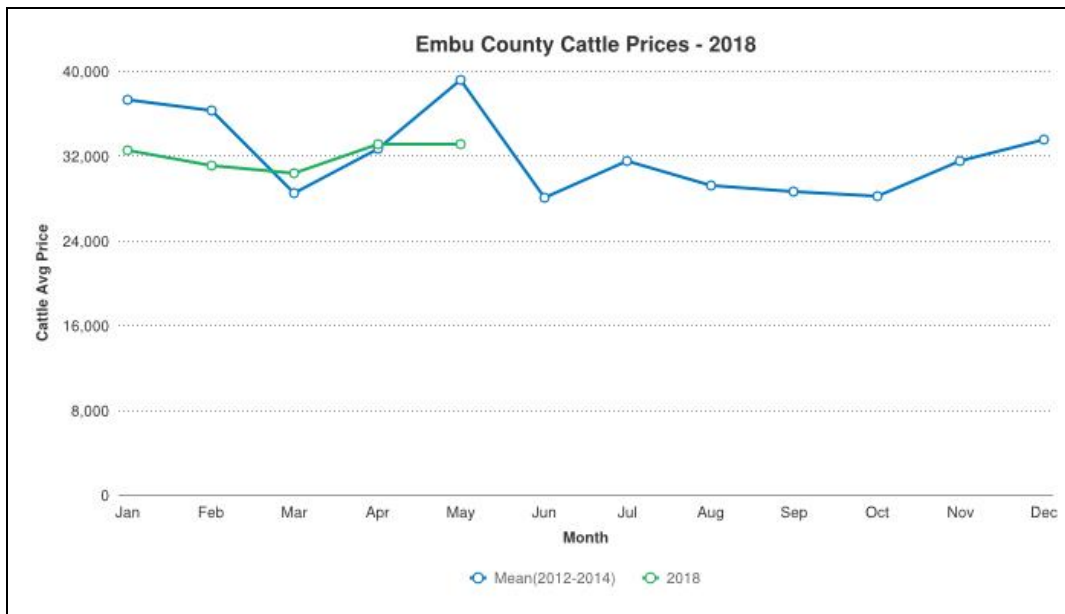


Figure 8: Market Cattle Prices in Mbeere North and South sub counties, Embu County

- The average price of mature 3-year old bull remained stable as compared to previous month at Ksh. 33,000.
- The stability is attributed to good body conditions for cattle across both livelihood zones occasioned by plenty of pasture and availability of water at reduced distances.
- Makutano livestock market recorded the highest average price for cattle of Ksh. 35,000, while Kiritiri and Ishiara livestock markets recorded average price of Ksh. 31,500 and 31,714 respectively.
- The average price recorded during the month is lower than the 3-year average price.

4.1.2 Goats Prices

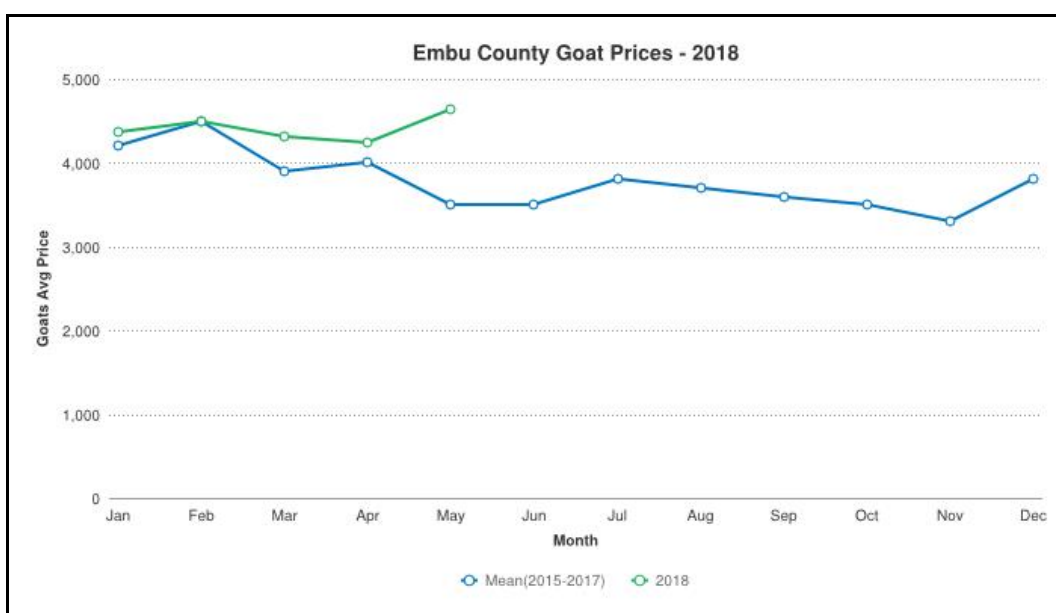


Figure 9: Average Goat Prices in Mbeere sub counties, Embu County

- The average market price for a 2-year goat slightly increased in the month of May to Ksh. 4600 from Ksh. 4,200 recorded in the previous month.

- The increase is attributed to improved body conditions occasioned by availability of good quality browse in both livelihood zones and low supply of goats in the market since no distress sales as households have started long rains harvesting.
- Makutano livestock market in MF zone recorded the highest average price of Ksh. 5,000, Ishiara livestock market in MMF zone recorded average price of Ksh. 4,700 while Kiritiri livestock market recorded average price of Ksh. 3,500.
- This variation in prices across the markets was as a result of differentiation in breed and the market supply-demand forces.
- The current price is above normal at this particular time of the year and the prices are expected remain high for the next 3-4 months.

4.2 FOOD PRICES

4.2.1 Maize Prices

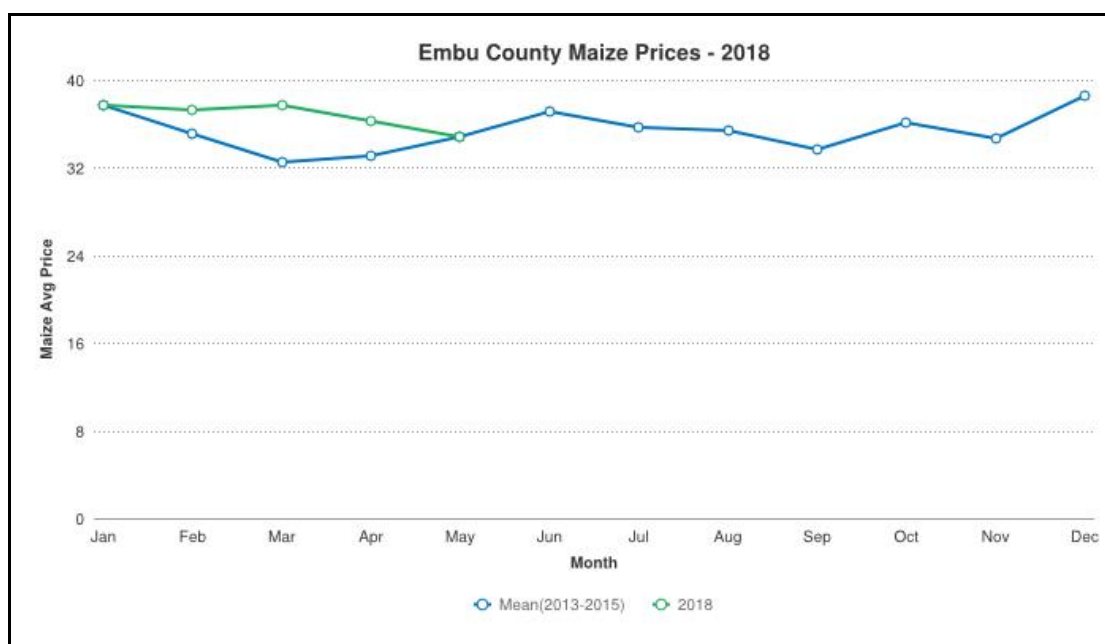


Figure 10: Average Maize Price in Mbeere North and South sub counties

- The average market price of maize remained stable at Ksh. 34 per kilogram.
- The stability is due to reduced demand for the commodity as households start to benefit from the early long rains harvests.
- One kilogram of maize was retailing at Ksh.40 in Makutano cereals market, Ksh.38 in Kiritiri cereals market and Ksh.29 in Ishiara cereal market.
- The average price recorded in the current month is slightly above the 3-year average for both livelihood zones.

4.2.2 Posho (Local Maize Meal)

- The average price per kilogram of 'posho' across the two livelihood zones slightly decreased from Ksh. 50 recorded in April to Ksh. 43 in the reporting month.
- The decrease is attributed to decreased demand of the commodity from the households in both livelihood zones as early harvests of maize and other cereals enhanced household stocks.
- The marginal mixed farming zone recorded high average price for 'posho' at Ksh. 55 as compared to the mixed farming zone that recorded an average 'posho' price of Ksh. 50

4.2.3 Beans Prices

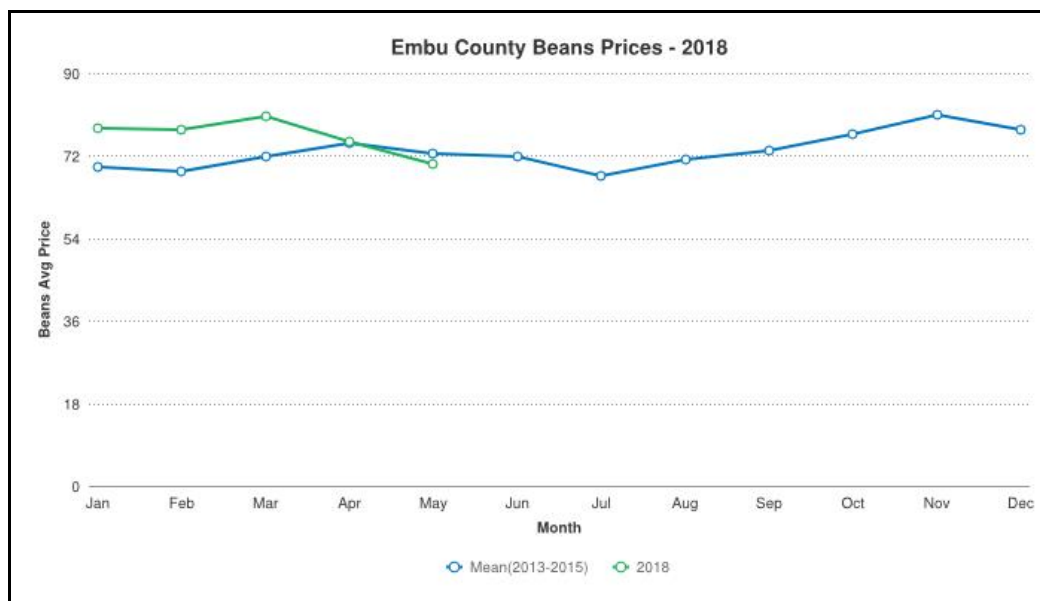


Figure 11: Average Beans Price in Mbeere North and South sub counties

- The average price per kilogram of beans across the two livelihood zones reduced further by 6.6 percent to Ksh. 70.
- The decrease is attributed to long rains harvests of pulses at household level.
- One kilogram of beans was retailing at Ksh.82 in Makutano cereal market, Ksh. 70 in Kiritiri cereals market, and Ksh. 61 in Ishiara cereal market.
- The variation of price across various markets is as a result of the market demand and supply forces.
- The current price is slightly below normal at this time of the year.

4.2.4 Green Grams Prices

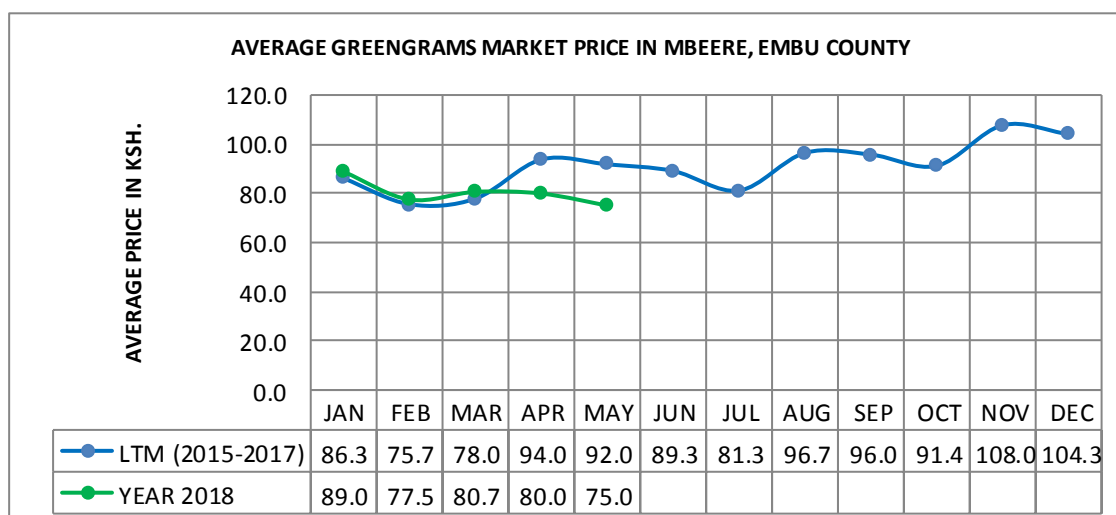


Figure 12: Average Price per kilogram of Green Grams in Mbeere North and South sub counties

- The average price per kilogram of green grams across the two livelihood zones decreased further to Kshs.75
- The decrease in average price was occasioned by harvest of green grams which replenished the household stocks.
- The current average price is Ksh. 17 lower than the three-year average for the region in a similar month; the prices are projected to decrease as the harvests of pulses continue.

4.3 Household Income

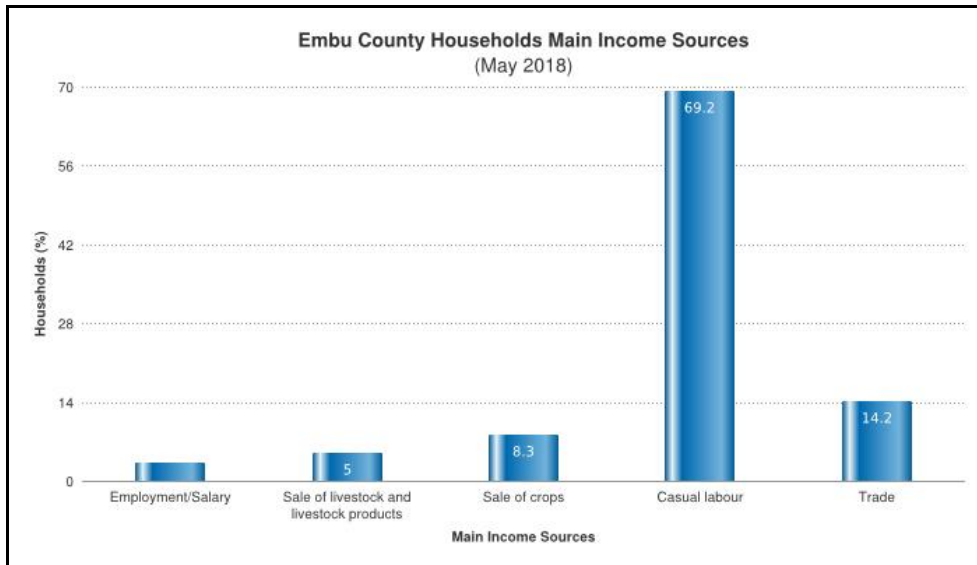


Figure 13: Income sources for households in Mbeere North and South sub counties

- During the month, households in both livelihood zones drew their income from casual labour, salaries/ wages, sale of livestock and livestock products and petty trade.
- The proportion of households that relied on casual labour remained high as agricultural activities continued in most farms.
- The change in various sources employed and proportions of households in various income generation activities is normal as households constantly embrace new and readily available ways of earning income.
- The main sources of income for households remained normal at this time of the year.

4.4 Terms of Trade (ToT)

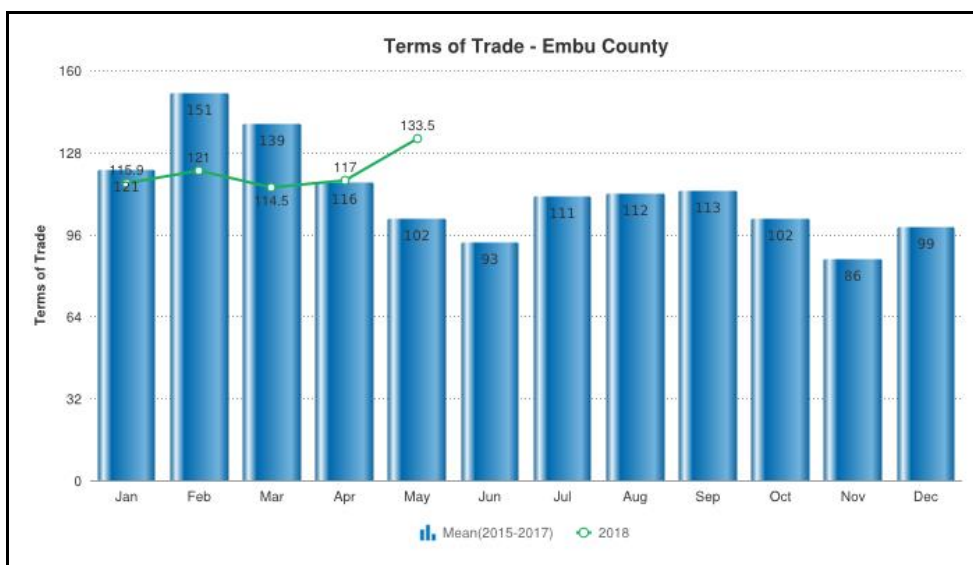


Figure 14: Terms of Trade in Mbeere North and South Sub Counties

- The Terms of Trade (goat versus maize) increased significantly during the month of May.
- The increase is occasioned by increase in goat prices and decreased maize prices during the reporting month.
- The observed terms of trade are above normal for the two livelihood zones at this time of the year.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

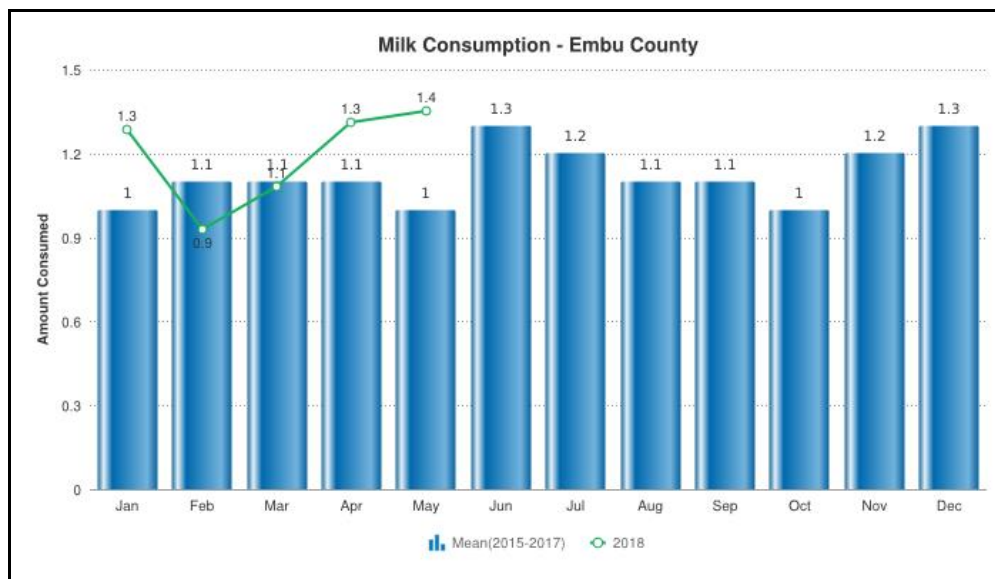


Figure 15: Milk Consumption in Mbeere North and South sub counties

- The average daily household milk consumption increased further to 1.4 litres per household per day.
- The increase is due to improved milk production during the reporting month.
- Households in the mixed farming zone consumed 1.5 litres per day as compared to 1. litre per household per day consumed by households in the marginal mixed farming zone.
- This trend is considered normal and within the expected range in this region at this particular time of the year.

5.2 Food Consumption Score

The food consumption score gives the dietary diversity of the meals consumed by the sampled households.

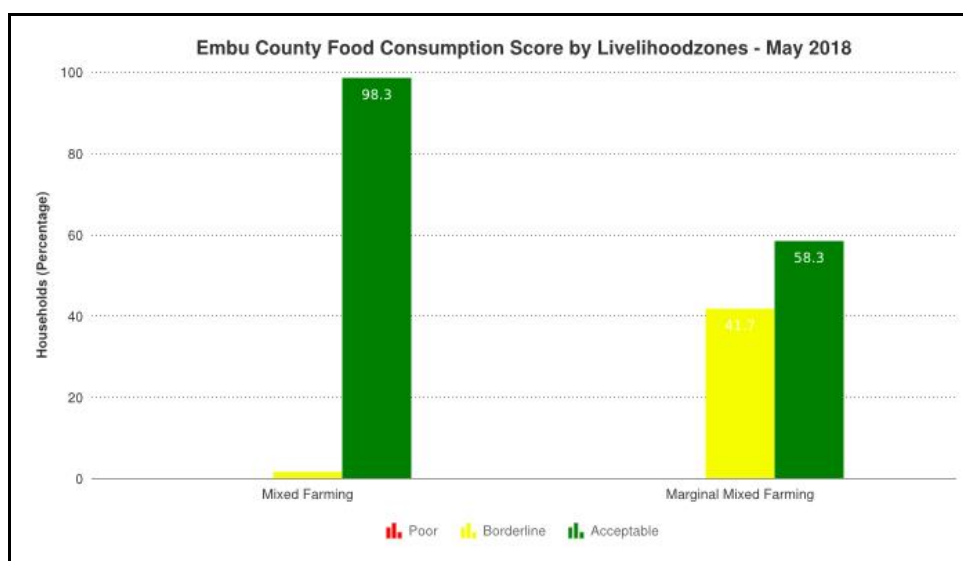


Figure 17: FCS for Households in livelihood zones in Mbeere [n=120 hh]

- During the month, 78 percent of the households from both livelihood zones were classified in acceptable food consumption category while only 22 percent were classified in the borderline food consumption category.
- Marginal mixed farming livelihood zone contributes 35 percent of the sampled households to the borderline consumption category compared to only 1 percent from the mixed farming zone.
- Even though early harvests have been realised at household level, most meals are only comprised of two or three food groups (cereals and pulses).

5.3 Health and Nutritional Status

5.3.1 Nutritional Status of Children

The Mid Upper Arm Circumference (MUAC) of children below five years of age sampled from the selected households is monitored monthly to detect those at risk of malnutrition.

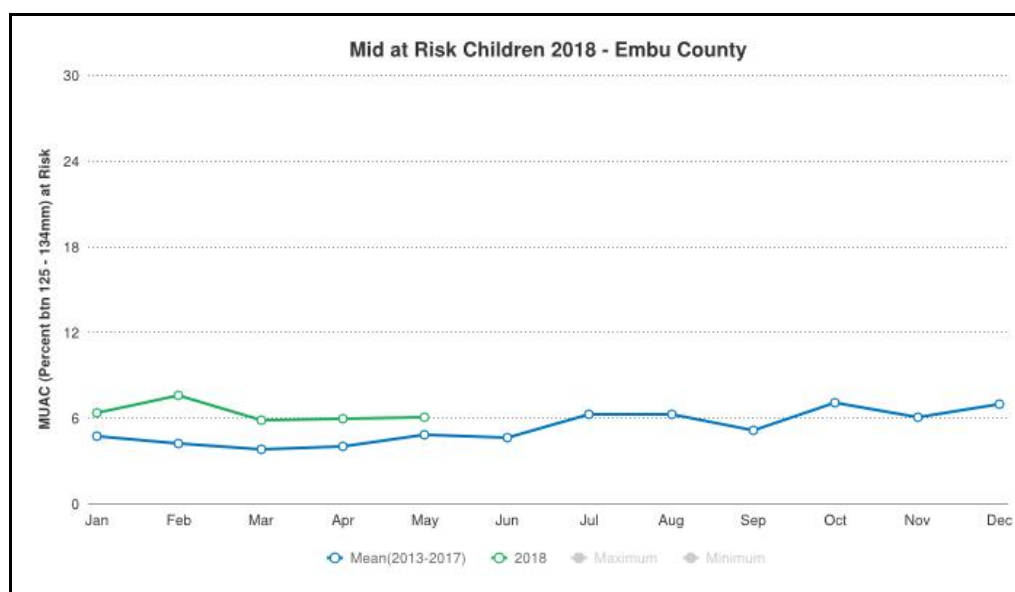


Figure 16: Children at Risk of Malnutrition in Mbeere Sub Counties [n=568]

- The proportion of the sampled children at risk of malnutrition during the reporting month remained stable at 5.9 percent.
- The stability is attributable to improved purchasing power of households and availability of food at household level due to early harvests realised.
- Some households reported children consumption of goat milk which positively impacted on their health and nutrition.
- The proportion of children at risk of malnutrition in the month under review is 25 percent higher than the five-year average at this time of the year.

5.2.2 Health

- No disease outbreaks reported in both livelihood zones during the month under review.
- County Department of Public Health and Sanitation continue with routine disease surveillance. This is after few cases of diarrhoea was reported previous month due to, drinking of water from open ground sources.

5.4 Coping Strategy Index

The Coping Strategy Index is derived from the coping mechanisms that households engage in when they lack food or money to buy food.

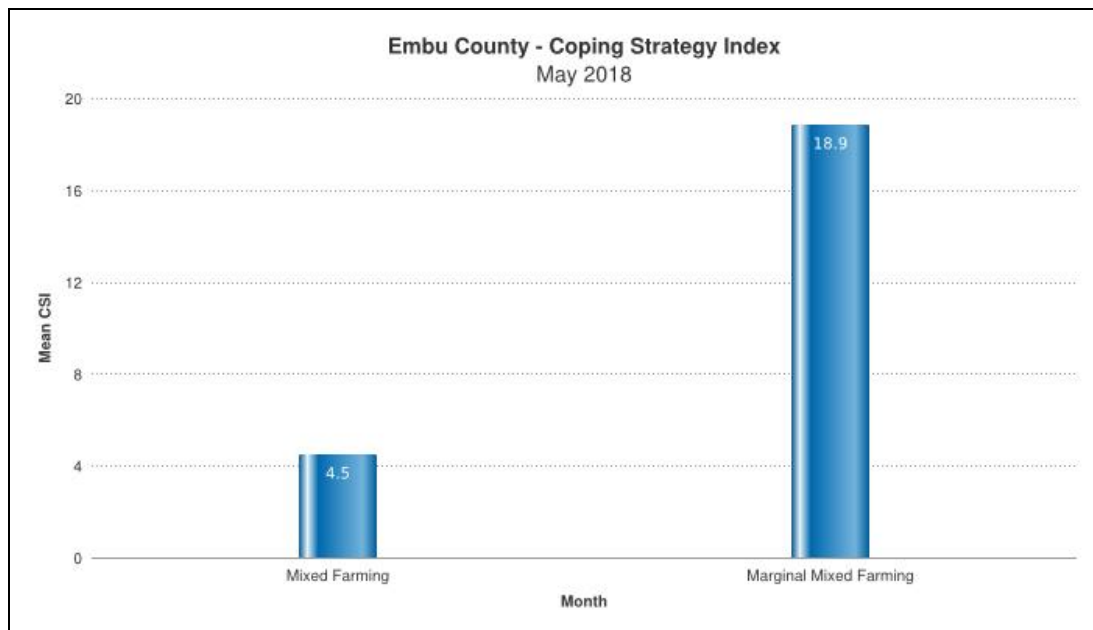


Figure 18: CSI for Sampled Households in Mbeere Sub Counties [n=120]

- The mean Coping Strategies Index remained stable as compared to the previous month at 11.68
- The stability is attributable to improved purchasing power of households due to favourable terms of trade and start of long rains harvest thus replenishing household stocks.
- The marginal mixed farming livelihood zone recorded a higher coping strategy index of 18.9 while mixed farming livelihood zone recorded coping strategy index 4.5

5.4.1 Implication of the above Indicators to Food Security

- Early harvest of cowpeas, green grams and beans in both livelihood zones brought reprieve to the households by replenishing stocks.
- Above normal livestock prices during the month improved the purchasing power of the livestock keepers
- The good pasture and browse conditions across both livelihood zones improved livestock productivity hence high milk consumption.
- Increased milk consumption at household level impacted positively on children health and nutrition.
- Income from agricultural casual labour continued to improve the purchasing power of households.

6.0 CURRENT INTERVENTION MEASURES

6.1. Non-Food Interventions

Intervention	Implementer	Beneficiaries
<ul style="list-style-type: none"> • Routine Promotion of good animal husbandry practices • Routine livestock diseases surveillance 	County Department of Livestock Production and Veterinary Services	Livestock farmers from both sub counties
<ul style="list-style-type: none"> • Routine Disease Surveillance • Routine screening and management of malnutrition at health facility level • Routine Vitamin A and Zinc Supplementation and deworming at health facility level • Iron Folate Supplementation among Pregnant Women • Community MUAC monitoring for the acute and moderate malnutrition 	County Department of Health Services NDMA /CHVs/health facilities	Mothers and children who visited health facilities in both sub counties Households and health facilities in targeted community areas

6.2. Food Interventions

- No relief food was distributed during the month of May

7.0 EMERGING ISSUES

- Damage of bridges and roads by above normal rains hence reduced/no accessibility of some areas (mostly in areas of Makima and Mwea wards).

7.1 Food Security Prognosis (Three months)

- Households are expected to benefit from the early harvests from the long rain season, green grams, beans and cow peas are already being consumed at households while maize is almost ready for harvest.
- Livestock production is expected to improve further as a result of pasture and browse availability and reduced distances to water sources.
- The proportion of children at risk of malnutrition will likely reduce as the households expect to benefit from long rain season harvests and improved livestock productivity.
- Food commodity prices are expected to remain lower due to increased market supply occasioned by the harvest from within the county and also from other neighbouring counties

8.0 RECOMMENDATIONS

Sector	Recommended Activities	Implementers	Expected Outcome/Impact
AGRICULTURE	<ul style="list-style-type: none"> Sensitization on post-harvest handling 	<p>County government</p> <p>Other Stakeholders</p>	Reduce post-harvest losses
LIVESTOCK	<ul style="list-style-type: none"> Routine disease surveillance and husbandry practices Promotion of goat rearing and improvement of local breed. Fodder conservation Pasture reseeding 	<p>County government</p> <p>Other Stakeholders</p>	<p>Increased productivity and Diversification of income</p> <p>Increased feed production</p>
WATER AND SANITATION	<ul style="list-style-type: none"> Pipeline extension to cover unreached areas. Purchase and provision of water treatment chemicals to households that rely on rivers, boreholes and water pans. Repair of spillways and embankment for earth dams 	<p>County government</p> <p>Upper Tana Natural Resource Management Project</p> <p>Other Stakeholders</p>	Improved potable water accessibility and consumption
HEALTH AND NUTRITION	<ul style="list-style-type: none"> Provision of commodities for management of various types of malnutrition at health facilities. Conduct nutritional survey covering both sub counties to establish health and nutrition indicators baselines. Community outreaches to sensitize the community on proper feeding practices and early detection of children at risk of malnutrition. Sensitization on use of water treatment chemicals for households that depend on pans and rivers. 	<p>County department of health</p> <p>NDMA</p> <p>Other Development partners (WFP, UNICEF, KRCS)</p>	Management of malnutrition amongst under five children
EDUCATION	<ul style="list-style-type: none"> Expansion of School Meals Program to cover all schools in need from both sub counties. Repair of toilets and roofs destroyed by floods and strong winds Supply of water harvesting tanks to needy schools 	<p>County government</p> <p>National government</p> <p>Other Stakeholders</p>	<p>Improved school attendance</p> <p>Improved school sanitation</p>