

**National Drought Management Authority**  
**EMBU (MBEERE) COUNTY**  
**DROUGHT EARLY WARNING BULLETIN FOR JUNE 2018**



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	Normal	Stable
Biophysical Indicators	Value	Normal
Rainfall (% of Normal)	171%	80% -120%
VCI-3Month	65.48	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	157.6	93
Milk Consumption	1.4	1.0-1.5
Average Water Distance for Households (Km)	4 Km	2.8 Km
Average Grazing-Water point Distance (Km)	5.4 Km	2.7 Km
Utilization Indicators	Value	Normal
% of children at risk (MUAC)	5.9	4.6
Coping Strategy Index (CSI)	11.68	7-14

**Drought Situation & EW Phase Classification**

**Biophysical Indicators**

**Rainfall:** The County received off season rainfall in the month under review 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 long rains received.

**Socio Economic Indicators (Impact Indicators)**

- **Production indicators:** Harvesting is the main agricultural activity in both livelihood zones. 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 remained stable 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 remains stable as compared to the previous month. The Coping strategy index decreased during the reporting month due to replenished household stock.

**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

- Erratic and poorly distributed rains were recorded in both livelihood zones during the month.
- Cessation of the long rains was expected during the last week of May, but the area continued to receive offseason rains in the month of June.

### 1.2 Amount of Rainfall and Spatial Distribution

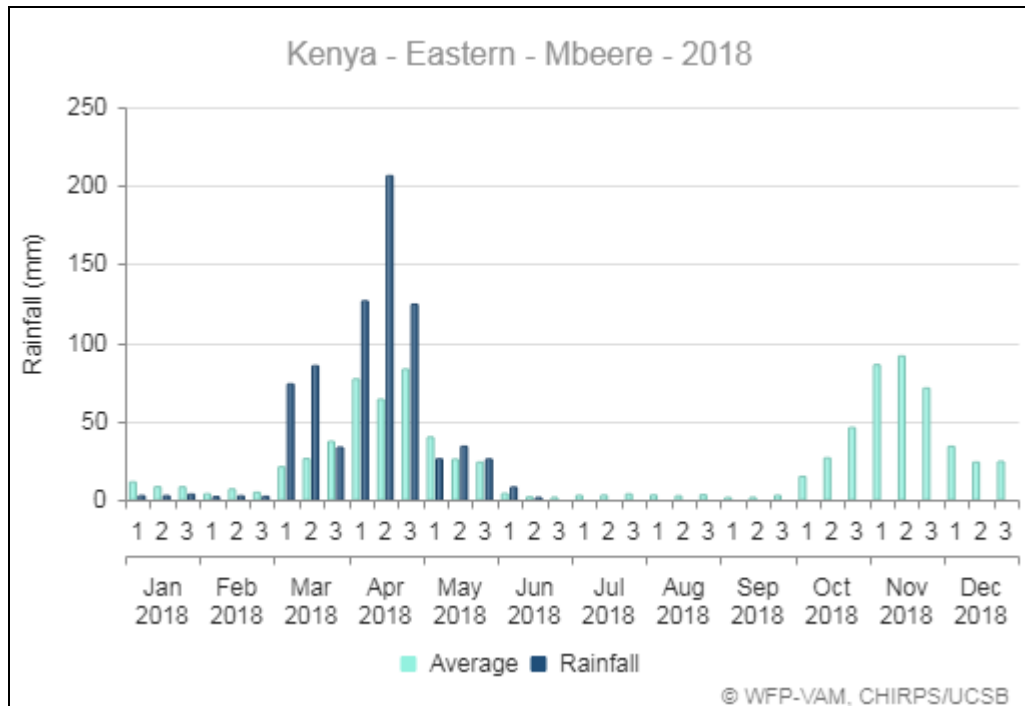


Figure 1: Average amount of rainfall recorded in Mbeere Sub Counties, Embu County

- The two sub counties received an average amount of 4.5 mm of rainfall compared to long term average amount of 2.68 mm for the month of June.
- 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 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) slightly decreased from 69.58 recorded in the previous month to 65.48 in the reporting month.
- Mbeere South Sub County recorded a higher 3-month Vegetation Condition Index of 67.59 as compared to Mbeere North Sub County with Index of 63.37.

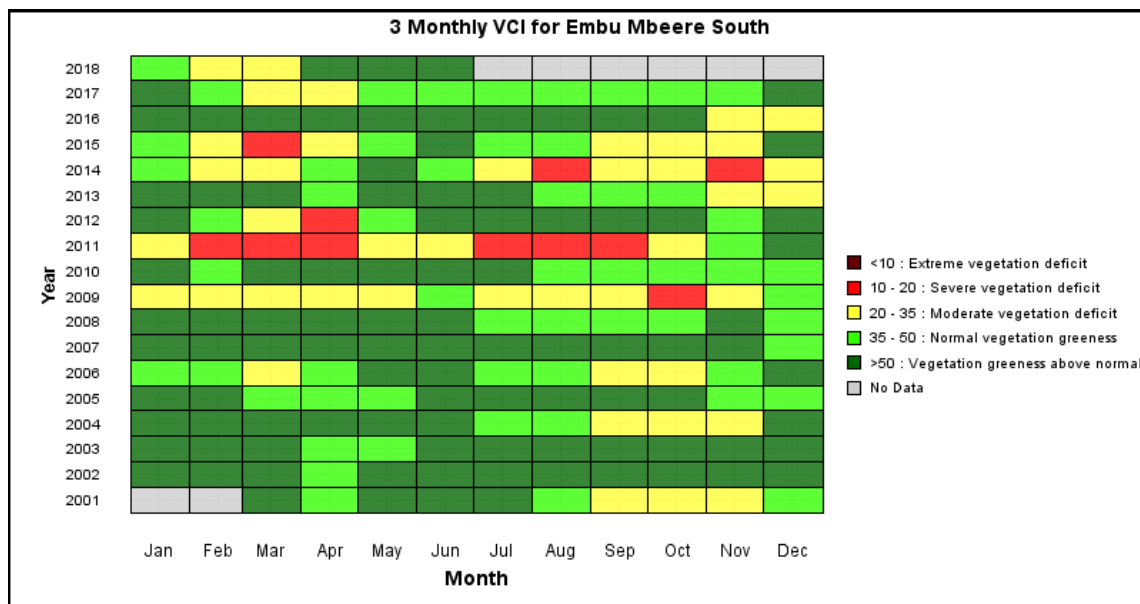


Figure 2: 3-Month VCI for Mbeere South Sub County [Source: Bokku University -Austria]

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

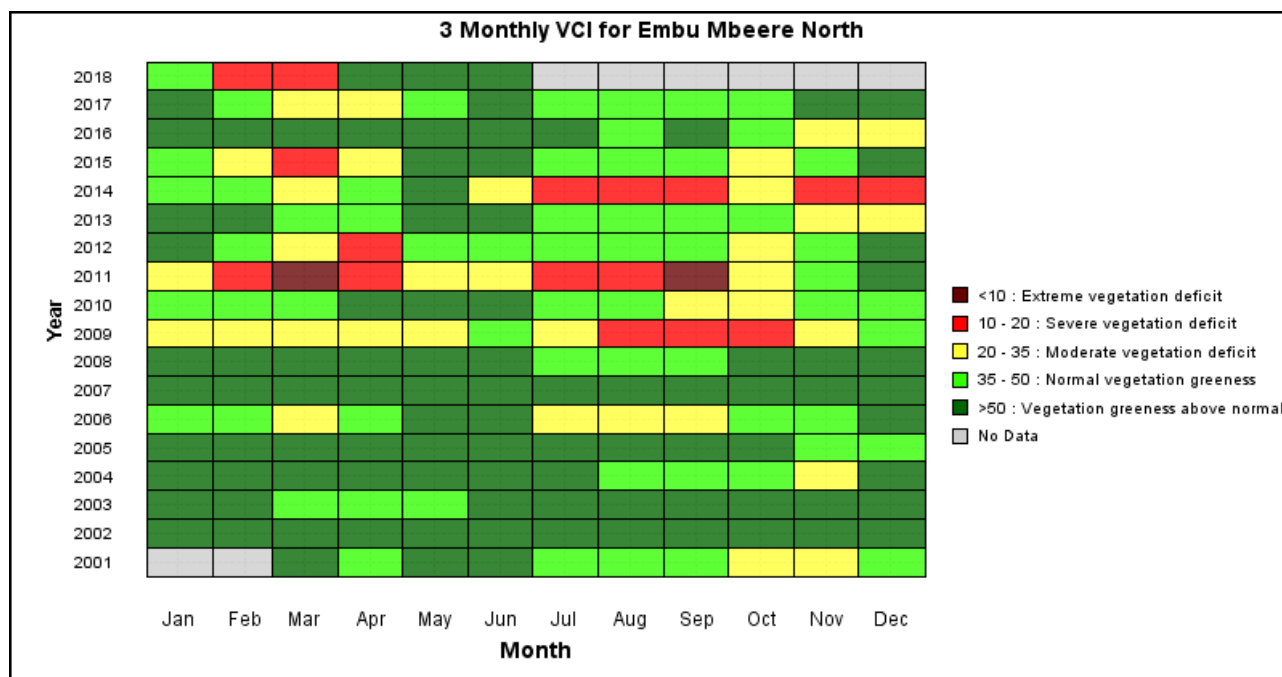


Figure 2: 3-Month VCI for Mbeere North Sub County [Source: Bokku University -Austria]

## 2.1.2 Pasture Condition

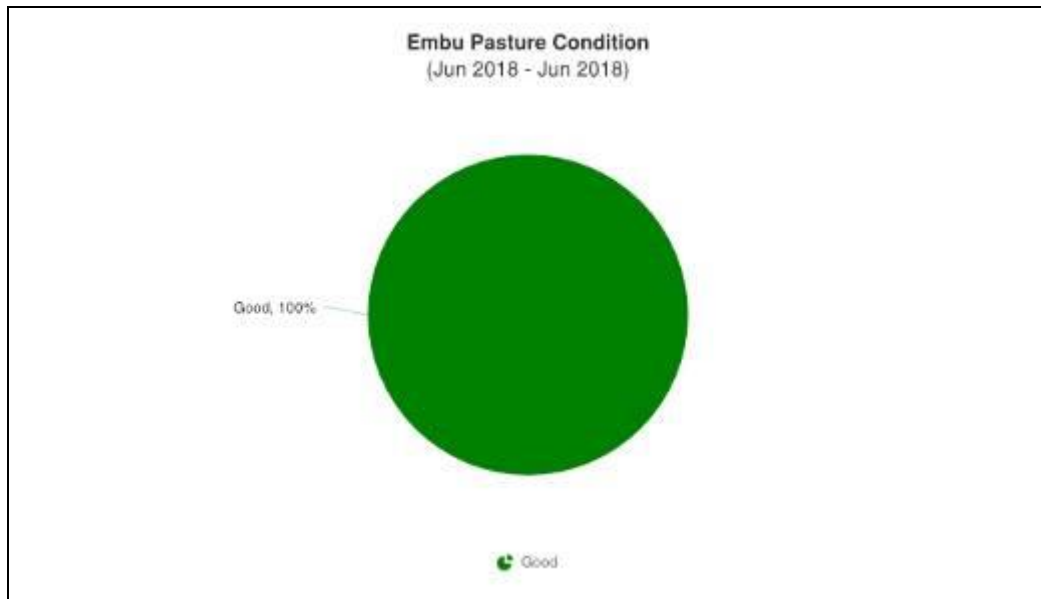


Figure 3a: Pasture Condition for Livelihood Zones in Mbeere sub counties, Embu County

- The pasture condition across both livelihood zones remains good.
- The good condition is as a result of above normal rains recorded during 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

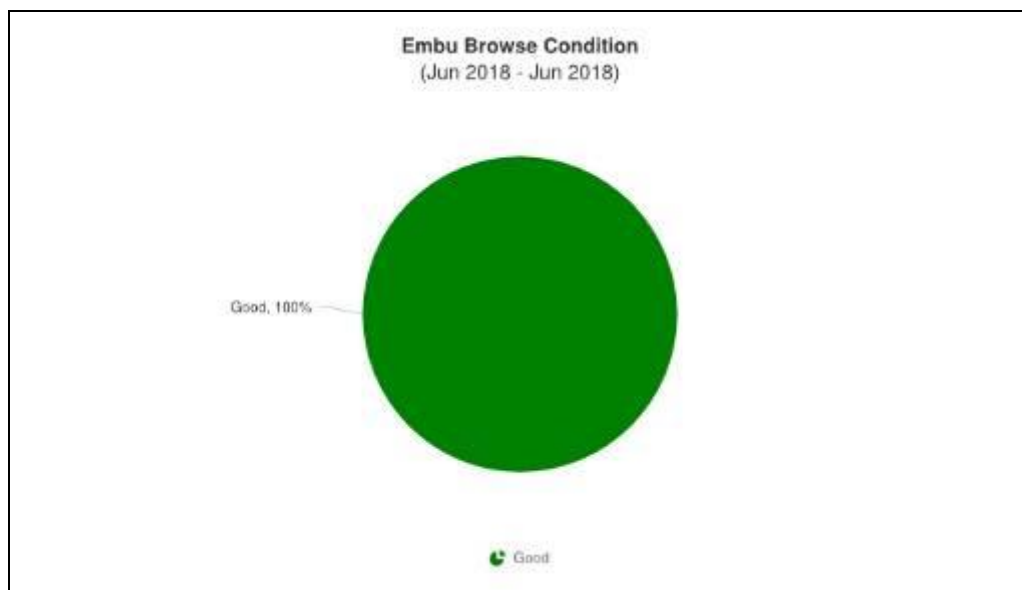


Figure 3b: Browse Condition for Livelihood Zones in Mbeere sub counties, Embu County

- The browse condition remains good in both livelihood zones during the month of June.
- The good condition is as a result of above normal long rains recorded across both livelihoods.
- The browse is expected to remain good for the next 3-4 months.
- The browse condition is above normal at this time of the year.

## 2.2 WATER RESOURCE

### 2.2.1 Water Sources

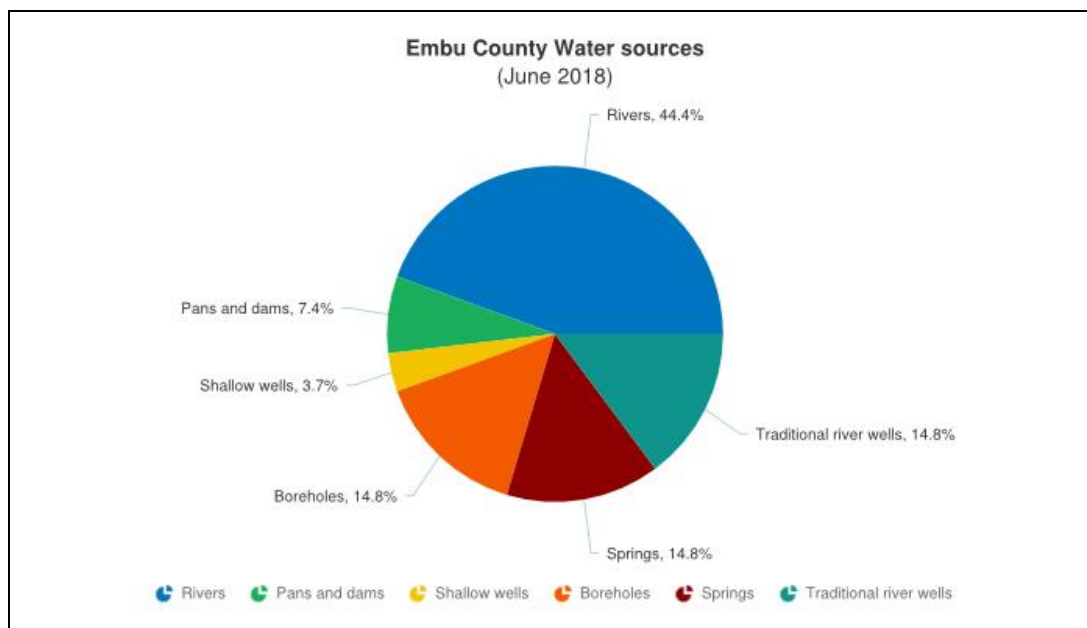


Figure 4: Water Sources for Mbeere North and South sub counties, Embu County

- The main water sources in the month under review for both livestock and domestic use across the two livelihood zones are; rivers, boreholes and traditional river wells.
- Households who had tanks for water harvesting relied on roof catchment water.
- The ground water sources recharge is at 80 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

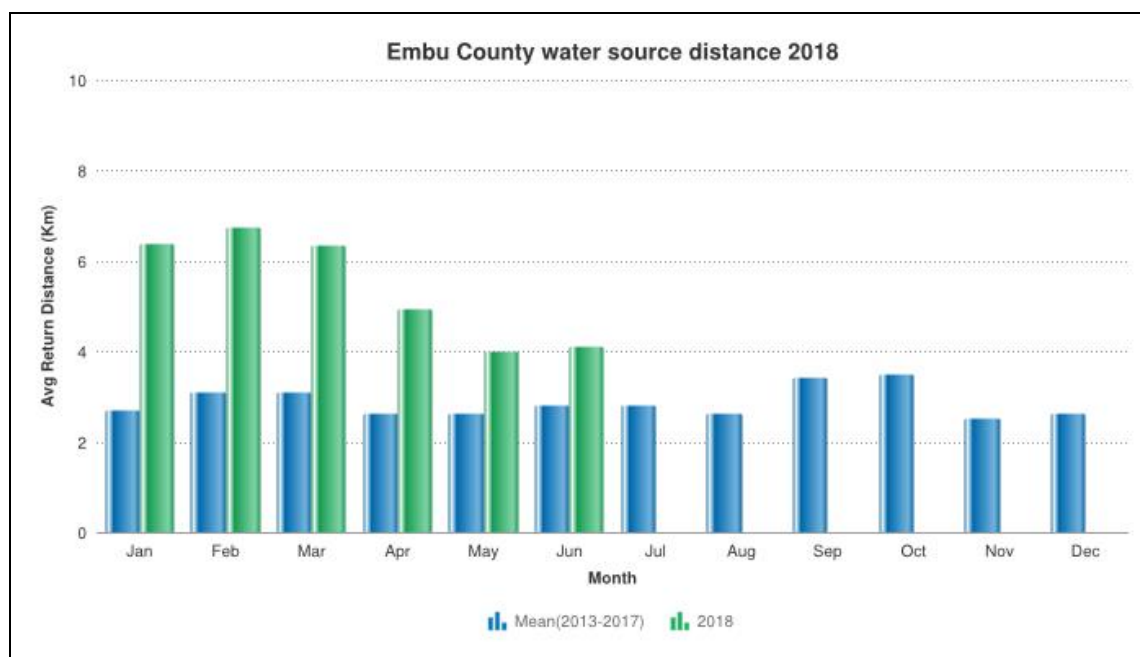


Figure 5: Water Access for Households in both sub counties

- The average distances from the households to water sources remained stable compared to previous month at 4Km.
- The stability is attributed to fully recharged near water sources from the long rains
- Households in the MF Livelihood Zone trekked for 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

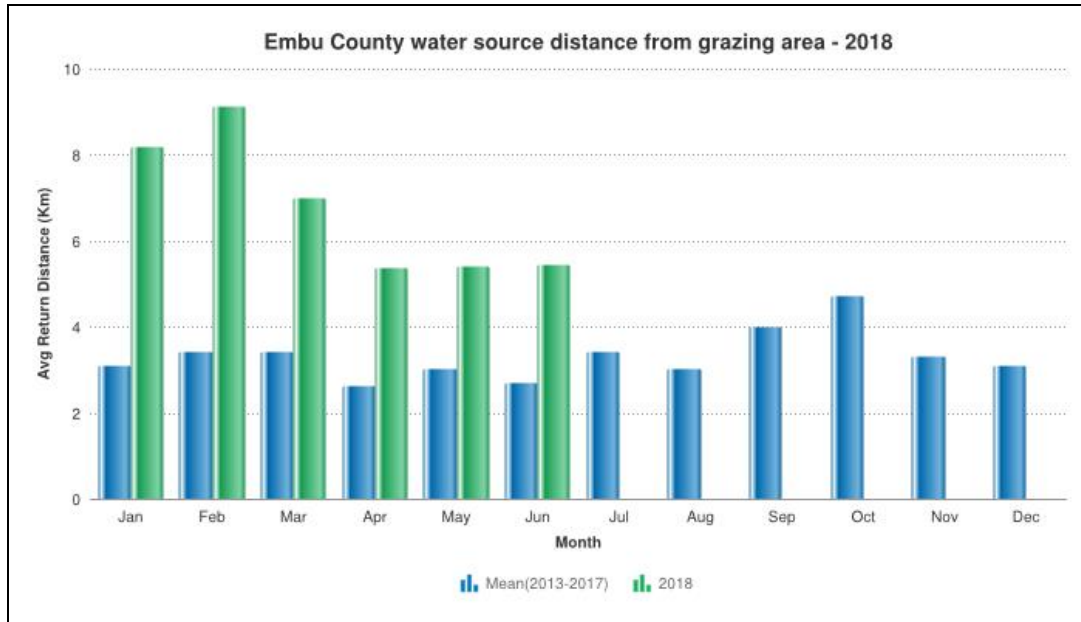


Figure 6: Water Access for Livestock in both sub counties

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

### 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 with smooth appearance.
- The condition for both small and large stock is 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

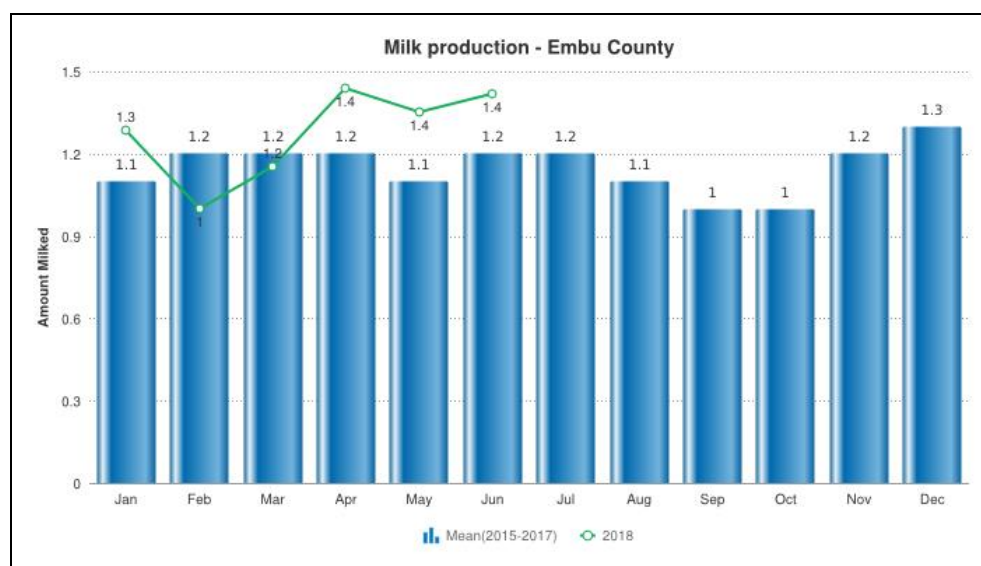


Figure 7: Milk Production in Mbeere North and South sub counties

- The average household milk production across the two livelihood zones remained stable 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 1.6 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

- Harvesting of beans, cowpeas and green grams was ongoing across both the marginal mixed farming and mixed farming livelihood zones. Harvesting of maize, millet and sorghum has started in some areas in 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

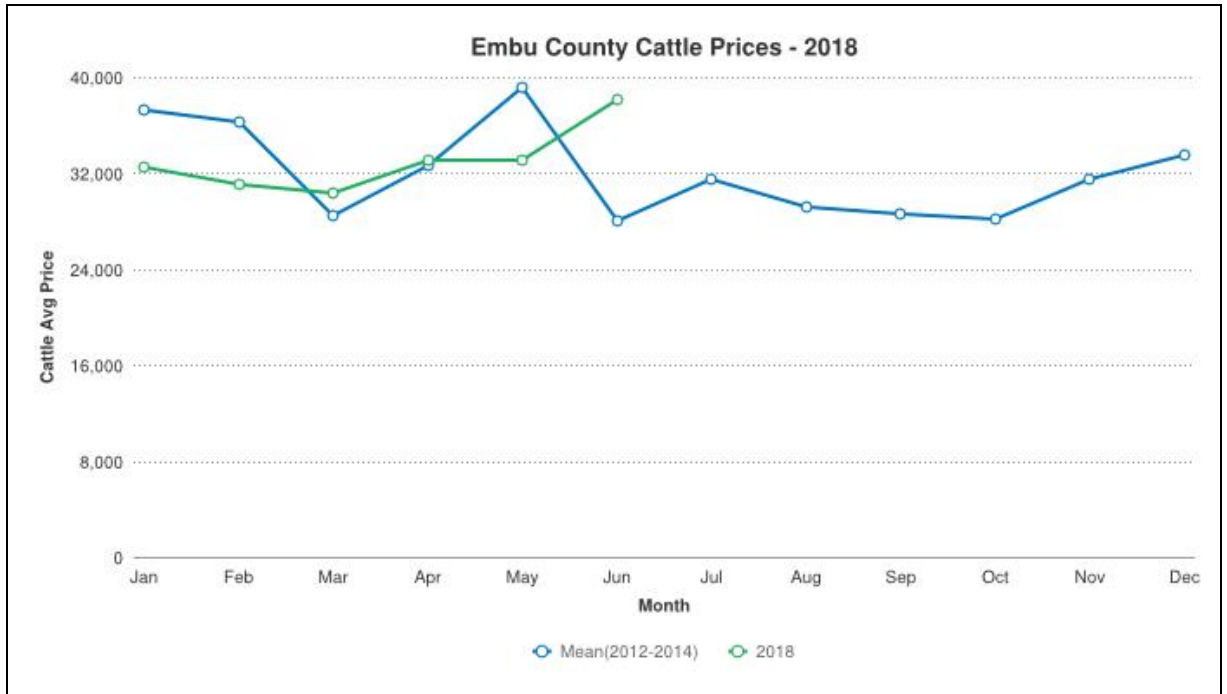


Figure 8: Market Cattle Prices in Mbeere North and South sub counties, Embu County

- The average price of mature 3-year old bull increased in the reporting to Ksh. 38,000 from Ksh. 33,000 recorded previous month.
- The increase 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. 40,000, while Kiritiri and Ishiara livestock markets recorded average price of Ksh. 35,000 and 38,375 respectively.
- The average price recorded during the month is 36 percent higher than the 3-year average price.



## 4.1.2 Goats Prices

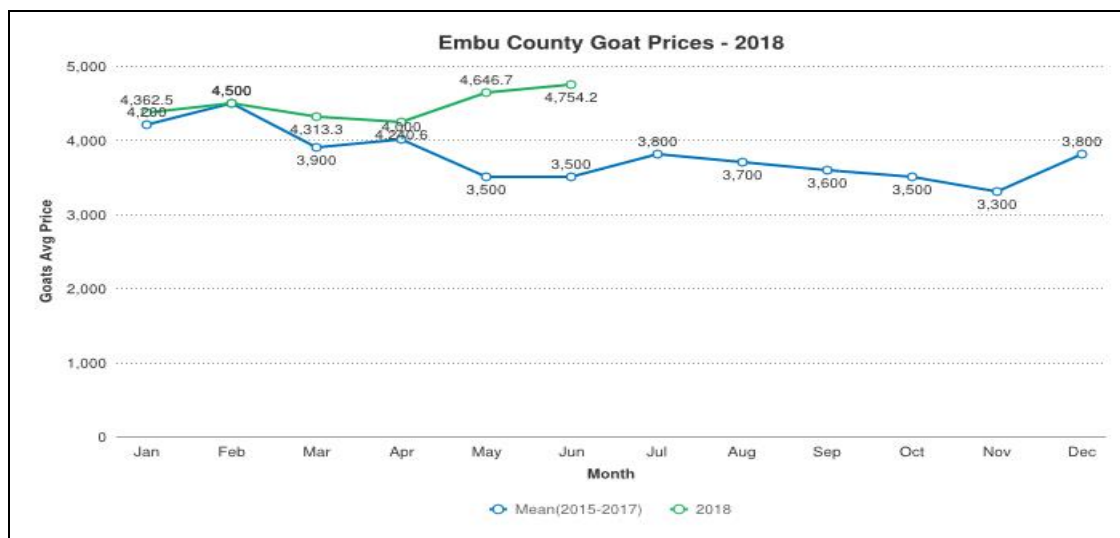


Figure 9: Average Goat Prices in Mbeere sub counties, Embu County

- The average market price for a 2-year goat marginally increased in the month of June to Ksh. 4,700 from Ksh. 4,600 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 average price of Ksh. 5,000, Ishiara livestock market in MMF zone recorded average price of Ksh. 5,000 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

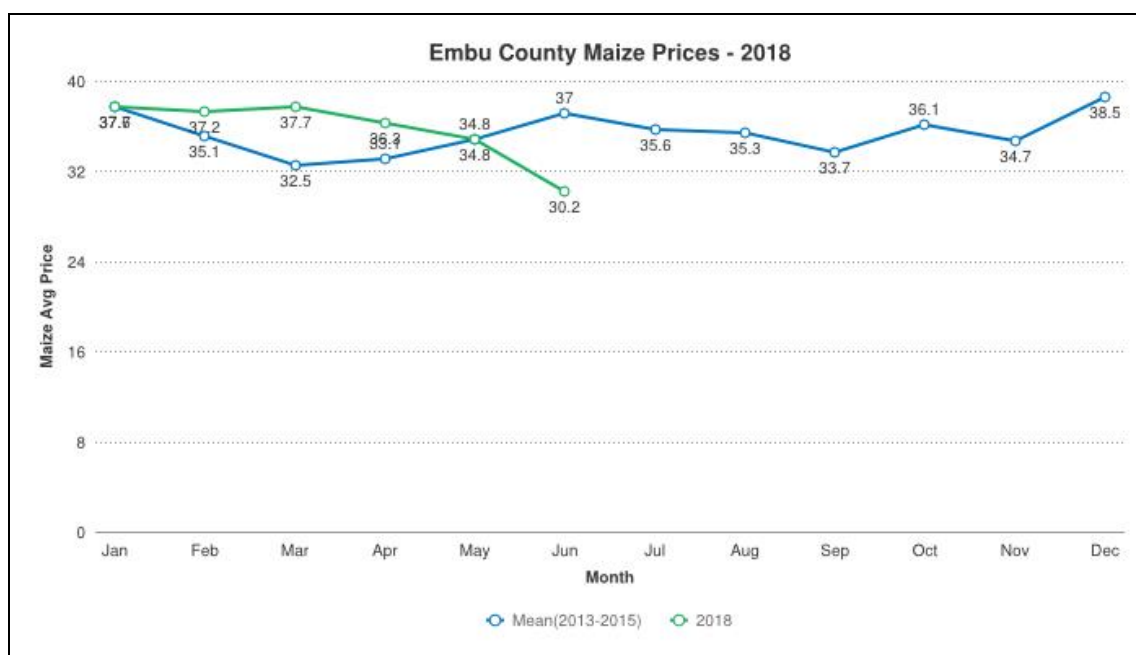


Figure 10: Average Maize Price in Mbeere North and South sub counties

- The average market price of maize decreased in the month of June to Ksh.30 from Ksh.35 per kilogram recorded in the previous month.
- The decrease is attributed to early harvests of the commodity at household level hence low demand at retail shops.
- One kilogram of maize was retailing at Ksh.36 in Makutano cereals market, Ksh.36 in Kiritiri cereals market and Ksh.28 in Ishiara cereal market.
- The average price recorded in the current month is below 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 remained stable at Ksh. 44 compared to previous month.
- The marginal mixed farming zone recorded high average price for ‘*posho*’ at Ksh. 57 as compared to the mixed farming zone that recorded an average ‘*posho*’ price of Ksh. 45

#### 4.2.3 Beans Prices

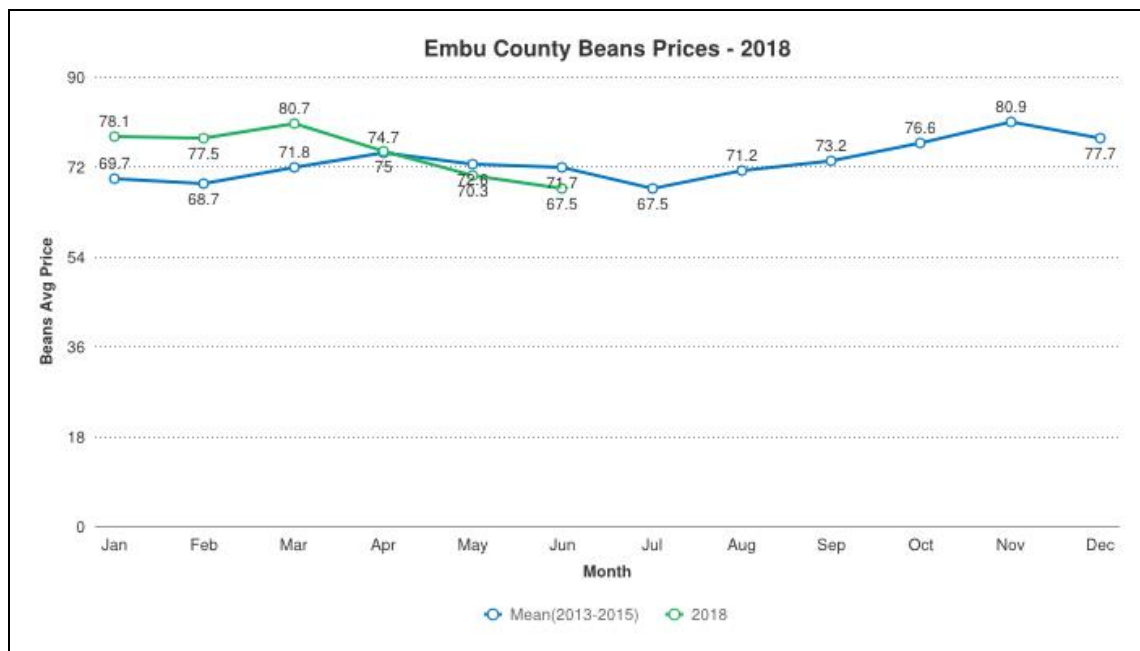


Figure 11: Average Beans Price in Mbeere North and South sub counties

- The average price per kilogram of beans across the two livelihood zones slightly reduced from Ksh. 70 recorded previous month, to Ksh.67 in the reporting month.
- The fall is attributed to long rains harvests of pulses at household level.
- One kilogram of beans was retailing at Ksh.100 in Makutano cereal market, Ksh. 50 in Kiritiri cereals market, and Ksh. 64in 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

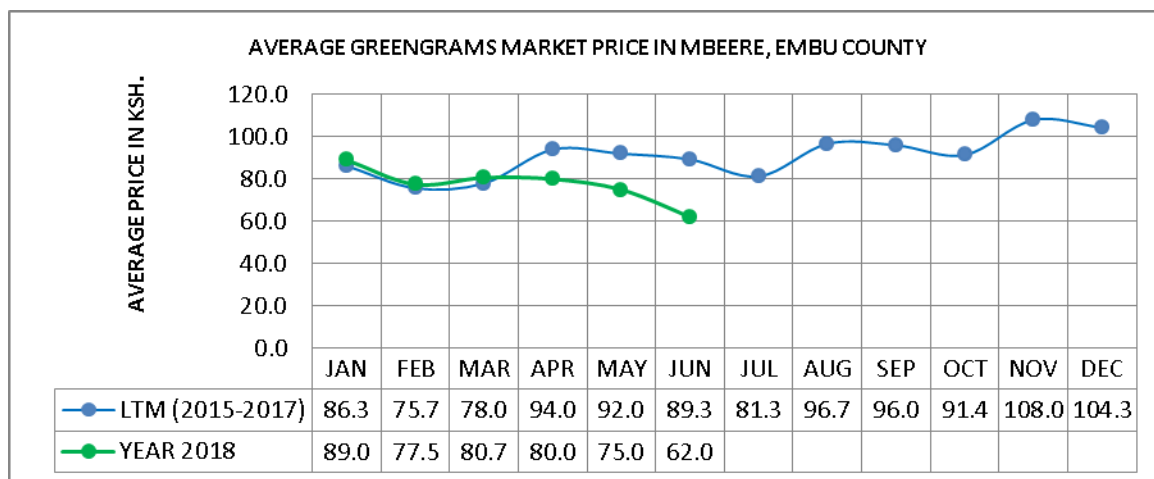


Figure 12: Average Price per kilogram of Green Grams in Mbeere North and South sub counties

- The average price per kilogram of green grams across the two livelihood zones decreased to Kshs.62 from Ksh 75 recorded in the previous month of May.
- The decrease in average price was prompted by harvest of green grams which replenished the household stocks.
- The current average price is Ksh.27 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

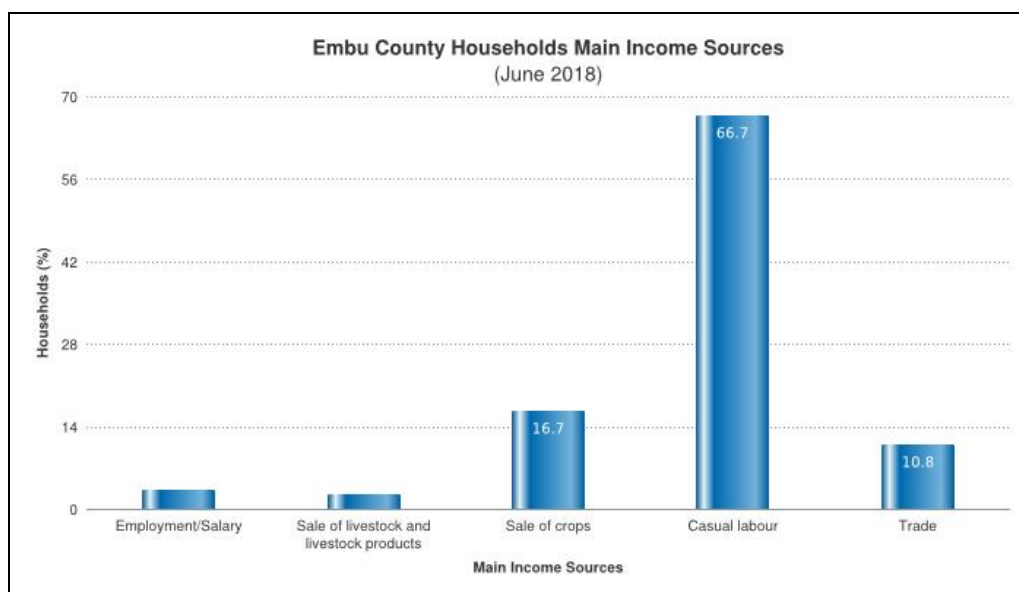


Figure 13: Income sources for households in Mbeere North and South sub counties

- During the reporting 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.
- There was increase on proportion of the households that relied on sale of crops, this is attributed to harvests realised from long rains. Farmers are selling surplus to meet other basic needs.
- The main sources of income for households remained normal at this time of the year.

#### 4.4 Terms of Trade (ToT)

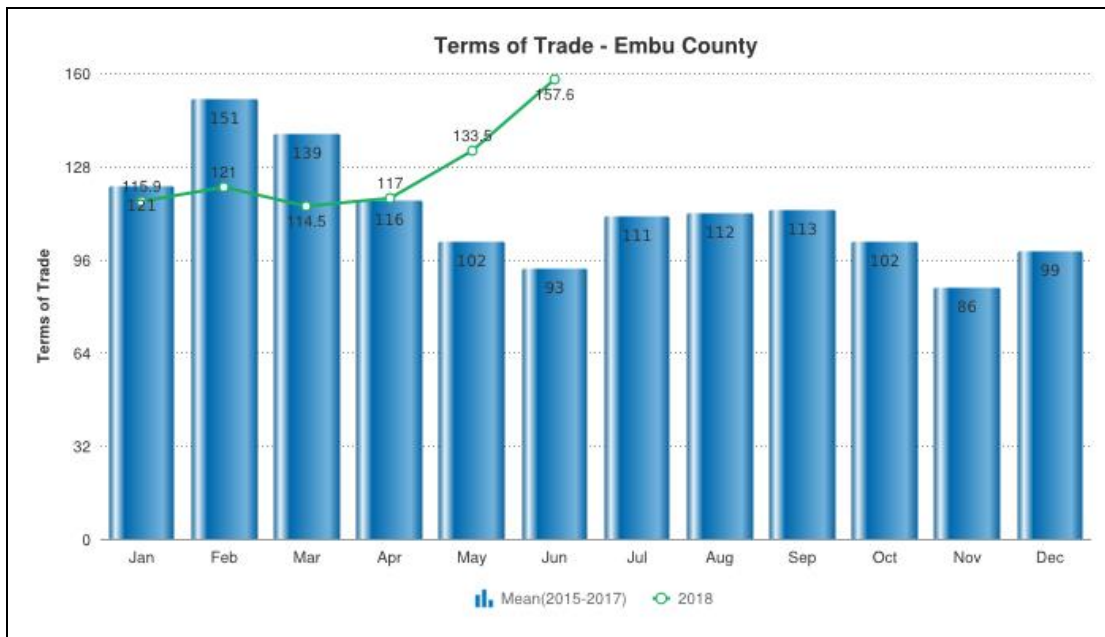


Figure 14: Terms of Trade in Mbeere North and South Sub Counties

- The Terms of Trade (goat versus maize) significantly increased during the month of June.
- 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

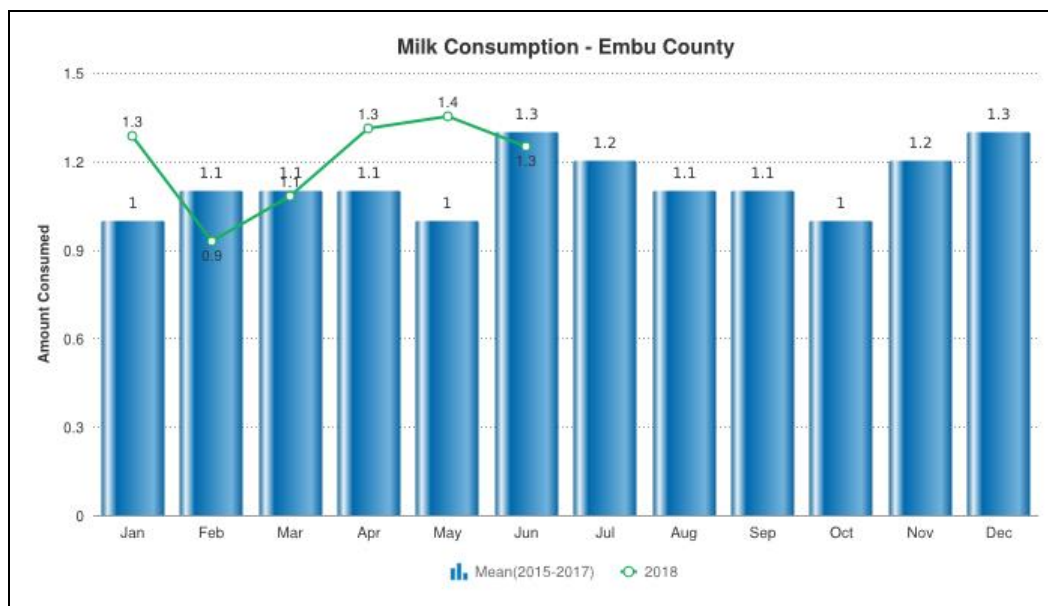


Figure 15: Milk Consumption in Mbeere North and South sub counties

- The average daily household milk consumption was stable compared to previous month at 1.3 litres per household per day.
- The stability is due to stable 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.

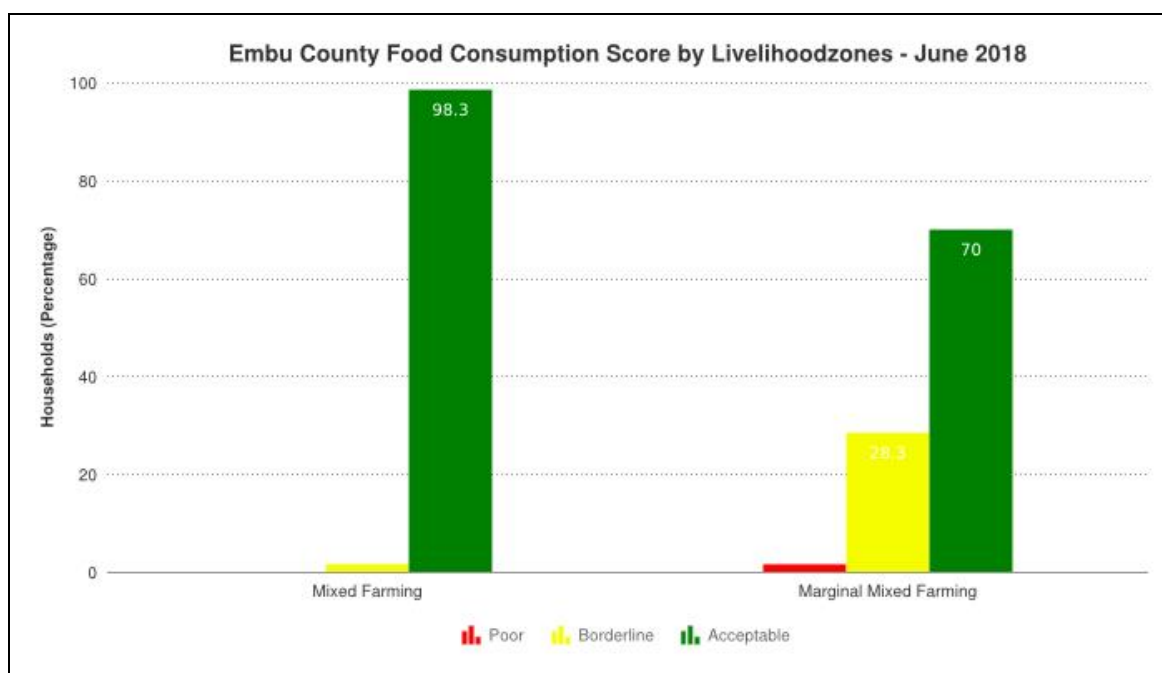


Figure 17: FCS for Households in livelihood zones in Mbeere [n=120 hh]

- During the month, 84 percent of the households from both livelihood zones were classified in acceptable food consumption category while only 15 percent were classified in the borderline food consumption category and 1percent at poor food consumption category.
- Marginal mixed farming livelihood zone contributes 28 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.

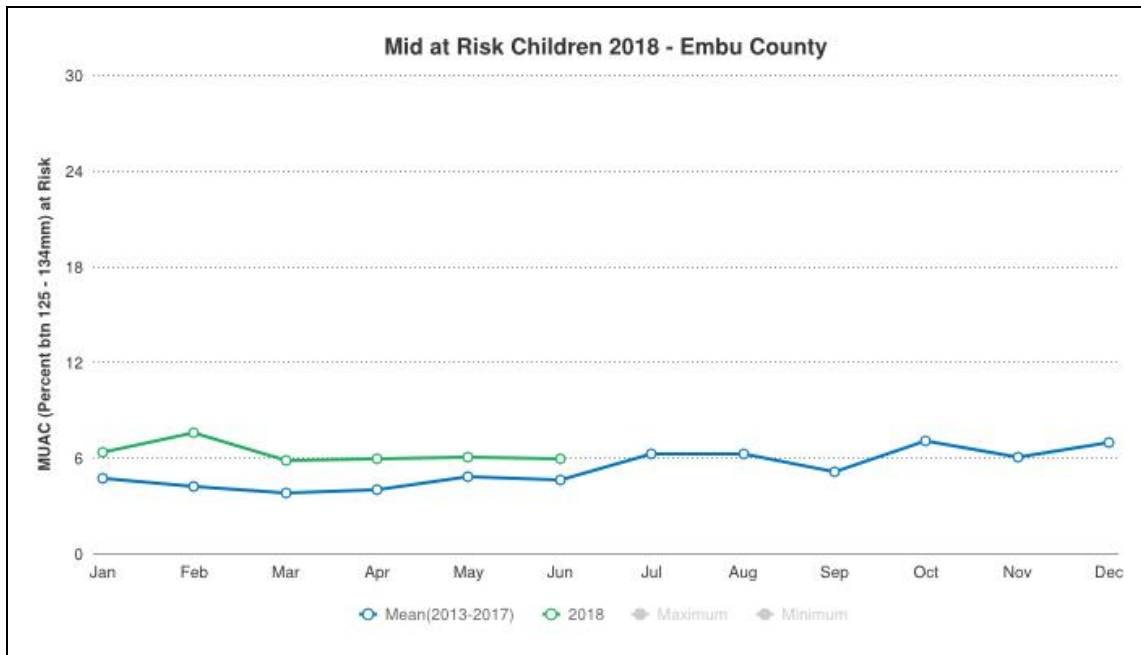


Figure 16: Children at Risk of Malnutrition in Mbeere Sub Counties [n=568]

- 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 stable purchasing power of households and availability of food at household level due to early harvests realised. Also consumption of milk impacts positively on children health and nutrition.
- The proportion of children at risk of malnutrition in the month under review is 28 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.

### 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.

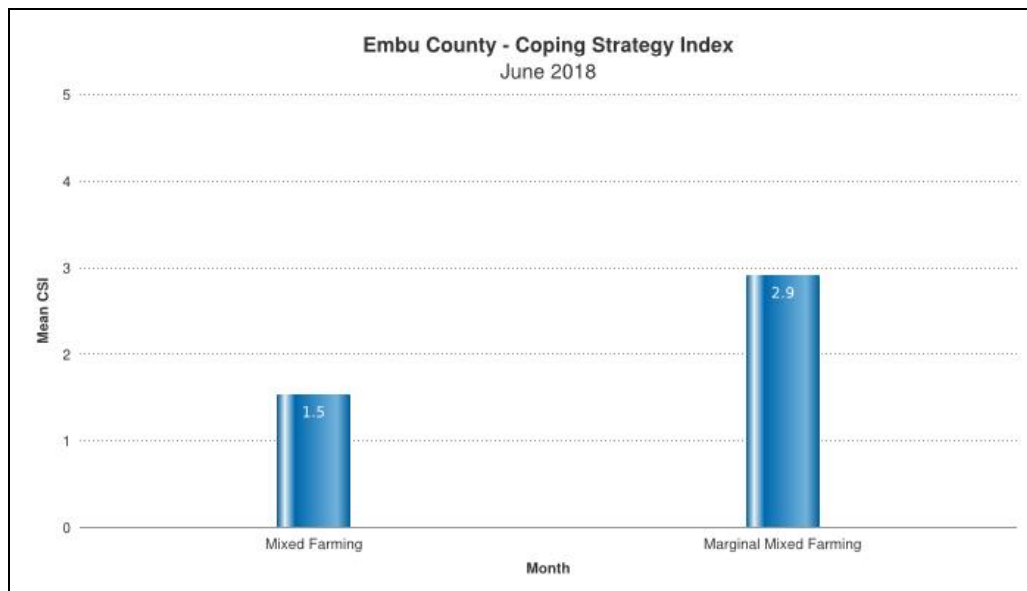


Figure 18: CSI for Sampled Households in Mbeere Sub Counties [n=120]

- The mean Coping Strategies Index greatly reduced to 2.2 compared to the previous month at 11
- The decrease is attributable to; availability of food at household level from the long rains harvests which replenishing household stocks and improved purchasing power of households due to favourable terms of trade.
- The marginal mixed farming livelihood zone recorded a higher coping strategy index of 2.9 while mixed farming livelihood zone recorded coping strategy index 1.5

#### 5.4.1 Implication of the above Indicators to Food Security

- Fair and good harvest of cowpeas, green grams, beans and maize in both livelihood zones brought reprieve to the households by replenishing stocks.
- There is increased purchasing power of the livestock users due favourable terms of trade during the month.
- Good pasture and browse conditions across both livelihood zones improved livestock body conditions hence increased productivity and high milk consumption.
- Number of children below 5 years who were at risk of malnutrition reduced occasioned by, replenished household stock and milk consumption across both livelihood zones.
- 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"> <li>• Routine Promotion of good animal husbandry practices</li> <li>• Routine livestock diseases surveillance</li> <li>• Harvesting and conservation of pasture through hay bailing</li> </ul>	County Department of Livestock Production and Veterinary Services	Livestock farmers from both sub counties
<ul style="list-style-type: none"> <li>• Routine Disease Surveillance</li> <li>• Routine screening and management of malnutrition at health facility level</li> <li>• Routine Vitamin A and Zinc Supplementation and deworming at health facility level</li> <li>• Iron Folate Supplementation among Pregnant Women</li> <li>• Community MUAC monitoring for the acute and moderate malnutrition</li> <li>• Integrated health outreaches; giving vitamin A, immunization, growth monitoring and treatment of minor ailment.</li> </ul>	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 June

## 7.0 EMERGING ISSUES

- No cases of issues reported the month under review

### 7.1 Food Security Prognosis (Three months)

- Households have pulses replenished food stock from the long rains harvests. This stock is expected to last for the next 4 months.
- Maize harvesting was ongoing during the month under review and is expected to continue into the next month. The harvested stock will replenish the household stocks and thus improve on household food security especially in the mixed farming zone
- Livestock production is expected to remain high as a result of pasture and browse availability and reduced distances to water sources. The terms of trade are also expected to remain favorable for livestock keepers.
- The proportion of children at risk of malnutrition will likely decrease as the households expects 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
<b>AGRICULTURE</b>	<ul style="list-style-type: none"> <li>Sensitization on post-harvest handling</li> </ul>	County government Other Stakeholders	Reduce post-harvest losses
<b>LIVESTOCK</b>	<ul style="list-style-type: none"> <li>Routine disease surveillance and husbandry practices</li> <li>Promotion of goat rearing and improvement of local breed.</li> <li>Fodder conservation</li> <li>Pasture reseeding</li> </ul>	County government Other Stakeholders	Increased productivity and Diversification of income Increased feed production
<b>WATER AND SANITATION</b>	<ul style="list-style-type: none"> <li>Pipeline extension to cover unreached areas.</li> <li>Repairs, rehabilitation and distillation of water sources</li> <li>Purchase and provision of water treatment chemicals to households that rely on rivers, boreholes and water pans.</li> <li>Repair of spillways and embankment for earth dams</li> </ul>	County government Upper Tana Natural Resource Management Project Other Stakeholders	Improved potable water accessibility and consumption
<b>HEALTH AND NUTRITION</b>	<ul style="list-style-type: none"> <li>Provision of commodities for management of various types of malnutrition at health facilities.</li> <li>Conduct nutritional survey covering both sub counties to establish health and nutrition indicators baselines.</li> <li>Community outreaches to sensitize the community on proper feeding practices and early detection of children at risk of malnutrition.</li> <li>Sensitization on use of water treatment chemicals for households that depend on pans and rivers.</li> </ul>	County department of health NDMA Other Development partners (WFP, UNICEF, KRCS)	Management of malnutrition amongst under five children
<b>EDUCATION</b>	<ul style="list-style-type: none"> <li>Expansion of School Meals Program to cover all schools in need from both sub counties.</li> <li>Repair of toilets and roofs destroyed by floods and strong winds</li> <li>Supply of water harvesting tanks to needy schools</li> </ul>	County government National government Other Stakeholders	Improved school attendance Improved school sanitation