

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



A Vision 2030 Flagship Project



FEBRUARY EARLY WARNING PHASE

Drought Status: ALERT

Maandalizi ya mapema

Early Warning (EW) Phase Classification		
Livelihood Zone	Phase	Trend
Mixed Farming (MF)	Alert	Worsening
Marginal Mixed Farming (MMF)	Alert	Worsening
County	Alert	Worsening
Biophysical Indicators	Value	Normal
Rainfall (% of Normal)	35 %	80% -120%
VCI-3Month	23.2	30-50
Forage condition	Fair to poor	Fair
Production Indicators	Value	Normal
Crop Condition (Maize)	No crop	No crop
Livestock Body Condition	Fair to good	Fair to poor
Milk Production	1.3 litre	1.0-1.5
Livestock Migration Pattern	No migration	No migration
Livestock deaths	No death	No death
Access Indicators	Value	Normal
Terms of Trade	121	151
Milk Consumption	1.2	1.0-1.5
Average Water Distance for Households (Km)	6.8	3.1 Km
Average Grazing-Water point Distance (Km)	9.1	3.4 km
Utilization Indicators	Value	Normal
% of children at risk (MUAC)	7.6	4.2
Coping Strategy Index (CSI)	10.86	5-10

Drought Situation & EW Phase Classification

Biophysical Indicators

- **Rainfall:** Below normal rainfall was received in the region in the month of February.
- **Vegetation Condition:** The vegetation condition is below normal for both Mbeere North and Mbeere South. The pasture and browse condition is fair to poor in both livelihood zones, with some pockets in marginal mixed farming zone recording good browse condition.

Socio Economic Indicators (Impact Indicators)

- **Production indicators:** Land cultivation is the activity across both livelihood zones. Livestock body condition is fair with a deteriorating trend. There were no abnormal cases of migration, diseases or death cases reported. The milk production slightly decreased compared to previous month.
- **Access indicators:** Average distance to water sources for both households and livestock increased during the month due to drying up of dams/pans and poor pasture conditions. The Terms of Trade in the month of February are below normal but remain favorable.
- **Utilization Indicators:** Milk consumption slightly decreased during the month due reduced production occasioned by increased distances in search of pasture and water.
- The proportion of children under five years who were at the risk of malnutrition increased slightly during the month. The Coping strategy index increased as households continued to struggle to get food as result of meagre household food stocks.

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

1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- Slight showers of rain were received in both livelihood zones during the month of February
- The rains received were erratic and with poor temporal distribution across the two livelihood zones.

1.2 Amount of Rainfall and Spatial Distribution

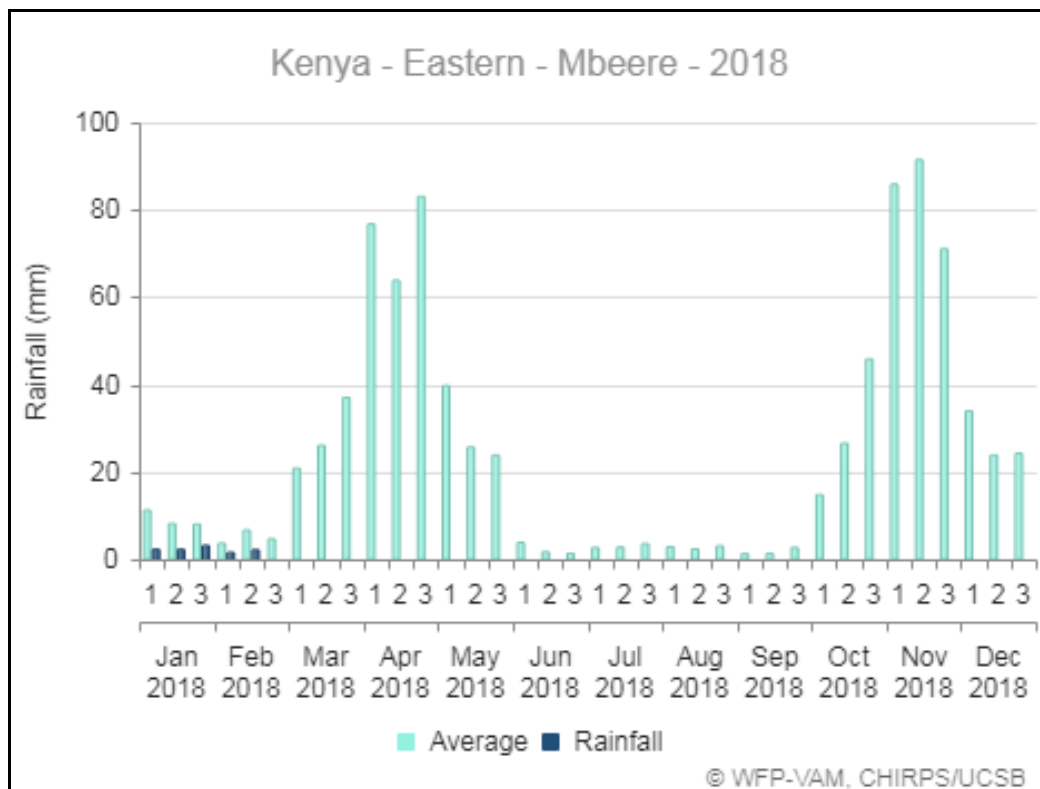


Figure 1: Average amount of rainfall recorded in Mbeere Sub Counties, Embu County

- The two sub counties received an average amount of 1.8 mm of rainfall compared to long term average amount of 5.1 mm for the 1st and 2nd dekads of February.
- The amount recorded in the month under review was below normal for the period under consideration
- The rains experienced were erratic and mainly recorded in the marginal mixed farming livelihood zone

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- Vegetation greenness deteriorated further in both sub counties during the month of February as compared to the previous month.
- The average 3-month Vegetation Condition Index (VCI) for the two sub counties decreased to 23.2 in the month of February from 42.31 recorded in the previous month of January.
- Mbeere South Sub County recorded a higher 3-month Vegetation Condition Index of 29.59 as compared to Mbeere North Sub County with Index of 16.8
- The vegetation condition index for Mbeere North Sub County reduced by 54 percent from 36.84 recorded in January to 16.8 in the current month.

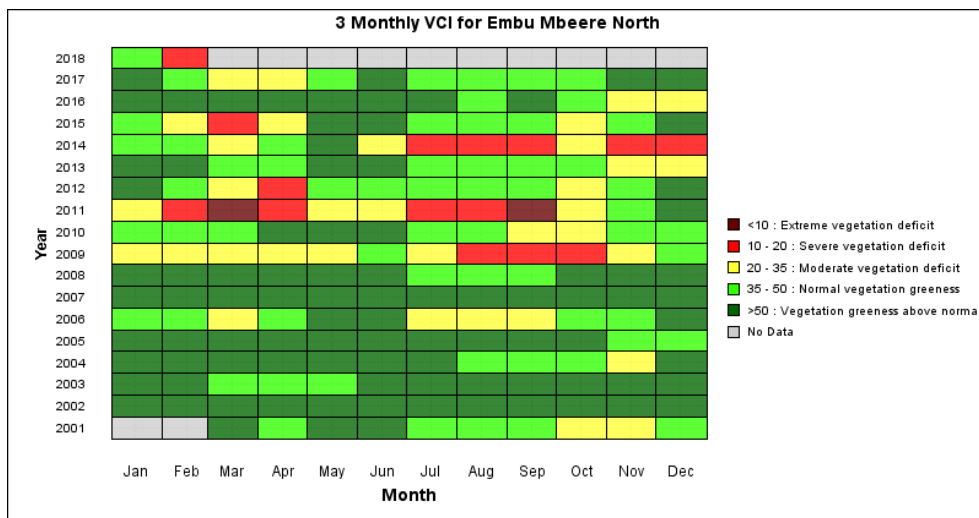


Figure 2: 3-Month Vegetation Condition Index for Mbeere North Sub County
[Source: Bokku University -Austria]

- The vegetation condition index for Mbeere South Sub County reduced by 38 percent from 47.78 recorded in January to 29.59 in the current month.

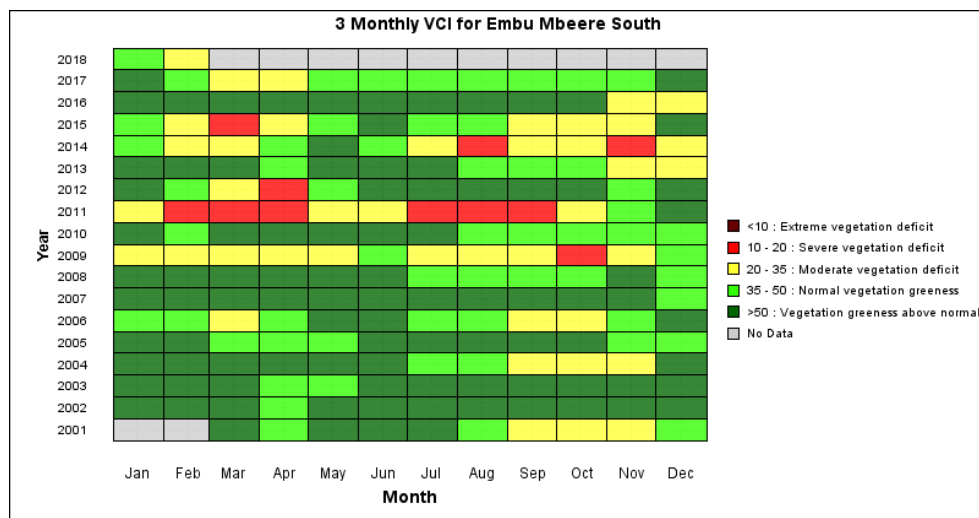


Figure 2: 3-Month Vegetation Condition Index for Mbeere South Sub County
[Source: Bokku University -Austria]

2.1.2 Pasture Condition

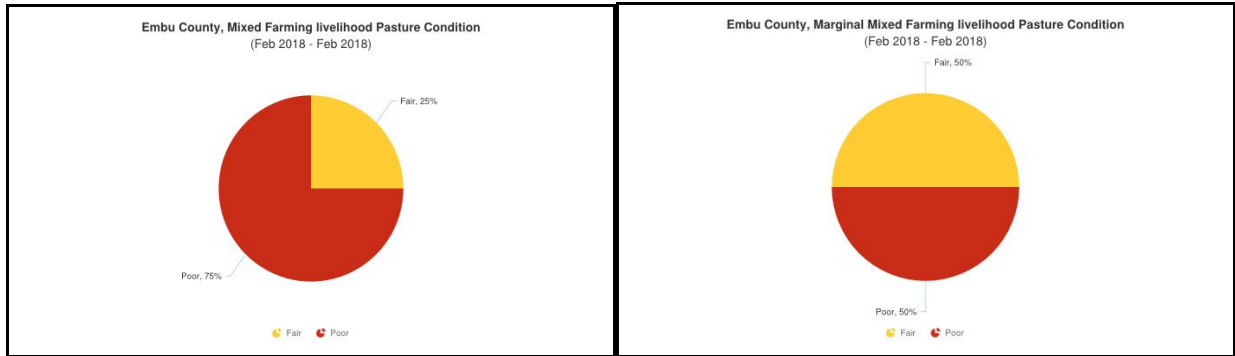


Figure 3a: Pasture Condition for Livelihood Zones in Mbeere North and South sub counties, Embu County

- The pasture condition across the two livelihood zones range from fair to poor.
- The pasture conditions deteriorated further due to the ongoing dry spell in the region.
- The existing pastures were accessible to the livestock at some increased distances compared to the previous month and were expected to last for one month.

2.1.3 Browse Condition

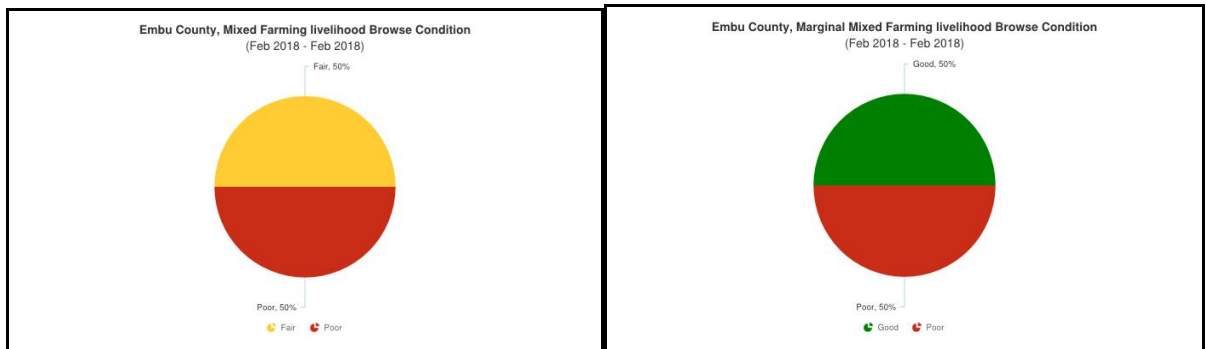


Figure 3b: Browse Condition for Livelihood Zones in Mbeere North and South sub counties, Embu County

- The browse condition deteriorated further due to the ongoing dry spell in both livelihood zones.
- The browse condition ranges from fair to good in Marginal Mixed Farming livelihood zones and from fair to poor in Mixed Farming livelihood zones across the two sub-counties in the month.
- The existing browses were accessible to the livestock at some increased distances compared to the previous month and were expected to last for one and a half months.

2.2 WATER RESOURCE

2.2.1 Water Sources

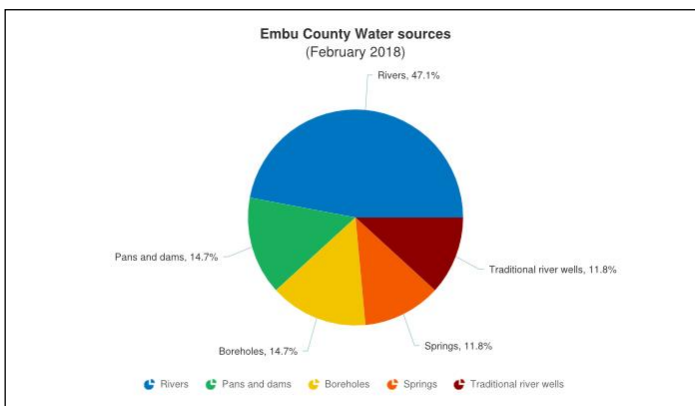


Fig 4: The water sources in Mbeere North and South sub counties

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- The main three water sources in the month under review for both livestock and domestic use across the two livelihood zones are; rivers, boreholes and pans/dams.
- Pipeline, Springs and traditional river wells also exist in both livelihood zones.

- The percentage of households that rely on boreholes reduced from 20 percent in January to 14.7 percent in the month under review. This is attributable to breakdown of strategic boreholes.
- There is increased waiting time across both livelihood zones at the pipeline kiosks and boreholes. Waiting time ranges between 15-45 minutes.
- Five percent of sampled households treat drinking water either by boiling or use of treatment chemicals.

2.2.2 Household Water Access and Utilization

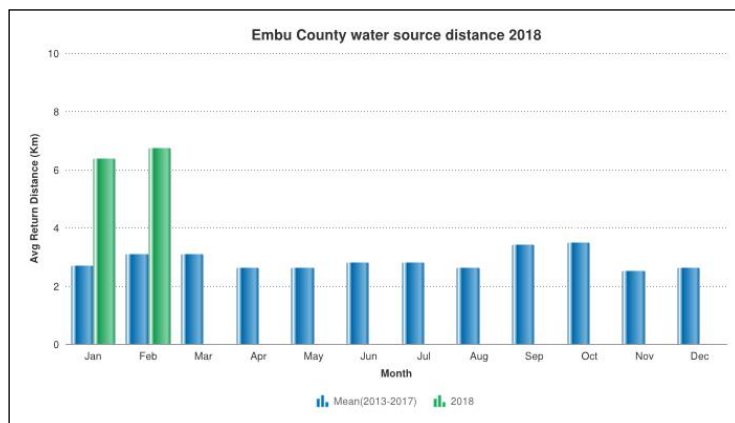


Figure 5: Water Access for Households in both sub counties

- The average distances from the households to water sources increased to 6.8 km in February from 6.4 km recorded previous month.
- The increase is occasioned by drying up of some shallow water pans, dams and breakdown of strategic boreholes in the MMF zone.

- Households in the MF Livelihood Zone trek for average distance of 7 km compared to those in MMF Livelihood Zone at 6.5 km in search for water.
- The average distance is above five-year average and is expected to remain so as the dry spell continues.

2.2.3 Livestock access to water from grazing areas

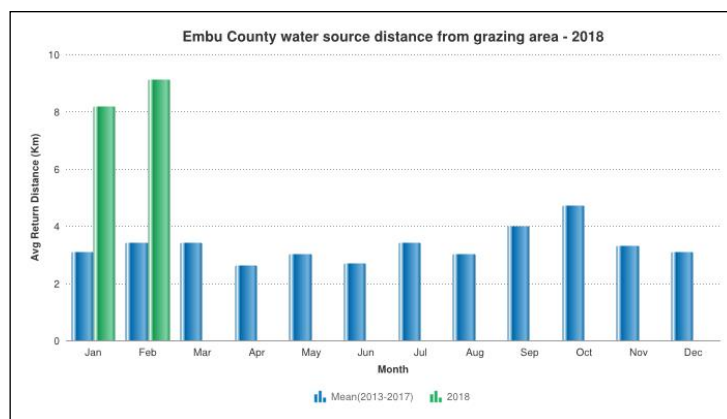


Figure 6: Water Access for Livestock in both sub counties

- The average distances to water sources from grazing areas increased by 11 percent from 8.2 km recorded previous month to 9.1 km in the month of February.
- The increase is due to search of forage in bush grasslands which are far from water points.

- Watering of cattle is on alternate basis in both livelihood zones due to increased average distance to water sources.
- This increasing trend is normal in the region at this particular time of the year, the distances are expected to increase further as the dry spell continues.
- The average distances trekked during the month under review was significantly higher than the five-year average distance at this time of the year.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

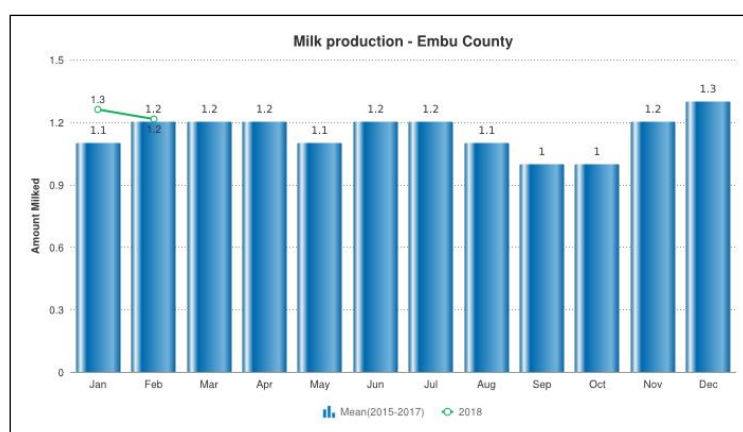
3.1.1 Livestock Body Condition

- The body condition for small stock (sheep and goats) is good to fair across the livelihood zones while that of cattle is fair to poor.
- In some areas of in the Marginal Mixed Farming zone such as Kiambere, Muminji, Thawa and Makima wards the body condition for cattle is poor due to poor pasture condition and long distances to watering points.
- The livestock body condition is expected to continue deteriorating in both livelihood zones until the next rainfall season.

3.1.2 Livestock Diseases

- No livestock diseases reported this month though the veterinary department continued with ring vaccination exercise in Thawa Ward.

3.1.3 Milk Production



- The average daily household milk production across the two livelihood zones remain stable as compared to January at 1.2 litres.
- The stability is due to the unchanged pastures condition distance to water sources as the dry spell continues

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

- Households in MF livelihood zone produced an average of 1.5 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 the pasture availability and differentiation in breed.

3.2 Rain-Fed Crop Production

3.2.1 Stage and Condition of food Crops

- There are no crops in the farms in both livelihood zones
- Few Farmers are engaged in late harvesting while majority are preparing land for long rain season planting

4.0 MARKET PERFORMANCE

4.1 Livestock Marketing

4.1.1 Cattle Prices

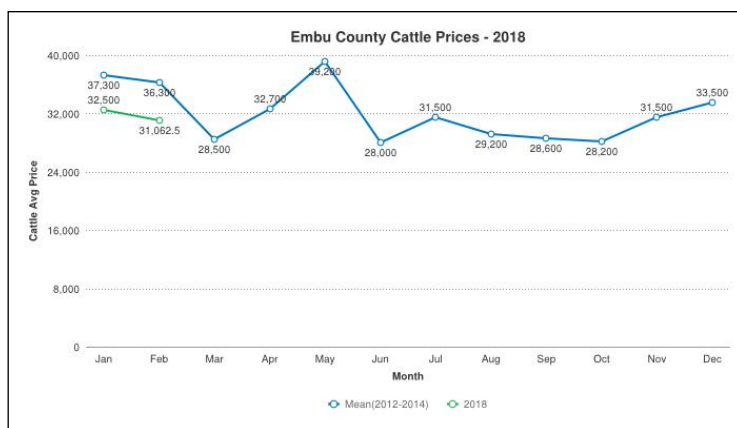


Figure 8: Average Cattle Prices in Mbeere Sub Counties, Embu County

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- The average price of mature 3-year old bull remained stable across the two livelihood zones compared to the previous month at Ksh.31, 063.
- The stability is attributable to reduced local breed volumes in the main livestock market.

- Makutano livestock market recorded the highest average price of Ksh. 35,000, while Kiritiri livestock market and Ishiara Livestock market recorded average price of Ksh. 31,500 and Ksh. 28,875 respectively.
- This trend is normal and is expected to slightly decrease in the coming month.
- The average price recorded during the month is Ksh. 5,238 lower than the 3-year average price.

4.1.2 Goats Prices

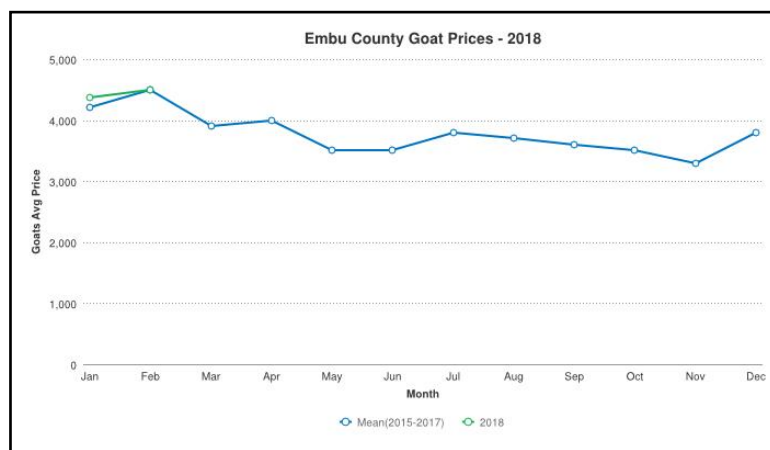


Figure 9: Average Goat Prices in Mbeere sub counties, Embu County

- The average market price for a 2-year goat slightly increased in the month of February to KES 4,500 from KES 4,200 recorded in the previous month.
- The increase is as result of reduced distress sale by farmers either for school fees needs or for purposes of purchasing food

- Makutano livestock market in MF zone recorded the highest average price of Ksh. 5,500 while Ishiara and Kiritiri livestock markets both in MMF zone recorded average price of Ksh. 4,700 and Ksh. 3,100 respectively.
- This variation in prices across the markets was as a result of differentiation in breed and the market supply and demand forces.
- This trend is considered normal and within the expected range in the region at this particular time of the year. However, the prices are expected to increase as the months progresses.

4.2 FOOD PRICES

4.2.1 Maize Prices

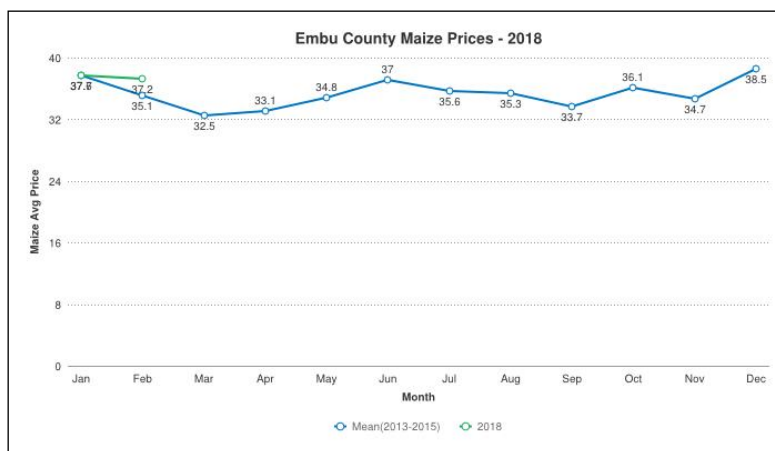


Figure 10: Average Maize Price in Mbeere North and South sub counties

- The average market price for maize remain stable in the month under review at KES 37.
- The stability is attributable to household stocks realized from the short rains harvests.

- One kilogram of maize was retailing at Ksh.44, Ksh.40 and Ksh.32 in Makutano and Kiritiri cereal in Ishiara cereal markets respectively.
- The average price recorded in the current month is slightly higher than the 3-year average.

4.2.2 Posho (Local Maize Meal)

- The average price of ‘posho’ significantly decreased from Ksh. 55 recorded in the month of January to Ksh. 45 per kilogram across the two livelihood zones.
- The decrease is attributed to low and stable prices of maize.
- The marginal mixed farming zone recorded high average price for ‘*posho*’ at Ksh. 50 as compared to the mixed farming zone that recorded an average ‘*posho*’ price of Ksh. 40

4.2.3 Beans Prices

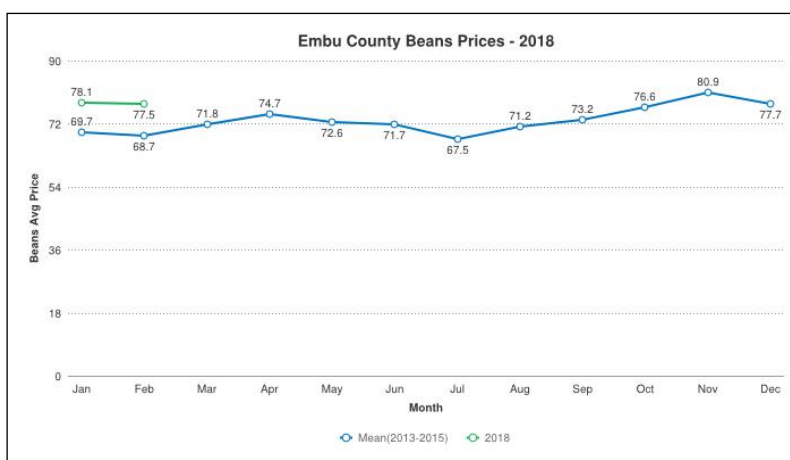


Figure 11: Average Beans Price in Mbeere North and South sub counties

- The average market price for beans remain stable compared to the previous month at Ksh.78.
- The stability is attributed to short rains harvest of pulses at household level,

- One kilogram of beans retailing at Ksh. 100 in Makutano cereal market, Ksh. 75 in Kiritiri cereals market, and Ksh. 68 in Ishiara cereal market.
- The current average price per kilogram was Ksh. 8.8 higher than the 3-year average price.

4.2.4 Green Grams Prices

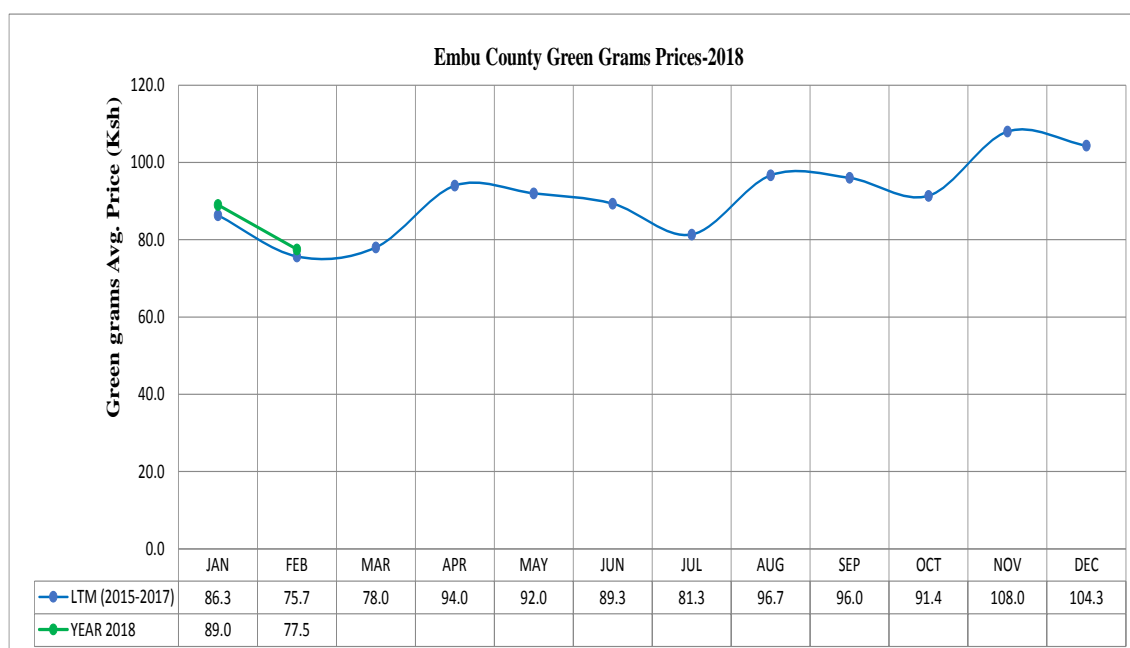


Figure 12: Average Price per kilogram of Green Grams in Mbeere North and South sub counties

- The average price per kilogram of green grams decreased from Ksh. 89 recorded in the month of January to Ksh. 77.5 in month under review across the two livelihood zones.
- The decrease is attributable to harvest of green grams and cowpeas across the livelihood zones.
- The current average price was Ksh. 15 lower than the 3-year average price at this time of the year.

4.3 Household Income

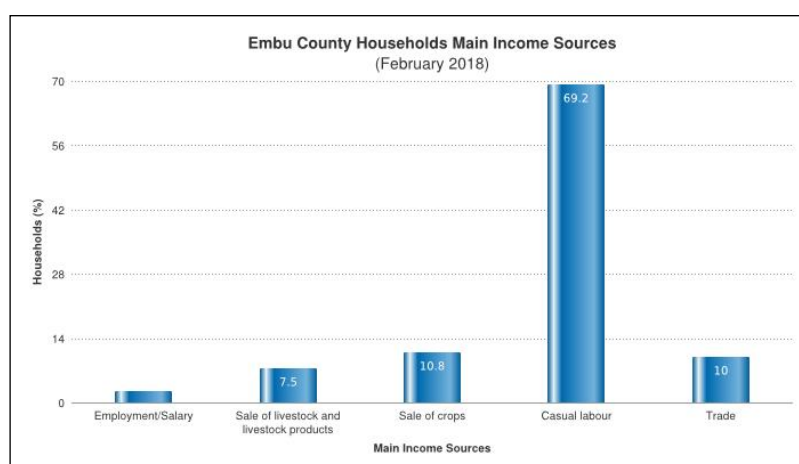
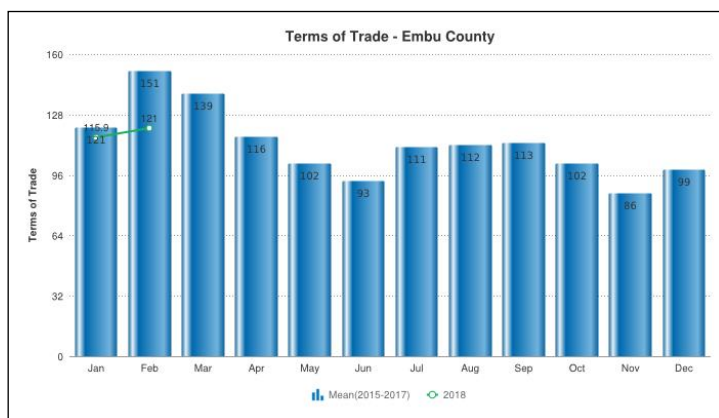


Figure 13: Income sources for households in Mbeere North and South sub counties

- Households in the region drew their income from casual labour, formal employment/ salaries/ wages, sale of livestock and livestock products and petty trade in the month.
- There is a slight decrease in proportion that depend on casual labour as harvesting ended
- There is a 7.7 and 4.5 percent increase in households that depended on sale of crops and petty trade respectively during the month. This will lead to faster depletion of the minimal stock realised from the short rains harvest.
- The main sources of income for households remained normal at this time of the year.

4.4 Terms of Trade (ToT)



- The Terms of Trade (goat versus maize) remained stable compared to previous month across the two livelihood zones.
- The stability is attributable to stable maize and goat prices across the two livelihood zones.

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

- The sale of one goat enables the household to purchase 121 kilograms of maize as compared to 116 kilograms that the sale of the same goat enabled the household to acquire in the month of January
- The increasing trend in TOT is normal and within the expected range in this particular time of the year.
- The terms of trade are below normal but still remain favourable for the households.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

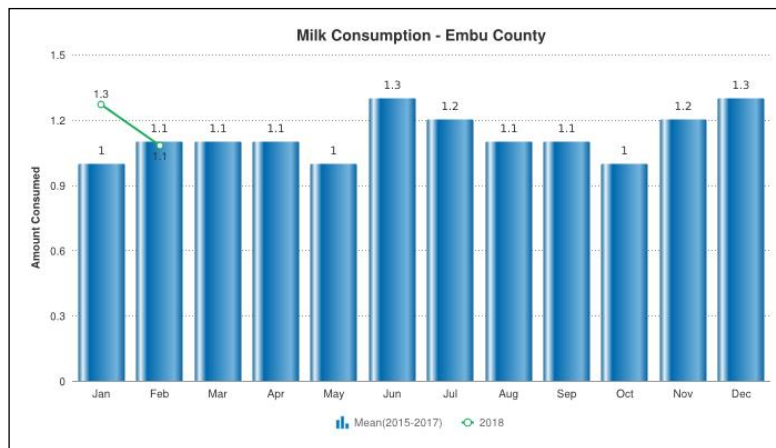


Figure 15: Milk Consumption in Mbeere North and South sub counties

- The average daily household milk consumption decreased by 15 percent to 1.1 litres in the month under review
- The decrease is due to the poor condition of pasture and longer distances to water sources

- Households in the mixed farming zone consumed 1.5 litres per day as compared to 0.5 litres 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 as the dry spell continues.

5.2 Health and Nutritional Status

5.2.1 Nutrition Status of Children

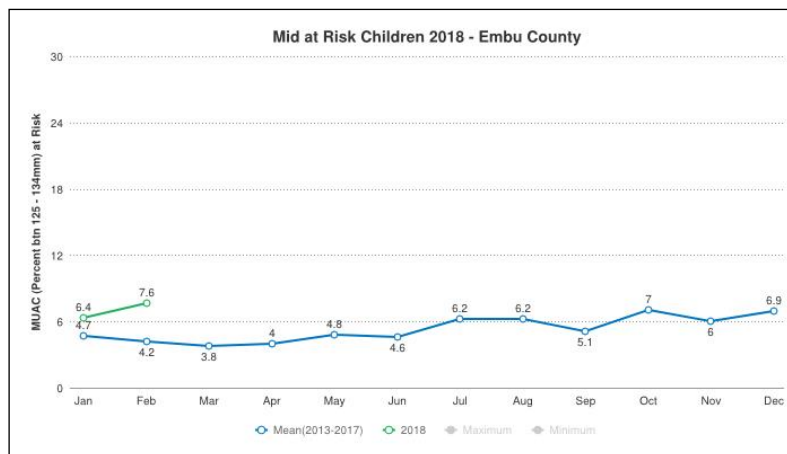


Figure 16: Children at Risk of Malnutrition in Mbeere Sub Counties [n=612]

- The proportion of the sampled children at risk of malnutrition increased from 6.4 percent recorded in the month of January to 7.6 percent in February.
- The increase is attributable to low household stocks and reduced milk consumption

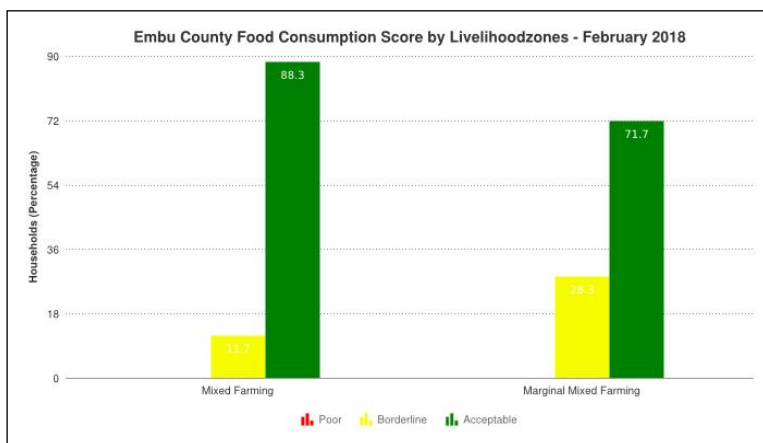
- The proportion of children at risk of malnutrition in the month under review is 3.4 percent higher than the five-year average at this time of the year.

5.2.2 Health

- Upper Respiratory Tract Infections were reported by households during month under review.
- Disease surveillance and community sensitization on hygiene, proper feeding practices and use of water treatment chemicals is ongoing in both sub counties.

5.3 Food Consumption Score

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

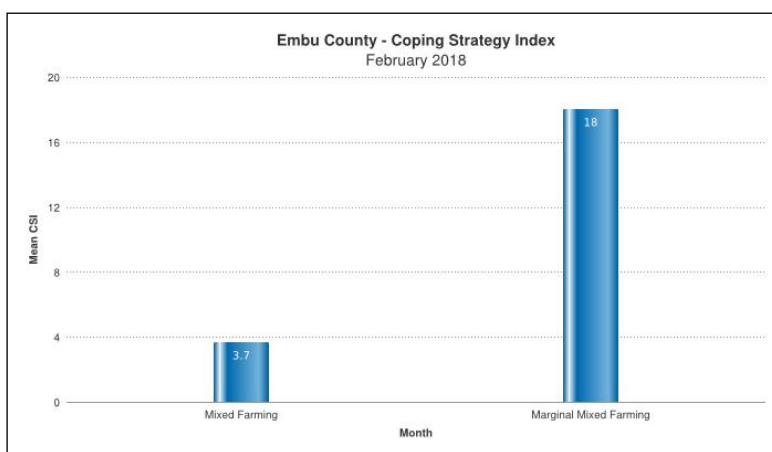


- During the month, 20 percent of all the sampled households were classified in the borderline food consumption category while 80 percent of the households from both livelihood zones were classified in acceptable food consumption category.

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

- Seven percent of the households who were in acceptable food consumption category in the month of January transitioned into borderline food consumption category due to low diversification during the month.
- The households continued depending mainly on pulses and cereals that were harvested to cover their daily food needs due to low purchasing power
- Marginal mixed farming livelihood zone has 28.3 percent of the sampled households at the borderline consumption category compared to only 11.7 percent from the mixed farming zone.

5.4 Coping Strategy Index



- The mean Coping Strategies Index increased significantly from 3.82 recorded in the month of January to 10.86 in the month of February.
- The increase is attributable to diminishing household food stocks.

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

- The marginal mixed farming livelihood zone recorded a higher coping strategy index of 18, while Mixed farming livelihood zone recorded coping strategy index 3.7
- Households in marginal mixed farming zone are engaging in severe coping mechanisms such as sale of female animals and complete skipping of meals for adults to allow children to feed.

5.4.1 Implication of the above Indicators to Food Security

- The pasture and browse conditions is poor to fair across both livelihood zones hence increased distances across the two sub counties. This has impacted negatively on body condition of the livestock thus low milk production.
- Livestock and crops prices remain relatively stable though the prices for food commodities are expected to go up due to diminishing household food stock occasioned by overdependence on meagre stock realised for the season.
- Milk production and consumption at household level during the month is low thus impacting negatively on children health and nutrition.
- Terms of Trade remain stable and favourable for the households which has relatively improved their purchasing power.
- Casual labour from agricultural activities was the main source of income for the households
- The households' food stocks are almost depleted hence poor food consumption and application of severe coping strategies.

6.0 CURRENT INTERVENTION MEASURES

6.1. Non-Food Interventions

Intervention	Implementer	Beneficiaries
<ul style="list-style-type: none"> • Ring Vaccination against Foot and Mouth Disease, Lumpy Skin Disease, Rabies and Anthrax/Black quarter. • Routine Promotion of good animal husbandry practices • Routine livestock diseases surveillance 	County Department of Livestock Production and Veterinary Services	Households in Thawa ward 201 Cattle 43 Dogs 12 Donkeys 2 Cats
<ul style="list-style-type: none"> • 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 • Routine Disease Surveillance • Community MUAC monitoring for the acute and moderate malnutrition 	County Department of Health Services NDMA /CHVs	Mothers and children who visited health facilities in both sub counties Households in targeted community areas
<ul style="list-style-type: none"> • Promotion of good land preparation practices 	County Department of Agriculture	Targeted farmer groups in Mbeere South and North Sub Counties

6.2. Food Interventions

- There is no direct food intervention for the month of February

7.0 EMERGING ISSUES

- There is no any emerging issue within the two livelihood zones

7.1 Food Security Prognosis (Three months)

- Livestock production is expected to reduce in the next three months as pasture and water availability will likely be a challenge for the households.
- The proportion of children under five years at risk of malnutrition will likely increase due to depletion of household stocks and reduced purchasing power of the households.
- Household stocks are diminishing at a high rate since only few harvests were realized coupled with the sale by households to acquire other non-food needs. This will negatively affect food security at household level hence severe coping strategies may be employed by households.
- Pasture and browse condition is expected to deteriorate further in both livelihood zones as the dry spell continues. The condition and quantity of pasture and browse is likely to last for 0.5-1 month in both livelihood zones.

8.0 RECOMMENDATIONS

8.1 Livestock Sector

- Promotion of goat rearing and improvement of local breed.
- Out scale vaccination against Lumpy Skin Disease, Foot and Mouth Disease, New castle Diseases and CBPP.
- Feed supplementation during the dry spell duration before long rains season

8.2 Water and Sanitation Sector

- Repair of strategic boreholes in the marginal mixed farming zone.
- Purchase and provision of water treatment chemicals to households that rely on rivers, boreholes and water pans.
- Repair of old and vandalized pipeline and extension of pipeline to uncovered areas.

8.3 Health and Nutrition Sector

- Provision of commodities for management of various types of malnutrition at health facilities
- Conduct nutritional survey covering both sub counties
- 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.

8.4 Education Sector

- Expansion of School Meals Program to cover all schools in need in both sub counties.
- Monitoring of children engagement in sand harvesting, boda-boda, betting and *Muguka* business.

8.5 Agriculture Sector

- Promotion of proper land preparation practices in readiness for long rains season planting.
- Provision of seeds for timely long rains season planting
- Promotion of small-scale irrigation on high value crops for areas that receive minimal rainfall in order contribute to household incomes and diversify household diet.