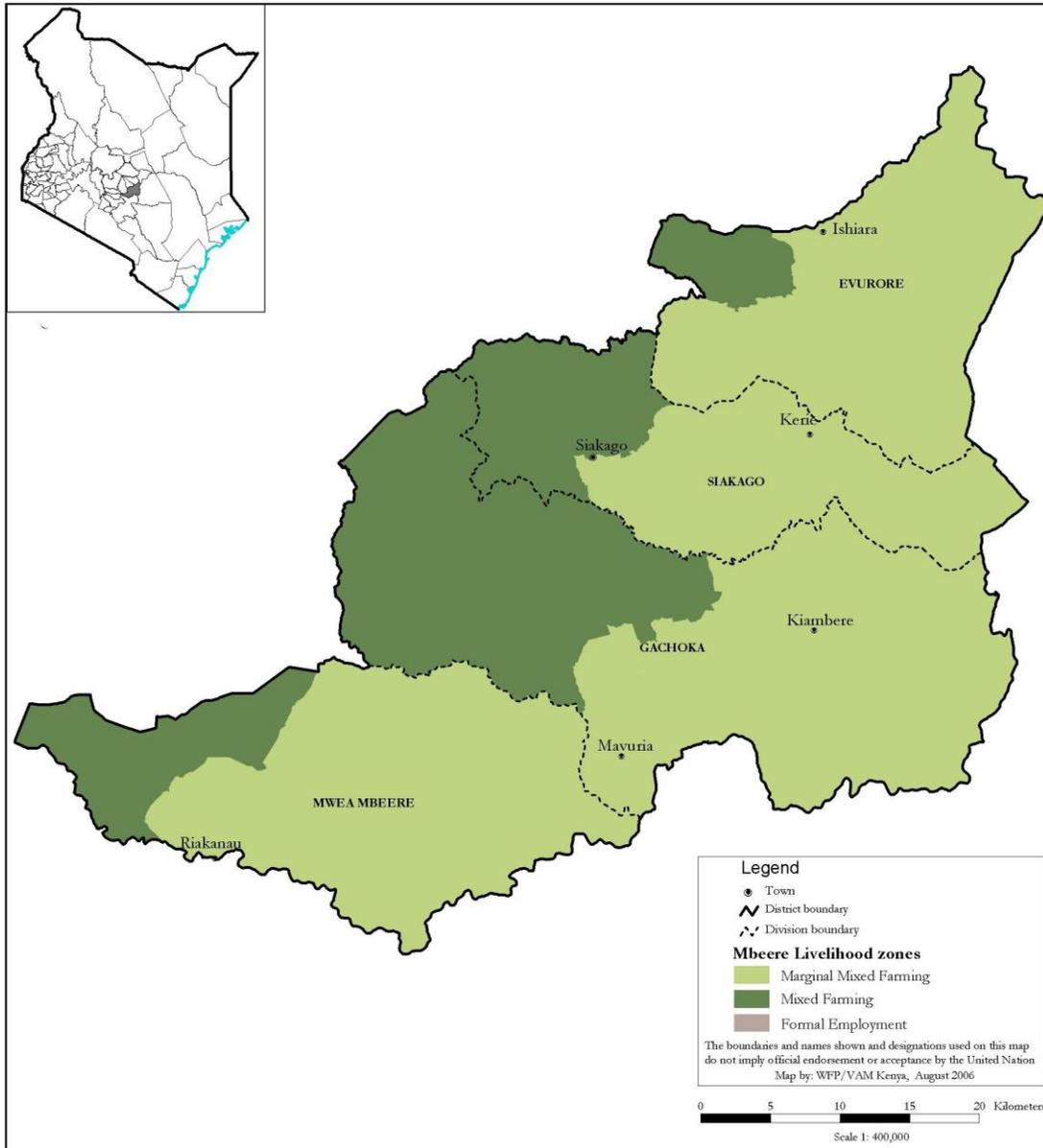


EMBU COUNTY (MBEERE)

2016 SHORT RAINS FOOD SECURITY ASSESSMENT REPORT



A Joint Report by the Kenya Food Security Steering Group¹ (KFSSG) and County Steering Group, Embu (Mbeere) County

February, 2017

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Executive Summary

The county is currently classified in the ‘Stressed’ (IPC Phase 2) food security phase across all livelihood zones a deterioration from the long rains season where it was classified in the ‘Minimal’ (IPC Phase 1) phase. The Mbeere sub counties are dependent on the short rains as the main season for crop production. In the month of December 2016, 10 percent of the households in the mixed and marginal mixed livelihood zones had poor food consumption scores implying that household’s dietary diversity and frequency of food consumed was deteriorating. Reported severe acute malnutrition cases have increased from 99 to 178. The coping strategy index is currently 10 and 3 in marginal mixed and mixed farming livelihood zones respectively. Milk consumption at household is normal ranging between 0.25 – 0.75 litres in the marginal mixed farming and 0.5 l -1.5litres in the mixed farming livelihood zone.

Currently, food availability is reduced with household and county maize stocks stand at 17 and 37 percent of the long term average due to two consecutive poor seasons with the expected. Crop production is generally expected to be below average with maize, cowpeas and green grams crop yields are expected to be 10, 41 and 30 percent of the LTA. Cases of weevils and aphids attacks have been reported affecting mainly the cowpea and green-gram crops. Milk production has also reduced in the mixed farming zones where it was 0.5 -1 l/HH compared to the normal 2 and in the marginal mixed farming zones production was 0.25 - 0.75 l/HH compared to 1 litre.

Food access is generally constrained considering that food and cash crop production contribute to 50 percent of cash income in both livelihood zones and crop production is below average significantly reducing income from this source and consequently access to food. Maize prices in January were Ksh 43 per kilogram and 17 percent above the LTA of Ksh 37 caused by reduced availability at household level reducing the purchasing power. Milk prices were above average from Ksh 60 – 80 compared to the normal Ksh 80. Trekking distances to domestic water sources increased to 5 km from 3 km in the Marginal mixed farming zones of Makima and Kiambere and 0 – 2 km from 0 – 1 km in the mixed farming zones.

Food utilization deteriorated reducing individuals’ capacity to absorb required macro and micronutrients from consumed food. Proportion of children under five years of age at risk of malnutrition (MUAC <135 mm) in December 2016 was 5.6 percent compared to 4.1 percent in 2015 and the number of children under 5 years suffering from severe acute malnutrition (SAM) doubled in 2016 compared to the same period in 2015. The fully immunized child (FIC) coverage for 2016 was 75 percent, lower than national target of 80 percent and a drop from 87 percent reported in 2015. Water borne related diseases are still a major health concern in the county due to poor sanitation and hygienic practices.

The major contributing factors to food insecurity in the county include; poor performance of the short rains, poor crop performance, increasing food prices, drying up of water sources and human – wildlife conflict.

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1.0 INTRODUCTION

1.1 County Background

Embu County comprises of five sub counties namely; Embu East, Embu West, Embu North, Mbeere North and Mbeere South.

This assessment covered the sub counties of Mbeere (North and South) with a population of 219,220 persons (KNBS 2009) and covers an approximate area of 2,092.5 square kilometers. There are two main livelihood zones namely Mixed Farming and Marginal Mixed Farming with 51 and 49 percent of the total population respectively.

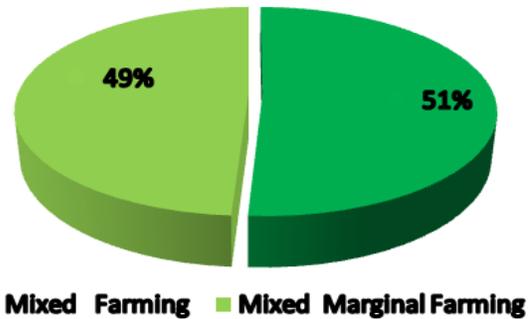


Figure 1. Proportion of population by livelihoods

1.2 Objectives and approach

The main objective of this SRA was to develop an objective, evidence-based and transparent food security situation analysis following the October – December short rains season of 2016 taking into account the cumulative effect of previous seasons, and to provide recommendations for possible response options based on the situation analysis.

The methodology used was review of the existing data on the current situation as well as historical data from different sources. Review of checklists from line sectors and focus group discussions were also carried out. The team composed of Kenya Food Security Steering Group (KFSSG) members and County Steering Group (CSG) members made transect drives and did market surveys in order to get a picture of the ongoing situation. The analysis took into consideration the different data and carried out evidence based analysis depending on convergence of the evidence from various sectors.

2.0 Drivers of Food and Nutrition Security in the County

2.1 Rainfall Performance

The onset was late in the first dekad of November compared to the second dekad of October normally. The county cumulatively received 84 percent of the normal rainfall. Spatial distribution was uneven with the marginal mixed livelihood areas located in the eastern part received 90 -110 percent of the normal rains while the western parts received 75 – 90 percent of the normal rains. Southern parts of Mwea Mbeere received 50 – 75 percent of the normal rains. Temporal distribution was poor with a false onset in the first dekad of October followed by a dry spell. Cessation was early in the third dekad of November compared to the third dekad of December normally.

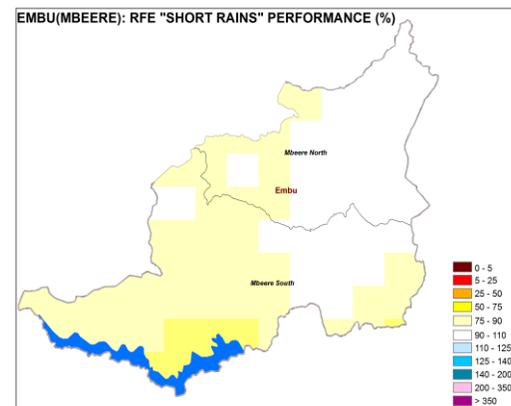


Figure 2: Rainfall performance

3.0 Impacts of drivers on Food and Nutrition Security

3.1 Availability

Food availability is set to be below average as household maize stocks will last until mid-February and expected maize crop harvest is set to be 10 percent of long term average. Milk production has decreased by 25 percent and will continue to do as livestock body condition decline.

3.1.1 Crops Production

In the mixed farming zones, maize, beans and cowpeas are the major crops while in marginal mixed farming major crops are sorghum, green grams and cowpeas. Area under plantation decreased by four percent for maize while acreage for green grams and beans increased by 27 and 10 percent of the LTA respectively. Projected crop yields were lower compared to the LTA as the rains received were not enough sustain the crop to physiological maturity consequently reducing the production. Maize crop yields are expected to be 10 percent of the LTA. Cowpeas and green grams crop yields are expected to be 41 and 30 percent of the LTA. Cases of weevils and aphids attacks have been reported affecting mainly the cowpea and green-gram crops

Table 1. Rain fed Crop Production

Crop	Area planted during Short season (Ha)	planted 2016 rains	Short Term Average area planted during the short rains season (Ha)	2016 short rains season production (90 kg bags) Projected/Actual	Short Term Average production during the short rains season (90 kg bags)
1.Maize	12350		12872	8944	81829
2.Green grams	6070		4793	7587	18454
3.Beans	9220		8367	9220	30507

Irrigated Crop

The area under production for irrigated tomatoes, kales and water melons increased by 65, 98 and 241 percent compared to the STA and can be attributed to a reaction to the rainfall forecast advisories from the meteorological department. The reduced dependence on rainfall and increased demand for vegetables and fruits both in the urban and rural areas encouraged farmers to produce more.

The production increased substantially for water melon and kales by 412 and 147 percent respectively while tomato production increased by five percent compared to the STA. Improved production can be attributed to an improved distribution network of government subsidized fertilizer.

Table 2: Irrigation Production

Crop	Area planted during the 2016 short rains season (ha)	Short Term Average (3 years) area planted during Short rains season (ha)	2016 short rains season production (Tonnes) Projected/actual	Short Term Average (3 years) production during 2 Short rains season (Tonnes)
Tomatoes	451	274	11275	10742
Kales	232	117	5800	2340
Water melons	461	135	34575	6750

Maize Stocks

Maize stocks held by the farmers are 83 percent below the LTA attributed to crop failure experienced during the 2016 long rains season. Stocks held by the traders are 10 percent above the LTA as the traders accumulate stock in anticipation of the below average short rains harvest. The stocks held by households are likely to last for about one week in both livelihood zones compared to the normal of six and three months in the mixed farming and marginal mixed farming zones respectively.

Table 3: Maize Stocks in the County

Maize stocks held by	Quantities held currently (90-kg bags)	Long Term Average quantities held (90-kg bags) at similar time of the year
House Holds	6,950	40,351
Traders	12,000	10,955
Millers	N/A	N/A
NCPB	N/A	N/A
Total	18950	51306

3.1.2 Livestock Production

The major livestock species kept in Mbeere are cattle, goats and sheep. In the mixed farming livelihood zone, livestock production contributes 18 percent of cash income while in the Marginal Mixed farming, livestock production contributes 23 percent of cash income.

Forage condition

Browse conditions were generally good in both livelihood zones expected to last up to mid-March while pasture condition was fair though rapidly deteriorating and expected to last up to

mid - February. Crop residues are expected to supplement fodder especially in the Mixed Farming zones and to a lesser extent in the Marginal Mixed Farming due to the poor crop performance.

Table 4: Forage Conditions by livelihood

Livelihood zone	Pasture condition			Browse condition		
	Current	Normally	Projected Duration to last (Months)	Current	Normally	Projected Duration to last (Months)
Mixed Farming	Good	Good	2	Good	Good	3
Marginal Mixed Farming	Fair	Good	1.5	Good	Good	2

Livestock Productivity

Livestock body condition was generally good in all livestock species in Mixed Farming zone however, while cattle body condition is fair in Marginal Mixed Farming zone and sheep and goats exhibit good body condition. Inadequate and sporadic rains resulted in poor regeneration of pastures and fodder and the body conditions are expected to deteriorate seasonally.

Table 5: Livestock Body Condition by livelihood

Livelihood zone	Cattle		Sheep		Goats	
	Current	Normally	Current	Normally	Current	Normally
Mixed Farming	Good	Good	Good	Good	Good	Good
Marginal Mixed Farming	Fair	Good	Good	Good	Good	Good

Milk production, consumption and prices.

Milk production is below LTA across the livelihood zones affected by inadequate forage and water resources.

Table 6: Milk Production, Consumption and Cost

Livelihood zone	Milk Production (Litres)/ Household		Milk Consumption (Litres)/ Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
Mixed Farming	0.5 -1	2	0.5 -1.5	1-2	60 - 70	60
Marginal Mixed Farming	0.25 - 0.75	1	0.25 - 0.75	0.5-1	70 - 80	60

Milk prices in the mixed Farming zone remained stable stabilized by supplies from the neighbouring Embu County. In the Marginal Mixed Farming zones, low production and higher transport cost increased the prices (Table 6). Reduced milk production and increasing prices have affected milk consumption and has resulted in above average malnutrition rates of the children below five years for second half of 2016.

Tropical livestock units (TLU) and Birth rates and Migration

The average TLUs in the mixed farming and Marginal Mixed Farming livelihood zone remained normal at two and 1.5 per household respectively. Birth rates are normal for all species, but expected to reduce as pasture and browse reduce. Normal intra-county migration and outmigration was reported in Mbeere North where about 20 percent of cattle was reported to have migrated from Marginal Mixed Farming area of Kamarandi to Kiambere in Mbeere South and an out migration to the riverine areas in Tharaka county due to poor forage conditions. The intra-county migration is expected to increase in the next three months as the forage conditions deteriorates further in these areas.

Livestock Diseases and Mortalities

The main livestock diseases reported in the sub counties were Helminthiasis and Contagious Caprine Pleuro Pneumonia (CCPP) which is normal at this time of the year. The veterinary department had procured the necessary vaccines and mass vaccination was underway. Incidences of New Castle Disease (NCD) in poultry was reported across both livelihood zones. Mineral and vitamin deficiencies were also reported in both livelihood zones.

Water for Livestock

The main water sources for livestock are permanent rivers, boreholes, dams, shallow wells. Major rivers like Thuchi, Thiba and Ena that traverse the livelihood zones are almost drying up. Distances to watering points increased from less than one kilometre to five kilometres and from five to 15 km in mixed and marginal mixed farming respectively.

3.2 Access

3.2.1 Market operations

The main markets in Mbeere are Ishiara, Siakago and Makutano. All markets were functioning normally for both livestock and staple foods. Main food commodities traded were maize, beans, green grams, millet and sorghum while the major livestock traded were goats, sheep cattle and poultry. Traded volumes for livestock were relatively higher than normal in the Marginal mixed farming livelihood zones compared to the mixed marginal farming livelihood zone where volumes were normal.

3.2.2 Maize prices

Maize prices in January were Ksh 43 per kilogram and 17 percent above the LTA of Ksh 37 which is attributed to the diminishing stocks at the household level increasing demand for the commodity in the markets. The price is likely to rise further as less than 20 percent of maize is expected to be harvested across both marginal mixed and mixed farming livelihood zones

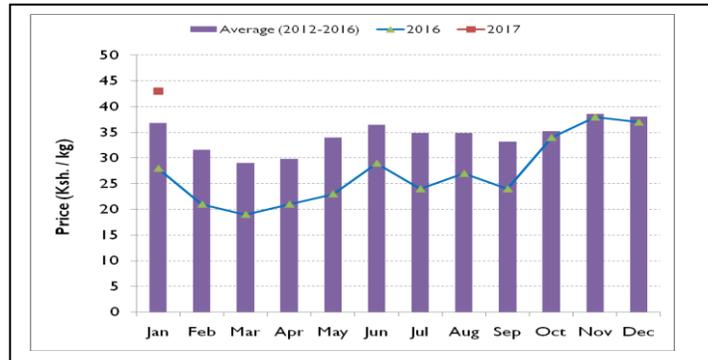


Figure 3: Maize prices trends for Embu (Mbeere)

3.2.3 Goat Prices

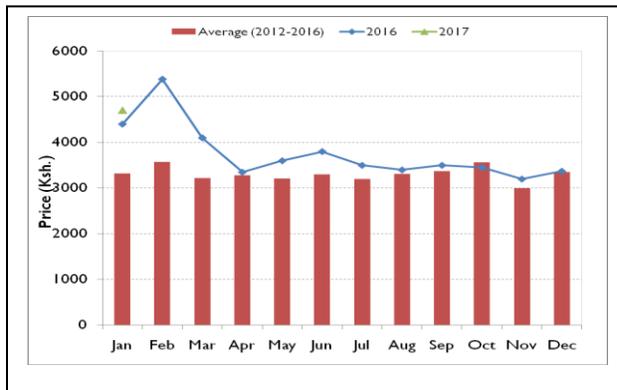


Figure 4: Goat prices

The current price for goats are high at Ksh 4,710 which is 42 percent above the LTA. The good prices can be attributed to good body condition driven by adequate browse. The prices are likely to increase further in accordance with the seasonal trend where the price peaks in February as the livestock body condition peaks supported by adequate forage hence fetching the highest price (Figure 4).

3.2.4 Terms of Trade (TOT)

Currently the terms of trade are 110 Kg of maize in exchange for one goat which is 21 percent above the LTA (Figure 5). The trend has been on a decline since October and can be attributed to the increasing maize prices in the county. The ToTs in 2017 are expected to be

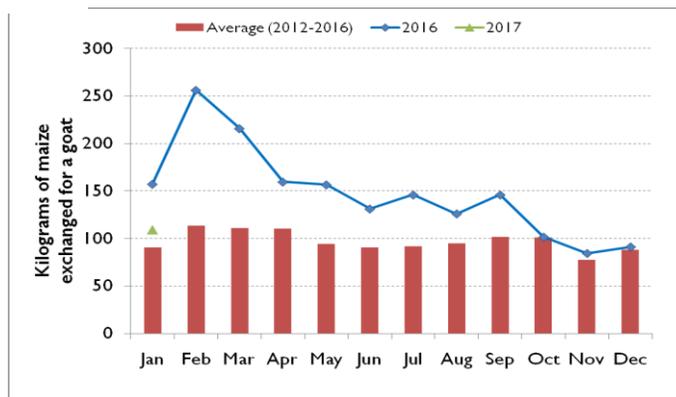


Figure 5: Terms of Trade (ToT)

lower than those in 2016 as the maize prices continue to increase.

3.2.3. Income sources

Food and cash crop production contribute to 50 percent of cash income in both livelihood zones while 23 and 26 percent of cash income is derived from livestock production. Other sources of income include casual labor, petty trade, firewood and charcoal sales. During the period under review, sources of income were affected by the poor rainfall performance.

Table 7. Income sources

Livelihood Zone	Source of Income	Percent of Income
Mixed farming	Food crop production	30%
	Cash crop production	20
	Livestock Production (including meat, milk, hides, skins, and by products)	18%
	Formal Waged Labour including public and private sector employees	10%
	Small Businesses/own business including crafts, non-farm production, beer etc.	14%
	Petty trading	5%
	Poultry production including meat and egg production	5%
	Casual Waged-labour Income	3%
	Firewood collection/charcoal burning	2%
	Remittance and gifts	2%
Marginal Mixed Farming	Food crop production	40%
	Livestock Production (including meat, milk, hides, skins, and by products) poultry and eggs	23%
	Cash crop production	10%
	Small Businesses/own business including crafts, non - farm production, beer etc.	5%
	Formal Waged Labour including public and private sector employees	5%
	Casual Waged-labour Income	4%

	Firewood collection/charcoal	15%
	Poultry Production including meat and egg production	3%
	Fishing (marine or inland)	2%
	Petty Trading 1%, Other Specify 1%, Hunting Gathering 1%, Remittance and Gifts 1%	4%

3.2.4 Water access and availability cost and consumption.

The main sources of water for domestic use include; rivers, boreholes, dams, shallow wells and piped water. The current water sources are below average compared to this time of the year and the below average rainfall affected their recharge which was below 50 percent leading to low water concentration points especially in marginal mixed farming areas. The major rivers serving the county and the lower sub counties are Thiba, Tana, Ena and Thuchi, Makima, Kiambeere, Mavuria, Evurore, Muminji and Mwea. By the end of 2016, there were few reported cases of dried up sources especially in marginal mixed farming livelihood zones. The water sources in the marginal mixed farming livelihood zones areas is expected to last for two weeks while that of (mixed farming is estimated to last for two months with rationings being implemented in areas supplied with piped water.

Distance to water sources, Waiting Time and Cost of Water Consumption of Water

The current distances to water sources are 5 km as compared to 3 km in the Marginal mixed farming zones of Makima and Kiambere and 0 - 2km in mixed farming as compared to 0 – 1km due to drying up of water sources like River Thiba. The trend is likely to worsen until the start of the long rains in March as the available water sources will have dried up. Current waiting time in the marginal mixed farming zone has increased from the normal 20 minutes to 60 minutes while in the mixed farming zone the waiting time from the normal 10 minutes to 30 minutes due to low pressure from piped water and increased number of users at water kiosks. The current cost of water in marginal mixed farming is Ksh 30 per 20 litre jerrican from vendors compared to the normal Ksh 5-10 while in the mixed farming, the current cost is Ksh. 10 per 20 litre jerrican compared to the normal of Ksh 2 for the same. Water consumption in litres per person per day (lpppd) decreased in both livelihood zones to 15 from 20 lpppd and 20 from 40 lpppd in the marginal mixed farming and mixed farming zones respectively. Increased cost, distances and waiting time is attributed to decreased water availability as the water sources dry up and others decrease in output.

3.2.5 Food Consumption and Dietary diversity

In December 2016 the food consumption score showed a worsening situation compared to November as the percentage of the of households with poor food consumption scores increased from 0 to 11 percent in the mixed farming and from 7 to 11 in the marginal mixed farming zones. In both livelihood zones more households moved from acceptable to borderline food consumptions as depicted in Table 8.

Table 8. Food Consumption Score

Period	Livelihood Zone	Poor	Borderline	Acceptable
November 2016	Mixed farming	0	30	70
December 2016	Mixed farming	10.8	56.9	32.3
November 2016	Marginal Mixed farming	6.7	33.3	60
December 2016	Marginal Mixed farming	10.9	40	49.1

Currently most of the children are consuming between 2 - 3 meals per day, down from 4 - 3 meals while adult meals frequency is 1 - 2 meals a day, which is below normal. The composition of meals is mainly more of starch and legumes with less vegetables than usual due to their increased scarcity affected by the below average rains.

3.2.6 Coping strategy

The coping strategy index (CSI) is 3.2 and 10 in mixed and marginal mixed farming livelihood zone respectively. The most commonly employed strategy was reduction of number of meals, sacrifice by adults for children as well as offloading of livestock to meet the household needs.

3.3 Utilization

3.3.1 Nutritional status and Health

Proportion of children under five years of age at risk of malnutrition with Mid Upper Arm Circumference (MUAC) of <135 mm in December 2016 is at 5.6 percent compared to 4.1 percent in 2015. The current trend is stable and below the LTA which can be attributed to relatively good consumption of which is poised to decrease as the season progresses (Figure 6).

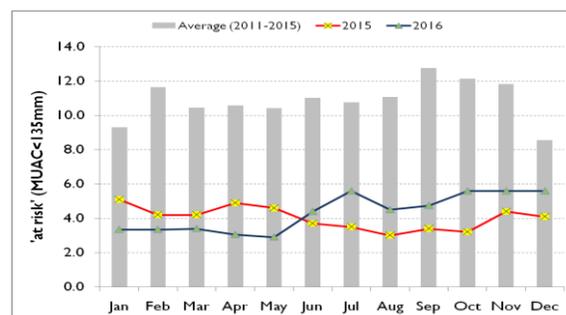


Figure 6: Proportion of Children at Risk of Malnutrition

3.3.2 Selective feeding programme outpatient therapeutic programme (OTP)

The number of children under 5 years suffering from severe acute malnutrition (SAM) doubled in 2016 compared to the same period in 2015. The high number registered in September was as a result of active case finding in the community while the sharp decline in the month of December 2016 can be attributed to the health worker's strike that disrupted health services (Figure 7). Increased incidences of

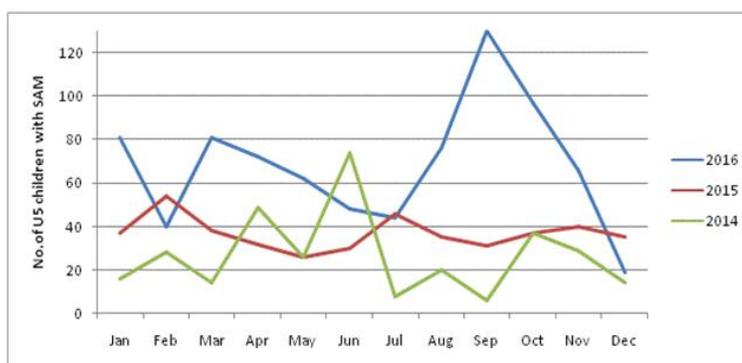


Figure 7. Number of children under 5 years with Severe Acute

people with moderate acute malnutrition (MAM) enrolled in the supplementary feeding

programme (SFP) rose by 45 percent from July-December 2016 compared to 2015. This is can be attributed to reduced meal frequency and dietary diversity.

3.3.3 Immunization and Vitamin A Supplementation

The fully immunized child (FIC) coverage for 2016 was 75 percent, lower than national target of 80 percent and a drop from 87 percent reported in 2015. Children aged 6-59 months supplemented with Vitamin A dropped from 41 percent reported in the second semester of 2015 to 38 percent in 2016. This can be attributed to the health workers strike coupled with changes made in the school calendar as schools closed early.

3.3.2. Sanitation and Hygiene

Latrine coverage improved in 2016 compared to the same period in 2015 across all the wards with the best improvement reported in Kanyuambora, Gachoka and Evurori at 10, 9 and 8 percent respectively (Table 9) and could be attributed to implementation of community total lead sanitation (CLTC) where all public health officers were trained and triggered in their own areas of work.

Table 9. Latrine coverage by wards

Division/Livelihood zone	July to December 2015 % Coverage	July to December 2016 % Coverage
Kiritiri/ Kiambere	77%	78%
Gachoka	76%	85%
Makima	81%	82%
Mwea	77%	79%
Siakago	91.2	94.6
Muminji	90.2	92.9
Kanyuombora	75.7	86.4
Evurori	82.1	90.0

The sub counties experienced stock out of water treatment chemicals in 2016 until late December hence water treatment using chemicals was low compared to normal affecting water quality. Hand washing at critical times remains poor at 40 percent while appropriate methods like use of water and soap is even lower at 30 percent.

3.3.3 Morbidity Patterns

According to the District Health Information Systems (DHIS), other diseases of respiratory system and upper respiratory tract infection (URTI) and urinary tract infection (UTI) among the general population increased by 17 and 10 percent in 2016 compared to same time in 2015 while disease incidence of skin and eye infections decreased by 17 and 15 percent respectively in 2016 (Table 10). Among the children under five, the disease incidences were fewer in 2016 compared to 2015 with exception of Pneumonia which increased by 10 percent. The decrease should be interpreted with caution as majority of the health workers were on strike in the month of November and December and should not necessarily be attributed to good hygiene and sanitation

practices by the community or to continued advocacy by health workers. During the period there were no unusual deaths reported as the reported cases were with acceptable threshold.

Table 10. Morbidity cases for children under five and general population

Reported Morbidity for General Population				Reported Morbidity for Children Under Five Years			
Disease /Condition	July - December 2015	July - December 2016	% change	Disease /Condition	July - December 2015	July - December 2016	% change
Other Diseases Of Respiratory System+ URTI	42277	49300	116.6	Other Diseases Of Respiratory System+ URTI	25471	23564	92.5
Disease of the skin	13376	11093	82.9	Disease of the skin	5134	3635	70.8
Arthritis, Joint pains etc.	6406	6388	99.7	Intestinal worms	3885	2135	55.0
Urinary Tract Infection	4260	4706	110.5	Diarrhea	3713	3577	96.3
Eye Infections	3403	2907	85.4	Pneumonia	1889	2114	111.9

3.4 Trends of key food security indicators

The comparative trend of key food security indicators shows a deteriorating situation compared to the long rains assessment period

Table 11. Food security indicator trends

Indicator	Long rains assessment, July 2016	Short rains assessment, Feb 2017
% of maize stocks held by households (agro-pastoral)	137 % above LTA	83 % below LTA
Livestock body condition	Good for shoats , good –fair for cattle in MMF	Good for shoats, fair for cattle in both MMF and MF
Water consumption (litres per person per day) MF	60-40 lpppd	20 lpppd
Water consumption (litres per person per day) MMF	40-20 lpppd	15 lpppd
Price of maize (per kg)	Ksh 35	Ksh 37
Distance to grazing		
Terms of trade (pastoral zone)	146 Kg	91 Kg

Indicator	Long rains assessment, July 2016	Short rains assessment, Feb 2017
Coping strategy index	-	3..2 (mixed farming) and 10.3 marginal mixed farming
Food consumption score MF	-	10.9 acceptable, 40, borderline, 49.1 poor
Food consumption score MMF	-	10.2 acceptable, borderline 57.5, 32.3 poor
Children at Risk of Malnutrition by MUAC >135mm	4.4%	5.6%

3.5 Education

The county has a total of 240 primary schools and the Home Grown School Meals Programme (HGSMP) is being implemented in 46 percent of the primary schools. The HGSMP is currently benefiting 44 percents of the pupils comprising 15, 217 boys and 14, 389 girls. Pupils in some primary schools miss meals due to delays in disbursement of funds and lack of water to prepare meals. HGSMP has reportedly improved participation, attendance and retention of pupils in schools.

Rate of attendance in the year 2016 was 99 percent for both boys and girls in public primary schools. In early childhood development (ECD) centres, participation was 98 percent for both girls and boys attributed to construction of more centres closer to the households and employment of more teachers by county governments. Main reasons reported for absenteeism were ailments and lack of school fees.

4.0 Food Security Prognosis

4.1 Prognosis Assumptions

Over the next six months (February – July), food security outcomes will mainly be influenced by several drivers. This section summarizes the assumptions about the key food security drivers.

- The short rains crop production expected in the month of February is expected to be below average reducing food availability at household level
- According to the CPC/IRI there is a probability that the March – May long rains are likely to be below average with a late onset.
- Staple food prices are likely to gradually increase and remain elevated through July reducing household food access
- Household income will reduce with the reduction in on farm labor opportunities with the reduced agricultural activities brought about by the expected below average harvest in February and by the forecasted below average long rains from March – May.

4.2 Food Security Outcomes from February to April 2017

From February, livestock body condition, milk production, distances to water sources are expected to worsen during the initial period and later improve in subsequent months. Nutrition status especially of children under five is likely to deteriorate. The expected below average short rains harvest will result in reduced food availability, it will also result in reduced agricultural

activities hence reduced income earning activities during the harvest period in February and the planting period from March to May reducing household income that will reduce household food availability and consumption. The forecasted below average rains are expected to begin late in April and will likely have a minimal effect relieving water and forage stress momentarily. The food security situation is likely to deteriorate with more households moving into the “Stressed” (IPC Phase 2) phase.

4.3 Food Security Outcomes from May to July 2017

From May, the below average rains will slightly improve forage production and minimally increase milk availability and improve food consumption and dietary diversity slightly reducing malnutrition. Staple food prices will gradually increase reducing food access in a majority of households unable to afford the high prices. From June, there will be below average availability of short cycle crops and reduced agricultural labor opportunities hence below average food availability and consumption due to shortage of income. Malnutrition in children under five years of age will increase due to reduced food and milk availability and consumption. The effects of the long rains will be short lived considering the below average rains and effects of two consecutive poor seasons, food insecurity will increase with a majority of households will be in the Stressed (IPC Phase 2) phase of food insecurity.

5.0 Conclusion and Interventions

5.1 Conclusion

The current food security situation in the County is stressed IPC (IPC Phase 2). The factors to monitor are water availability, pasture and browse condition, market trends, livestock disease outbreaks, crop value chain development, health and nutrition status of the population and is expected to worsen as the short rain season did not perform well. In the next three to six months, there will be need to be monitor water situation in the both Mixed and Marginal Mixed Farming livelihood zone, Livestock off load campaign endemic livestock diseases, nutrition and health status among the population.

5.1.2 Summary of findings

Short rains harvest will be in the range of 10-20 percent of LTA, as a result of poor rainfall coupled with limited household stocks which stands at 83 percent below the LTA, loss of income and food especially from own farm production and reduced on farm labor opportunities. This has led to majority of household to rely on markets for their food Terms of trade are already unfavorable to the households and the trend is worsening due to high trade volumes and low demand. Water stress counties to bite across all the livelihood zones, The situation is likely to worsen until the onset of the long rains, The nutrition status has deteriorated as more malnutrition cases being reported. Majority of households are currently at borderline in terms of food consumption score this will exacerbate further and the household food security will be compromised, most households will remain in Stressed (IPC Phase 2)

5.1.3 Ward Ranking

Table 12. Ward Ranking

WARD	Ranking	Rationale
Kiambere	1	Poor pasture and browse,-Increased distance to water sources, inadequate access to health facilities, Human, livestock and wildlife conflict – crocodiles, little rain
Muminji	2	Crop failure and water stress
Makima	3	Crop failure and water stress
Mwea	4	Crop failure and water stress
Evurore	5	Crop failure and water stress
Mbeti South	6	Water stress
Nthwa	7	Water stress

5.2 Ongoing Interventions

5.2.1 Food interventions

The government has been supplying relief food to the needy families since October 2016 so far 13500, 12500 and 22500 kilograms of maize, beans and rice respectively and 2400 litres of cooking oils have been distributed in both Mbeere north and south.

5.2.2 Non - food interventions

Table 13. Non - food interventions

Sub County	Intervention	Location	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost (Ksh M)	Time Frame	Implementation Status (% of completion)
AGRICULTURE								
	Fertilizer Subsidy	County Wide	84,300	DoALFS/ National and county government	Increased productivity /income	200	FY 2016/17	Ongoing
	Cash for assets in making terraces, farm ponds,	County Wide	30,000	Dept of agriculture and partners e.g. WVK, WFP, KRCS , ,	Improved productivity and profitability (income)-	77	FY 2016/18	Ongoing

	vegetable sunken beds, zai pits ,agro forestry nurseries			ASDSP,FAO,U SAID,KRD,	food security			
LIVESTOCK								
	Pasture and Fodder conservation	County Wide	2,000 HH	Dept of Livestock& Veterinary	Increased income hence food security	10	FY 2016/17	Ongoing
	Cattle Breeds upgrading through AI subsidized services	County Wide	15,000 HH	Dept of Livestock& Veterinary	Improved milk availability	6	FY 2016/17	Ongoing
	Livestock disease surveillance	30 Wards	2,000 HH	Dept of Livestock& Veterinary	Enhanced livestock survival for food supply	2	FY 2016/17	Ongoing
	Improvement of chicken breeds & disease control	15 Wards	5,000 HH	County Government of Makueni; FAO, KAPAP, ASDSP/BISEP	Improved income & food security	5	FY2016/17	Ongoing
WATER								
	Dam construction (84)	County wide Country wide	100,000	CGM	Increased water availability	293	2015-2016 FY	54% complete 46% On going
	Borehole drilling 36.	County wide	35,000	CGM	Increased water availability	60	2013-2016 FY	25 bore hole are 90% complete, equipping to be done by August 2016. 11 borehole survey and drilling to start by August 2016

	Pipeline extension 20 No	County wide	5,000	CGM	Increased water availability	100	2015-2016 FY	Contracts awarded
	Sand dam's construction 10 No	County wide	5,000	CGM	Increased water availability	20	2015-2016 FY	Contracts awarded
HEALTH								
ALL	Management of Acute Malnutrition (IMAM) and SMART SURVEY	ALL		GOK/UNICEF/WFP	Improved nutrition status	6	One year	ALL
ALL	High Impact Nutrition intervention and Mass screening	ALL	50,000	GOK/UNICEF	Improved health	5	One year	ALL
ALL	Advocacy Campaigns	ALL		GOK/UNICEF/WFP	Improved Health	0.2	One year	ALL

5.3 Recommended Interventions

5.3.1 Food interventions

Approximately 25 -30 percent of population in Mbeere are in need of food aid the Table 14 below illustrates the proportion of people by ward.

Table 14. Population in need of food assistance

Ward	Population	Percentage requiring intervention
Kiambere	15,059	45-50
Muminji	16,728	35-40
Makima	21,291	35-40
Mwea	30117	30-35
Evurore	45,585	30-35
Mavuria	34,139	20-25
Mbeti south	29,579	15-20
Nthawa	26,725	5-10

5.3.1 Non - food interventions

Table 15. Non- food interventions

Sub County	Intervention	Location	No. of beneficiaries	Implementers	Impacts in terms of food security	Cost (Ksh M)	Time Frame
AGRICULTURE							
Mbeere south/Mbeere North	Trainings on post harvest management of grains	all	17,000 households	MOA	Reduce losses associated with aflatoxin and also pests infestation.	Human resource	2 months
Mbeere North/Mbeere south	Provision of traditional crop seed	Sub Countywide	12,000	National and County government	Increase in food availability at household, increased income	3.9	On going
LIVESTOCK							
Mbeere north & south	Routine animal husbandry practices	Mbeere north & south	2000 farmers	Livestock production department.	Improved Living standards Increased income	Normal extension work	On going
Mbeere north & south	Routine disease surveillance	Mbeere north & south	2000 farmers	Veterinary department.	Improved animal productivity	Normal extension work	On going
WATER							

MAKIMA, KIAMBERE MAVURIA MWEA(Marginal Mixed Farming)	Boreholes repairs, construction and desilting of earth dams	Makima, Kiambere, Mavuria	300 house holds.	county government and national government	-reduce walking distance -Reduced waiting time -Increase domestic water usage. -Reduce cost of water. - reduce water borne diseases	2.4	January - March 2017
ALL WARDS	Water harvesting to schools and health institutions		150 INSTITUTIONS	county government and national government	-reduce walking distance -Reduced waiting time -Increase domestic water usage. -Reduce cost of water. - reduce water borne diseases	15	January - March 2017
HEALTH							
Embu County	Micro nutrient Supplementation Vitamin A deworming, Therapeutic ZINC, IFAs	Health facilities in all divisions All schools	31892 3600	MOH MOE NDMA APHIA PLUS	Improved immune system, Reduced diarrhoea incidence, boost Iron level, reduce MMR	0.32	Bi annual throughout year

Mbeere south and North	Management of Acute Malnutrition (IMAM) 1.Outpatient therapeutic program and Inpatient Management	All facilities implementin g feeding programmes	2280 1368	GOK (MOH) UNICEF WHO	Reduce severity of malnutrition	0.7	Annual
Mbeere south and North	MIYCN Interventions (EBF and Timely Intro of complementary Foods)	Mbeere South and North	6-23 months	GOK UNICEF WHO A+K	Improve nutrition status	2	Throughout the year