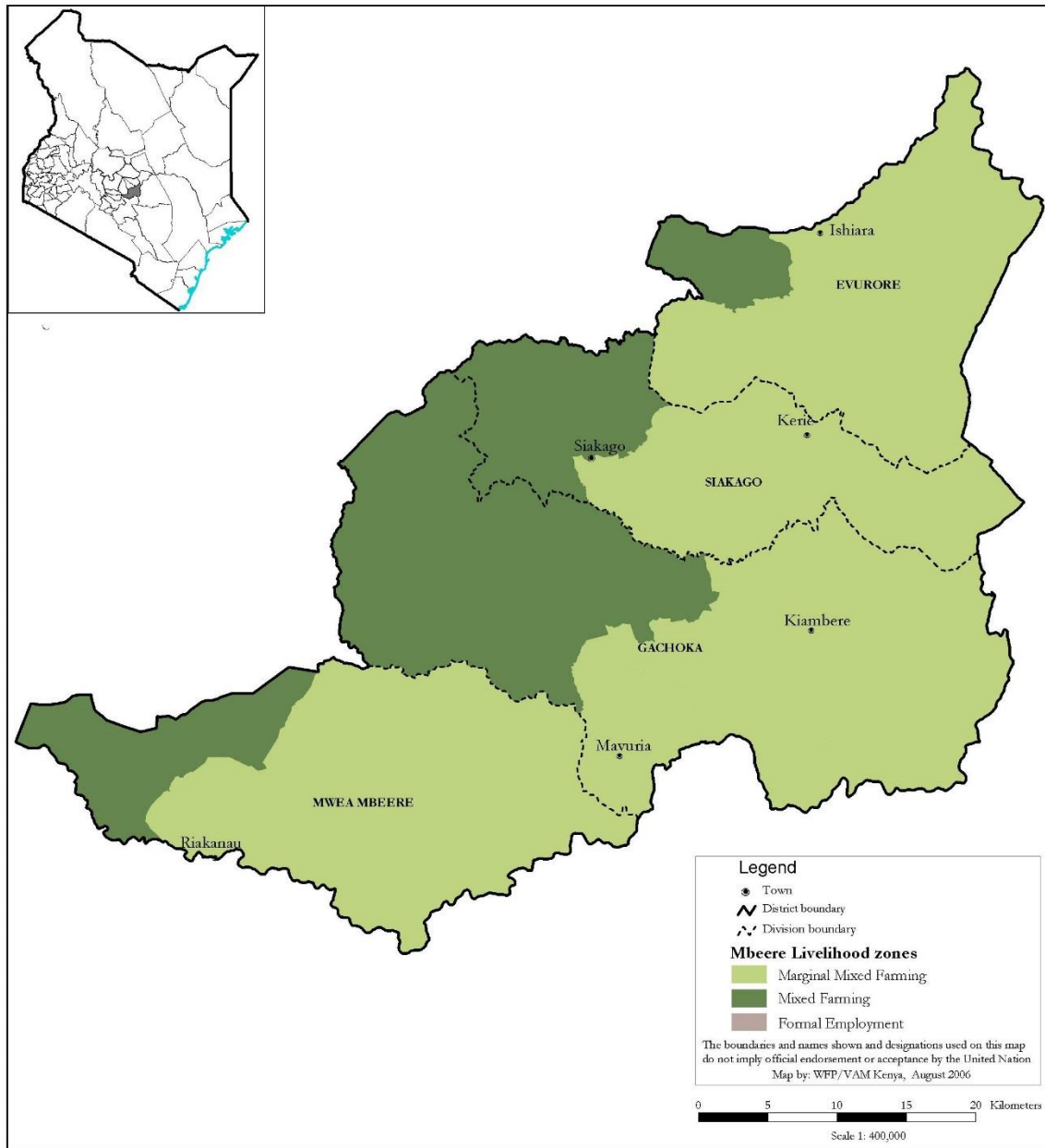


**EMBU (MBEERE) COUNTY
2016 LONG RAINS FOOD SECURITY ASSESSMENT REPORT**



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

August 2016

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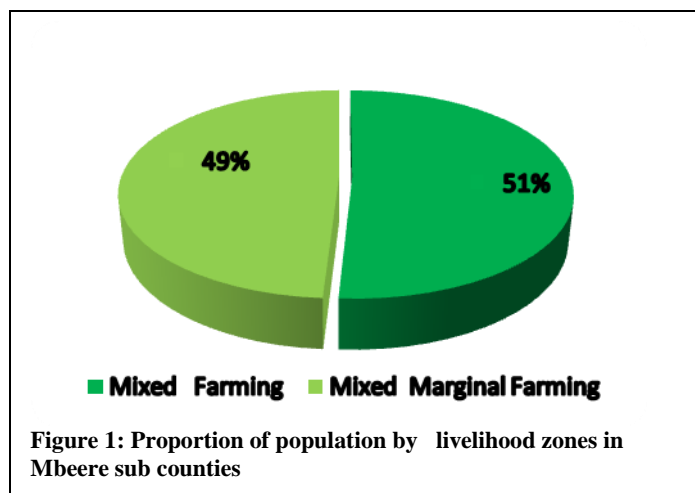
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1 INTRODUCTION

1.1 County Background

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

Mbeere (North and South) have an estimated population of about 219,220 persons (KNBS 2009) and covers an approximate area of 2,092.5 square kilometres. 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).



1.2 County Food Security Situation

Food security situation is classified as Minimal (IPC Phase 1) in both Mixed farming and Marginal Mixed Farming livelihood zones. Food Consumption has improved from 73 percent to 91 percent for those having acceptable food consumption score while those in borderline decreased from 21 percent to 8 percent respectively between May 2015 and May 2016. Food stocks at household level are 137 percent above Long Term Average (LTA) and were carryover stocks from the previous harvest. Although expected maize crop is poor (50 percent of LTA), green grams and cowpeas production is expected to be above LTA (40 and 60 percent above LTA), indicating stable availability of food at household level. Prices of maize were 24 percent below LTA and are expected to rise marginally but remain below LTA, while livestock prices were above LTA indicating favourable terms of trade for households that rely on livestock production. Milk is available but below LTA. Water consumption has been acceptable above 20litres per person per day across the livelihood zones.

The trend on proportion of children at the risk of malnutrition below five years measured through Mid-Upper Arm Circumference (MUAC<135mm) has been stable between January and April and rose from 2.9 percent in May to 5.6 percent in July and is expected to remain within the LTA. The current factors affecting food security include poor pasture in the Marginal Mixed Farming livestock zone include poor pasture, poor performance of maize crop and low milk availability.

1.3 Food Security Trends

During the 2016 Short Rains Assessment, the County was classified in the Minimal Phase (IPC Phase 1) for all the livelihood zones same phase during the short rains assessment in February 2016.

Table 1: Food security indicator in SRA 2015 and LRA 2016.

Indicator	Current situation(LRA 2015)	Previous season(SRA 2016)
Food insecurity phase	None/Minimal(IPC phase 1)	None/minimal, pockets of stressed
Household food stocks	137 % above LTA	131 % of LTA
Household water consumption,	15 - 30 lpppd	25-30 lpppd

Indicator	Current situation(LRA 2015)	Previous season(SRA 2016)
Marginal mixed Farming		
Household water consumption, Mixed framing	60 lpppd	60 lpppd
Coping strategy index	13	20
Terms of trade	131	89
Food consumption score	Acceptable – 91%, Borderline – 8% and poor -1%	Acceptable-73%, Borderline-21%, poor 6%
Children at risk of malnutrition (MUAC)	4.4 %	3.5 %

1.4 Rainfall Performance

The onset of the Long rains was late in the first dekad (10 day period) of April instead of first dekad of March as expected. Though onset was timely, temporal distribution was poor and spatially even. Rainfall amounts were mainly 90 - 110 percent of normal. The highest amount was received in third dekad of April. Only a small section of the western parts of Mixed Farming livelihood zone received 110 - 125 percent of normal. Rainfall cessation was normal in second dekad of June.

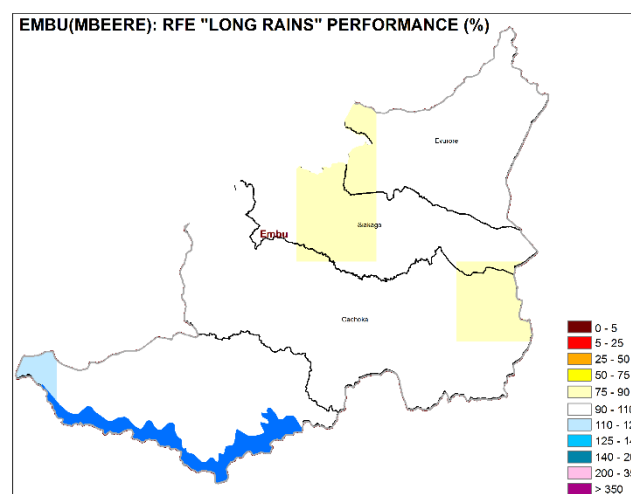


Figure 2: Long rains Performance

2 IMPACT OF RAINFALL PERFORMANCE, SHOCKS AND HAZARD

2.1 Crop Production

Mbeere sub counties mainly rely more on the October - December short rains for crop production. The major crops grown are maize, green grams, cowpeas, beans, tomatoes, kales and watermelons. The contribution of each to cash and food income is as shown in in Table 2.

Table 2: Contribution of crops to cash and food income

	Mixed farming zone		Marginal Mixed Farming zone	
	Crop contribution		Crop contribution	
	Cash income	Food income	Cash income	Food income
Maize	25	38	10	50
Green grams	-	-	30	10
Cowpeas	5	15	15	8
Beans	15	23	6	17

Rain fed Crop production

During the long rain season, the area planted with food crops declined by 13, 32 and 52 percent for maize, cowpeas and green grams respectively since farmers expected depressed rains and therefore decreased acreage to reduce risks.

Table 3. Rain fed Crop production

Crop	Area planted during 2016 Long rains season (Ha)	Long Term Average area planted during the Long rains season (Ha)	2016 Long rains season production (90 kg bags) Projected	Long Term Average production during the Long rains season (90 kg bags)
Maize	10,900	12,545	72,580	151,059
Cowpeas	3,870	5,725	12,280	8,715
Green Grams	3,118	6,536	31,180	19,008

In the Marginal Mixed Farming livelihood zone in Mbeere South, it was reported that rains had uneven temporal distribution. There was a dry spell after onset of rain which resulted in germinated seedlings drying, leading to replanting. The replanted crops did not perform well and some dried altogether since there was a successive dry period. The expected maize crop yields will be 48 percent of the LTA. The cowpeas and green grams crop yields are expected to be 40 and 64 percent above the LTA, attributed to good response of these dry land crops to the prevailing rainfall regime. The improvement in the expected yields in cow peas and green grams was attributable to sensitization done on planting early maturing dry land crops which boosted production.

Irrigated Crop

The area under irrigation was above the Short Term Average (STA) by 284, 52 and 160 percent for watermelon, tomatoes and kales respectively since to farmers turned to irrigated agriculture in view of the expected depressed rains in the region.

Table 4. Irrigated Crops Production

Crop	Area planted during the 2015 Short rains season((ha)	Short Term Average (3 years) area planted during Short rains season(ha)	2015 Short rains season production (MT) Projected	Short Term Average (3 years) production during 2015 Short rains season (MT)
Watermelon	411	107	25,688	2,250
Tomatoes	321	211	16,050	6,752
Kales	112	43	1,400	211

Production was expected to be 1042, 138 and 564 percent above the STA for watermelon, tomatoes and kales respectively. The farmers further took advantage of the subsidized fertilizer that was promoted by the agriculture extension office to boost production. Watermelon production greatly improved due to control of melon fly by use of real Integrated Pest Management (IPM) technology (Table 4).

Maize stocks

The stocks held are much higher at 137 percent and 18 percent above the LTA at household level and traders respectively attributed to farmers having stocks from the previous short rains season.

Table 5 : Maize Stocks status

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	68,636	28,911
Traders	16,430	13,970
Millers	N/A	N/A
NCPB	N/A	N/A
Total	85,066	22,281

The food stocks at the household level are kept for food and also sold to meet non-food needs such as school fees. The sale therefore depletes the stock and amount available for food will last for two to three months. Traders stocks are low since they are expecting to buy from the farmers at low prices after harvest. There are pockets in the Marginal Mixed Farming zone which have no stocks and are relying on the market.

2.2 Livestock Production

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

Forage condition

Pasture and browse were generally good in the Mixed Farming zone and good to fair in the Marginal Mixed Farming zone, since rainfall performance was poor. In the Mixed Farming livelihood zone maize stovers will supplement the pasture hence lasting longer while in the Marginal Mixed Farming livelihood zone, maize crop did not perform well due to erratic rainfall and hence will not contribute adequately to forage situation (Table 6)

Table 6 : Forage status and projected duration

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

The forage situation had deteriorated in Kamaradi area in Evurore, Mbeere North which is in the Marginal Mixed Farming livelihood zone, and livestock were on move for pastures.

Livestock Productivity

Livestock body condition is generally good in all livestock species across the livelihood zones. However the cattle body condition was declining in the Marginal Mixed Farming zone in Kamarandi area, due to the decline in the pasture conditions (Table 7).

Table 7 : Livestock body condition .

Livelihood zone	Cattle		Sheep		Goat	
	Current	Normally	Current	Normally	Current	Normally
Mixed Farming	Good	Good	Good	Good	Good	Good
Marginal Mixed Farming	Good-fair	Good	Good	Good	Good	Good

The good body condition was due to adequate presence of good fodder, pasture and maize stovers in mixed farming livelihood zone which are projected to last three months while in Marginal Mixed Farming livelihood zone fodder and pastures were fair and on deteriorating trend, expected to last till September.

Milk production, consumption and prices.

Milk production is below LTA across the livelihood zones. Milk production in the Marginal Mixed Farming was lower than normal due to decline in quality and quantity of pasture as result of the poor temporal distribution in the Marginal Mixed Farming livelihood zone (Table 8).

Table 8 : Milk Production, consumption and prices

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres)per Household		Prices (Ksh)/Litre	
	Current	LTA	Current	LTA	Current	LTA
MF	1.5	2	0.5 - 1	1 - 2	60	60
MMF	0.5	1	0.5	0.5 - 1	90	60

Milk price was lower in Mixed Farming zone due area own production and supplies from neighbouring areas of Embu district which have high production. The distance from Embu to the Mixed Farming zone is less hence lower transport cost. In Marginal Mixed Farming zones low production and higher transport cost pushes up the milk price (table 8).

Reduced milk production and increase in prices have affected milk consumption and may impact negatively on nutrition status of the children below five years with a possibility of elevating proportion at risk.

Tropical livestock units (TLU)

The average TLU in the mixed farming livelihood zone was 1.5 compared to normal of two household while the average TLU in the Marginal Mixed Farming was two compared to normal of 2.5. In Mixed Farming zone, the land under livestock is small due to crop production while in Marginal Mixed Farming zone, land under livestock is bigger since larger part of the land is not cultivated due to unreliable rains. It was reported that there was an increase in the number of live

stocks held per household by 0.5 TLUs in both livelihood zones due to availability of water and pastures following favourable performance of the last two seasons.

Birth rate

Birth rate is normal, but expected to reduce as pasture and browse reduce. Conception rates in the county stands at an average of five percent and three percent of every 10 females of goats, sheep and cows respectively

Migration

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 river line 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, Foot and Mouth Disease (FMD), Contagious Caprine PleuroPneumonia (CCPP), and New Castle Disease (NCD) in poultry. Vaccination against the above livestock diseases was carried out together with routine pest and disease control practices. Sheep and goat pox was reported in Mbeere North with a five percent mortality. The situation was under control after interventions by the veterinary department. Mineral and Vitamin deficiencies was reported in both livelihood zones.

Water for Livestock

The main water sources for livestock are permanent rivers, boreholes, Dams, shallow wells and Piped water. Rainfall recharged the open water sources to 80 percent of their capacity and dams to 60 percent. The prevailing water sources are normal ones for this season (Table 9)

Table 9 : Status of water for Livestock in different livelihood zones

Livelihood zone	Sources		Return trekking distances (Km)		Expected duration to last (Min)		Watering frequency	
	Current	Normal	Current	Normal	Current	Normal	Current	Normal
Mixed farming	Rivers, boreholes, pans, dams, piped water, shallow wells	The same sources	0-2	0-1	0-3	0-3	daily	daily
Marginal Mixed Farming	Rivers, boreholes, pans, dams, shallow wells	The same sources	3	0-4	30-60	3-15	Alternate	daily

Water is more readily available in the Mixed Farming zone since 90 percent of the piped water structures are in this zone and has more rivers compared to Marginal Mixed Farming zone In Kiambeere area and Evurori in Marginal Mixed Farming zone, , the distances to the livestock watering point slightly increased above the normal situation due to reducing water level in the

boreholes and drying of dams and pans, resulting in reduction in watering frequency from daily to after one other day(table 9)

2.3 Water and Sanitation

Water for domestic use.

The main sources of water for domestic use include; rivers, boreholes, water dams, shallow wells and piped water. The current water sources across the livelihoods are the normal sources at such a time of the year.

Table 10: current water situation

Livelihood zone	Distance to Water for Domestic Use		Cost of Water		Waiting Time at Water Source		Average HH Use		Projected duration (months)
	(Km)		(Kshs./20litres)		(Minutes)		(Litres/person/day)		
	Current	Normal	Current	Normal	Current	Normal	Current	Normal	
Mixed Farming	2	0.5	10	0	30	5	60	60	3
Marginal Mixed Farming	4	2	20	10	30-60	20	15-30	30	3

2.4 Markets and Trade

Market operations

Market operations were normal without disruptions reported. The main markets are Ishiara, Kiritiri and Makutano. Market supplies were stable, with cereals, pulses and livestock being sourced from farmers within the area, from Tharaka and Kitui counties. Traded volumes were relatively higher than normal in the Mixed Farming livelihoods compared to the Marginal Mixed Farming zones. The mainly traded food staples were maize, beans and green grams while goats were more traded than cattle and sheep. Poultry was also common in the markets.

Maize prices

The prices of maize between January and July 2016 were significantly lower than LTA, a reduction attributed to adequate stocks in the markets from the short rains harvest (Figure 3). The prices were on increase following the LTA trend. The increase in prices was attributed to exhaustion of the stocks from the last season harvest thereby increasing the demand of the crop in both local market and at the household level. Expectation of below average long rains harvest is likely to continue pushing prices upwards as demand increases through September.

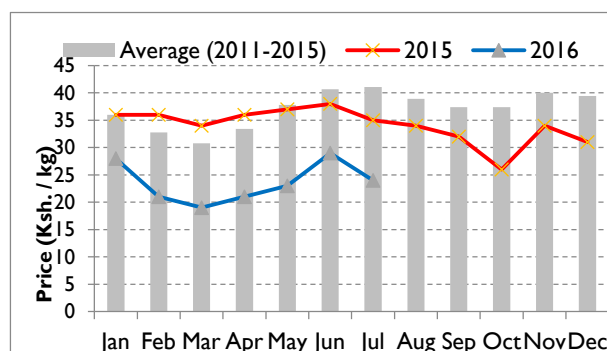


Figure 3: Maize prices trend

Goat price

The goat prices were above the LTA and also higher than the prices recorded in similar period in the year 2015. The higher than average prices were attributed to improved body condition, low supply of the livestock to market by the farmers, as food is available from stocks from previous season coupled with high demand of the animals in the local markets.

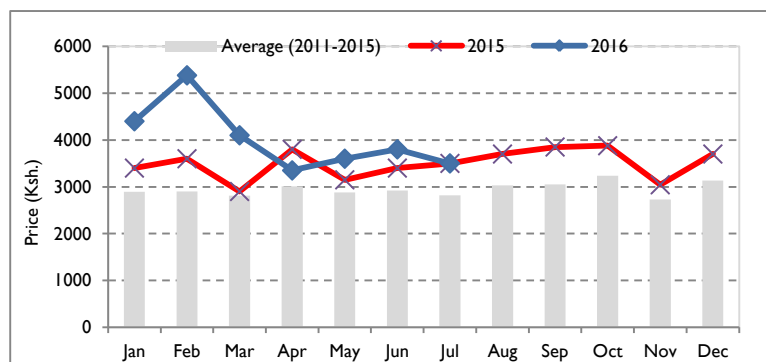


Figure 4: Trend on Goat prices.

Terms of trade

The trend on the Terms of trade between January and July 2016 has been significantly above the LTA which is attributed to high goat prices and low maize prices. The current trend indicate decreasing TOT but following the LTA trend.

with higher ToT, the households in the marginal mixed farming livelihood zone who rely on livestock have a higher purchasing power, hence can access upto 140 kilograms of maize compared 70 over LTA in same month of July..

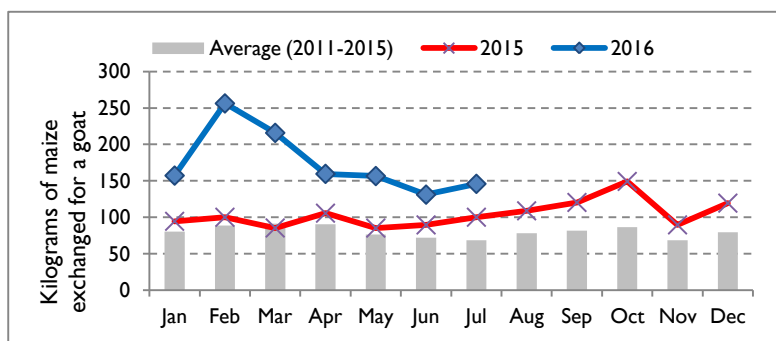


Figure 5: Trend on Terms of Trade (ToT)

2.5 Health and Nutrition

Morbidity patterns

Table 11: Morbidity cases in children under five years and the general population.

Reported Morbidity cases for children under five				Reported Morbidity cases for General Population			
Disease	Jan-June 2015	Jan-June 2016	% Change	Disease	Jan-June 2015	Jan-June 2016	% Change
Malaria	1865	2295	123	Malaria	5454	3714	68
URTI	25730	32750	127	URTI	54624	59464	109
Diarrhoea	3393	3266	96	Diarrhoea	2638	2903	110
Pneumonia	2394	2256	94	Pneumonia	2496	3327	133
Skin Disease	4281	6995	163	Skin Disease	25092	16424	65

In children under five, malaria, URTI, and skin diseases increased between January and June 2016 compared to similar period in year 2015 by 23, 27 and 63 percent respectively which could

be attributed to changing environmental factors, while diarrhoea and pneumonia reduced by four and six percent respectively. In adults, URTI, diarrhoea, and pneumonia increased in a similar period by 9, 10 and 33 percent respectively (Table 11).

Epidemic prone diseases

Table 12: Epidemic prone diseases

Epidemic	January –June 2015		January –June 2016	
	No of cases	Reported Deaths	No of cases	Reported Deaths
Measles	11	0	1	0
Cholera	6	0	0	0
Dysentery	191	0	80	0

There was no diseases outbreak reported in the sub counties during the reporting period compared to the same time in 2015.

Immunization Coverage

Table 13: Immunization Coverage

Year	Percentage of fully immunized children in the County (Source: DHIS MOH 710 Vaccines and Immunizations)	Percentage of children immunized against the mentioned diseases in the County Source: Nutrition survey-(Done 2013)
January to June 2016	74.5%	OPV 1 98.7% OPV 3 97.9% Measles 97.0%
January to June 2015	94.1%	OPV 1 98.7% OPV 3 97.9% Measles 97.0%

There was a drop in immunization coverage in 2016 which was attributed to shortage of antigens. The county reported that data for measles campaign was not captured under routine system. Routine and also that mothers did not take their children for immunization at the health facilities (which are far off) awaiting the measles campaign which is done door to door, hence affecting the coverage.

Vitamin A supplementation

Vitamin A coverage as per DHIS was slightly below the national target a 20 percent decline from a similar period in 2016.

Table 14: Vitamin A supplementation

% Children < 12 months who received Vit A (DHIS 710)		% Children 1 to 5 years old who received Vit A (DHIS 710)		% Children 6-11 Ones (Survey)		% Children 12-59 Twice (Survey)		% Children 6-59 Ones (Survey)	
Jan –June 2015	Jan –June 2016	Jan –June 2015	Jan –June 2016	Jan – June 2015	Jan – June 2016	Jan – June 2015	Jan – June 2016	Jan – June 2015	Jan – June 2016
94.1 %	74.5%	114%	112%	N/A	N/A	N/A	N/A	N/A	N/A

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The increase in vitamin A coverage in children aged 12 – 59 months was attributed to other interventions like vitamin A supplementation in the Early Child Development Education Centres(ECD and during the *malezi bora campaign* . While for those under one year depended on routine supplementation and also supplementation during the integrated measles-rubella campaign

Nutrition Status and Dietary Diversity

In mixed farming livelihood zone, meal frequency was two to three meals per day which is normal, while in Marginal Mixed Farming livelihood zone meal frequency was one to two meals per day as opposed to a normal of two to three meals.

Proportion of children at risk of malnutrition (MUAC<135mm)

The proportion of children at risk of malnutrition (assessed by MUAC <135mm) between January and July 2016 was below LTA. There was an upward trend from May to July 2016, indicating decline in nutrition status of the children below five years attributed to in part reduced milk consumption in the Marginal Mixed Farming livelihood zone(Figure 5).

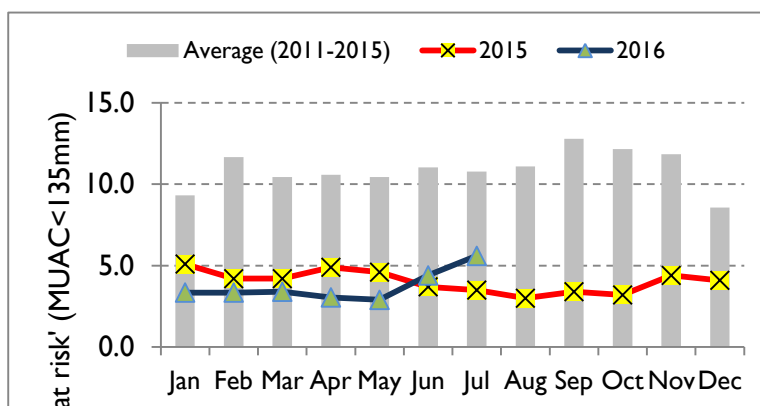


Figure 6: Trend on proportion of children at risk of Malnutrition (MUAC<135mm)

Food Consumption Score (FCS) and Coping Strategy Index (CSI)

According to the Food Security Outcome Monitoring (FSOM) report by World Food Programme (WFP), the proportion of households' having acceptable food consumption score increase from 73 percent in May 2015 to 91 percent in May 2016 in addition the proportion in borderline has reduced from 21 percent to 8 percent while the proportion with poor food consumption score has decreased from six percent to one percent from May 2015 to May 2016, underscoring the improved food security situation at the household across the livelihoods (Figure 6).

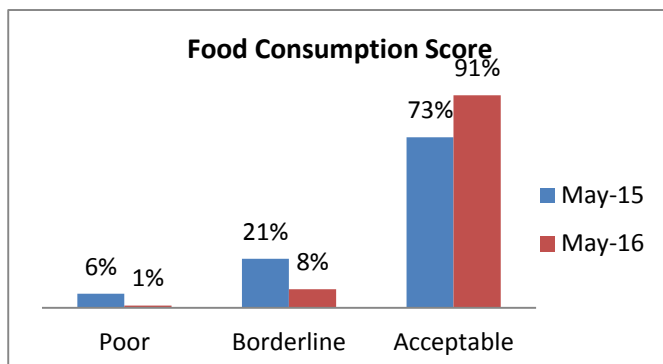
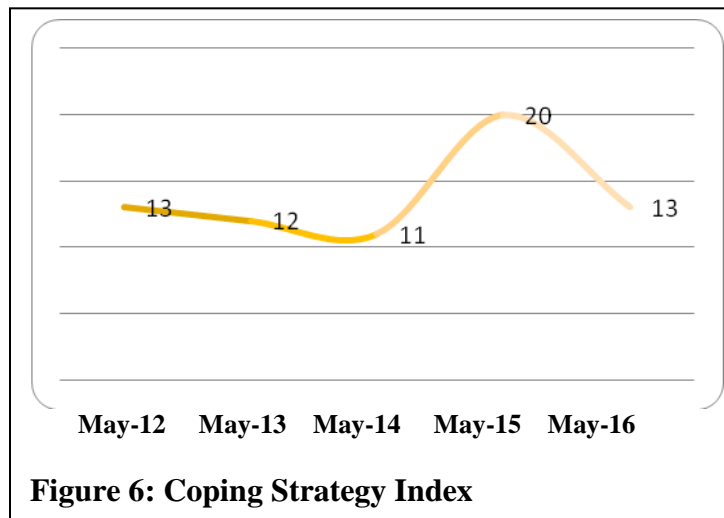


Figure 7: Food consumption score in months of May 2015-16

Coping Mechanisms

Coping strategy index (CSI)

The Coping strategy index has decreased from 20 in May 2015 to current 13 in May 2016 indicating improvement in access to food at household level. The improvement in access to food is as a result of good performance of the short rain season which contributed positively to household's food stocks which stabilised food prices. In addition the season performance supported resulted in access to adequate pasture and water which resulted in good body condition hence the goats prices remained above LTA, supporting favourable purchasing power of the livestock farmers.



Sanitation and Hygiene

Latrine coverage was 90 percent in both Mixed Farming and Marginal Mixed Farming livelihood zones as compared to 76 percent in 2015..The increase in coverage was attributed to continuous sensitization under sanitation programme.

3 FOOD SECURITY PROGNOSIS

3.1 Prognosis Assumptions

- The 2016 short rains will likely be below average, as forecasted, driven in part by the expected *La Nina* conditions.
- The price for cereals will increase steadily, through August, as stocks from previous season harvest decline and demand from households increase.
- The prices for livestock will decline through October, as rangeland resources get depleted affecting livestock body conditions.
- The pasture and browse conditions will remain stable in the mixed farming livelihood zone, while in the Marginal Mixed Farming zones, pasture and browse quality and quantity will deteriorate since regeneration was below normal level.

3.2 Food Security Outcomes for the Next Three Months

Food Security Outcomes from August to October

The food security situation in both livelihood zones will remain relatively stable. The amounts of food stocks at household level is projected to last up to September and will coincide with the current season harvest in the mixed farming livelihood .The households in the Marginal Mixed Farming livelihood will continue to access food from the market through livestock sales supported by favourable ToT. Maize prices is expected to rise but remain below LTA while the livestock prices are expected to decline but remain above the LTA, hence terms of trade will still

be favourable to enable households in the Marginal Mixed Farming livelihood to meet food gaps. In the Marginal Mixed Farming zones, livestock production is expected to decline as forage conditions deteriorates, resulting to reduced milk production and consumption at household level. The nutrition status of the children under five in The Marginal Mixed Farming livelihood zone is expected to deteriorate but largely remain below the five-year average.

Households in the Marginal Mixed Farming zones in the pockets that received erratic rainfall resulting in poor crop and pasture performance, will increase the insurance and crisis coping strategy to meet food gaps.

The overall food security situation is expected to remain at Minimal phase for the next two to three months in both the mixed farming and Marginal Mixed Farming livelihood zones.

Food Security Outcomes for November to January

The short rain season is likely to be below average as forecasted possibility of *La Nina* phenomena. Food crop production will be affected resulting to below normal yields. Households in both livelihood zones will have low food stocks and will rely on market pushing up food prices.. The browse and pasture condition are likely to deteriorate leading to poor livestock productivity. Milk availability will be reduced impacting negatively on nutrition status among the children under five years. Terms of trade especially in the Marginal Mixed Farming livelihood zone will decline due to drop in livestock prices and increase in food prices. The household income levels will likely decline due to lower livestock prices and less on farm casual labour income. The proportion of children at risk (MUAC < 135mm) will likely increase attributed to reduced access to food at household level, but will remain below LTA. Overall food security situation for the sub counties is expected to remain in Minimal, though None/Minimal (Phase 1). The households in affected areas in Marginal Mixed Farming will increase insurance coping mechanism and some employing stress coping mechanism to meet food gaps.

4 CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

The current food security situation in the County is stable and is expected to remain in the relatively stable but decline if the short rain season does not perform well as forecasted. . In the next three to six months, there will be need to be monitor water situation in the Marginal Mixed Farming livelihood zone, endemic livestock diseases , livestock migration from the Marginal Mixed Farming livelihood and performance of the forthcoming short rains which is forecasted to be below normal.

4.2 Summary of Recommendations

- Provision of water and water treatment chemicals
- Livestock disease and pest surveillance
- Repair of broken down boreholes

4.3 Sub-County Ranking

Table 15: Ward food security ranking (worst to best)

Food Security (1-8)	Rank	Justification
Kiambeere	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	High poverty levels, Early cessation of rains, Poor pasture regeneration, increased distance to water sources, Human, livestock and wildlife conflict, lack of diverse livelihood
Mavuria	3	Fair distances to water sources, Pasture situation was fair , Presence of household stocks.
Makima	4	45 percent of the ward has black cotton soil, Water logging lead to late planting, poor harvest due to early rainfall cessation
Evurore	5	Low recharge levels and increased evapo-transpiration, Increased distance to water sources, presence of irrigation scheme. Hotspots: Kamarandi, Ndurumori, Iriaitune
Mwea	6	Diverse coping strategies, Good to fair pasture and browse, Use of crop residues for animal forage.
Nthawa	7	miraa as an alternative to cash income, household stocks, good irrigation practices, Adequate pasture and browse, presence of markets, Good accessibility to health facilities
Mbeti South	8	Presence of <i>miraa</i> as an alternative to cash income, use of subsidized fertilizer hence higher yields, irrigation of horticultural crops.

5 ANNEXES

5.1 Ongoing non-food sectoral interventions

Table 16: Ongoing non-food sectoral interventions

sub county	Intervention	Objective	No. of beneficiaries	Cost -Kes. (million)	Implementation stakeholders	Time Frame
AGRICULTURE						
Both sub counties	Trainings farmers on post-harvest handling and Marketing of grains	Reduction of post-harvest losses	15,000	KSH	MOALF	Two months
LIVESTOCK						
Mbeere North and south	Routine animal husbandry practices	Increased income	2000 farmers	Normal extension work	MOAL&F, Livestock County Government	Bi annually

Mbeere North and south	Vaccination against FMD, LSD, and Rabies in dogs and donkeys	Minimise stock losses		Ksh 0.9 Millions	Livestock production/ Veterinary departments, NDMA, OP	Completed
WATER						
Mbeere north	Augmentation of Siakago township water supply And extension of water supply	Improve access to clean water	30,000	50	Embe Wasco & Tana River Water board	12 months
Mbeere South	Extension of Ewasco water supply project.	Improve access to clean water	20,000	Ksh 20M	Embe Wasco water project	9 months
mbeere south	Repair of strategic bores(8No	Enhance water supply and access to clean water	2,400	KSH 2.3	Embu County Government	6 Months
HEALTH AND NUTRITION						
All sub counties	Vitamin A and Zinc Supplementation	Improve the Micronutrient status of the community	49,000	Ksh	MOH,NDMA,APHIS+	Annually
All sub counties	Management of Acute Malnutrition (IMAM)	To prevent deterioration of malnutrition	5037	969033	GOK (MOH) UNICEF	Annually
Mbeere South	IYCN Interventions (EBF and Timely Intro of complementary Foods)	To improve care practices hence	4941	KSH 2.8m	GOK/UNICEF,A=K	Bi annually
EDUCATION						
Mbeere north	School meals program for public schools	Improve attendance, retention pupils	16,131	KSH 22,675,492	G.O.K, MOEST, W.F.P	yearly
Mbeere south	HGSMP	Increased enrolment and retention	8,114	Ksh 11,405,922	G.O.K, MOEST, W.F.P	Yearly

5.2 6.2 Proposed Intervention

5.3 Food Intervention Required

Table 18: Population requiring food assistance

Ward	Population	Percentage requiring intervention	Min	Max
KIAMBERE	15,059	50	6,024	7,530
MUMINJE	16,728	30	3,346	5,018
MAVURIA	34,139	20	3,414	6,828
MAKIMA	21,291	10	1,065	2,129
EVURORE	45,582	5	2,279	2,279
MWEA	30,117	0	-	0
NTHAWA	26,725	0	-	0
MBETI SOUTH	29,579	0	-	0
Total Population	219,220		16,127	23,784

5.4 Proposed Intervention

Table 19: Proposed Non-Food Interventions by Sector

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
AGRICULTURE							
Mbeere South & North	Trainings on post-harvest handling of grains	All	5000 households	County Government and partners	0.32m	Trained staff	2months
Mbeere South & North	Trainings on value addition	All	5000 households	County Government and partners	0.32m	Trained staff	2months.
Mbeere South & North	Provision of planting materials(THVCs)	All	5000 Households	County and national government	2.12M	officers	2months
LIVESTOCK							
Mbeere North and south	Mass treatment of animals	All wards	1000 households	County Government and partners	Technical staff, Transport	1m	2 months
Mbeere North and south	Livestock Vaccination	All wards	4000 households	County Government and partners	Technical staff, Transport	3m	2 months

Sub County	Intervention	Location	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Mbeere North and south	Pasture and fodder establishment, and conservation	All wards	2000 household	County Government and partners	Technical staff, Transport Seeds	1m	1 month
Mbeere North and south	Up grading using both A. I and superior breeds	All wards	500 households	County Government and partners	Technical staff, Transport	3m	5 months
WATER							
Mbeere South	-Water Pipeline Extension, -Repair And Equipping Of Strategic Bore Holes, -Desilting And Construction Of Strategic Dams	Makima,Kiambere, Mavuria,Muminji, Evurori	16000	County government, Partners, NDMA	23m	Technical Personnel, Land Availability	Financial Year 2016-2017
Mbeere North	Water Pipeline Extension and Repair And Equipping Of Strategic Bore Hole.	Gachoka,Gachuriri, Siakago,Kanyuambora,	6500	County government, Partners, NDMA	6.5m	Technical personnel, land availability	Financial Year 2016-2017
HEALTH AND NUTRITION							
Mbeere	comparative nutritional survey	All	Entire Mbeere community	County government, Partners	No budget proposed	Man power	Annually
Mbeere North & South	Food fortification at house hold level activities	All	31,466	County government, Partners	No budget proposed	Man power	Annually
Mbeere North & South	Intensify the High impact nutrition interventions	All	31,466 90HWs	County government, Partners	No budget proposed	Human resource ,logistic	Bi-annually
EDUCATION							
Mbeere North/South	Expand HGSMF to cover all schools in vulnerable areas	All locations	32,760	County government, Partners, NDMA WFP, GOK	Funds est. 46m	Human resources	Immediate and continuous
Mbeere North/South	Improved Sanitation	All Locations	66,043 Pupils	County government, Partners,	1.65m	SMC BOM	continuous
Mbeere North/South	De-worming	All Locations	66,043 Pupils	M County government, Partners,	0.66m	Human resource	1 year