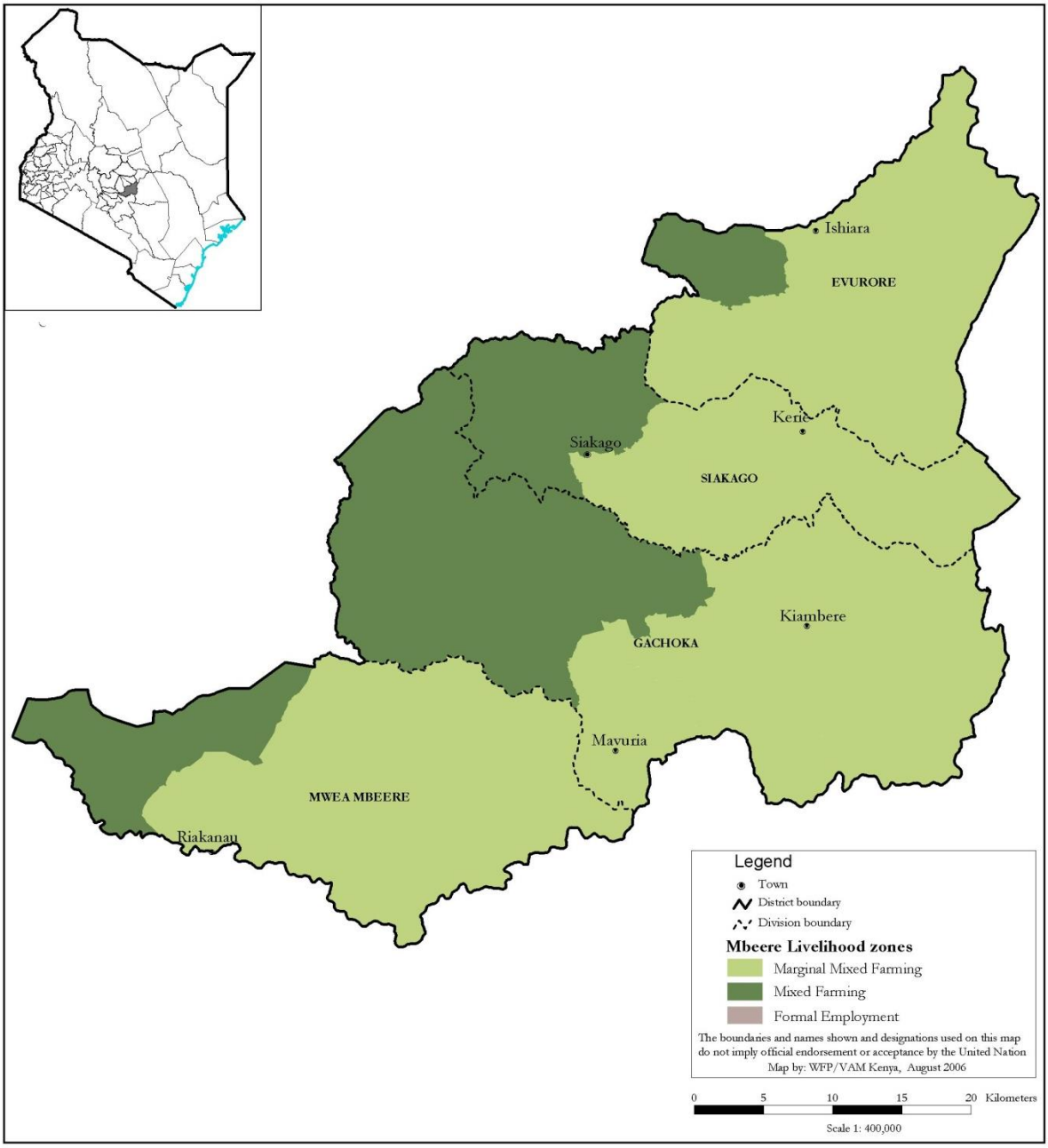
EMBU COUNTY (MBEERE)

2023 LONG RAINS FOOD SECURITY ASSESSMENT REPORT



A Joint Report of the Kenya Food Security Steering Group[1] and Embu (Mbeere) CSG

July 2023

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EXECUTIVE SUMMARY

The Kenya food security and nutrition assessment for Embu County (Mbeere) was undertaken from 17th – 21st July 2023 conducted by sector working group technical members. The assessment covered three sub-counties namely Mbeere North, Mwea and Mbeere South within the Mixed Farming (MF) and Marginal Mixed Farming (MMF) livelihood zones. Most parts of Mbeere generally experienced a normal onset of the long rains season in the second dekad of March 2023. Most areas in Mbeere North received enhanced rains of approximately 111-125 percent of their normal while the larger part of Mbeere South received 91-110 percent of normal rains. The sub counties received 297 millimeters (mm) of rains for the period between March and June 2023 compared to the long term average (LTA) of 286 mm. Spatial distribution was uneven with some areas in marginal mixed farming zones recording lower amounts as compared to the areas in mixed farming zone. Temporal distribution was fair with all dekads in May receiving below average rains. Cessation was early in the third dekad of April.

The area under green grams, maize, beans and cowpeas declined by 37, 27, 23 and 18 percent respectively when compared to LTA**.** The decrease in area planted was attributable to high cost of planting seeds and the low consideration of the long rains season for food production. Reduction in area planted led to a decline in the production maize, green grams, beans and cowpeas which were at 71, 84.5,48 and 63 percent of their LTA respectively. Additionally, high cost of inputs and fertilizers, use of non-certified seeds, high incidences of pests and diseases and early cessation of rains especially in marginal mixed farming zones decline in production led to decreased yields. The household and stocks with traders were 62 and 52 percent of the LTA.

The pasture and browse condition was fair to good across both livelihood zones occasioned by enhanced rains during the first two months of the long rains season thereby allowing adequate regeneration. The body condition for all livestock species was fair to good across both livelihood zones attributed to availability of pasture and browse and shorter trekking distances to watering points. The body condition was likely to deteriorate in the next three months in the marginal mixed framing zones occasioned by faster depletion of the available pastures and browse as the dry period progresses. The water availability was stable and the average return distances were within normal for both livestock and people. There was no congestion at water points and the cost was within the LTA

All markets within both livelihood zones were operational and sufficiently stocked with food commodities and livestock species. More volumes of cereals and pulses were traded as seasonal harvests were realized and through importation from external markets in Kajiado, Busia and Makueni. The price of main food commodities remained stably high occasioned by the prevailing meagre food stocks at the community level. The traded livestock volumes were likely to increase owing to the onset of dry period.

The terms of trade remained significantly lower than the LTA in the reporting month at 71 kilograms of maize exchanged by sale of one goat and therefore the household's purchasing power was low for the livestock keepers. Majority of households across both livelihood zones had acceptable food consumption with 2-3 meals per day for both adults and children. However, 23 percent of households in the marginal mixed farming zone reported borderline food

consumption. Cases of severe acute malnutrition had increased by 27 percent in the year 2023 as compared to the previous year attributable to consumption of foods made up of only two food groups, poor childcare practices, reduced purchasing power and poor health seeking behavior. School feeding programme in primary schools continued to impact positively on learning outcomes in Mbeere region, 21 percent of the pupils benefited from government supported cash transfer for school meals while 58 percent of the learners remained under the community supported school meals programme where parents pool together resources to cover the lunch costs. Taking all indicators into consideration, Embu County (Mbeere) is currently in Phase 2 of the Integrated Food Security Classification (stressed).

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1.0 INTRODUCTION

1.1 County Background

Mbeere region refers to the lower region of Embu County and covers the two sub counties of Mbeere North and Mbeere South. It borders Kitui and Machakos Counties to the south, Tharaka Nithi County to the east and Kirinyaga County to the southwest. Mbeere covers an area of approximately 2,096 square kilometres with a population of 346,749 (KNBS Projections 2023). The two main livelihood zones are Mixed Farming (MF) and Marginal Mixed Farming (MMF) with a population proportion of 49 and 51 percent respectively. In the marginal mixed farming zone, food crop, livestock and cash crop production contributes about 40, 23, and 10 percent to household cash income respectively. Cash crop production contributes majorly to cash income by about 30 percent in Mixed Farming and food crop and livestock production each contributes 20 and 10 percent to cash income respectively. The rainfall pattern for Mbeere is bimodal with October–November–December season rains being the most reliable in production compared to the March–April- May rainfall season.

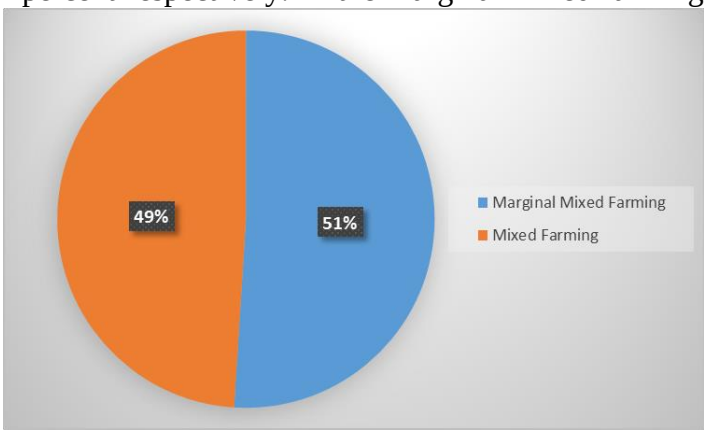

Figure 1: Population proportion by livelihood zone

1.2 Methodology and Approach

The overall objective of the long rains' assessment was to conduct an objective, evidence based and transparent food and nutrition security situation analysis following the long rains season of 2022 and considering the cumulative effect of previous seasons, and to provide recommendations for possible response options based on the situation analysis.

During the pre-assessment training, secondary data was gathered through quantitative and qualitative methods. This data includes previous assessment reports, DHIS data, market prices, MUAC trends, and rainfall estimates. Detailed desk review carried out on sectors checklists and other available secondary data, semi structured data collection was also conducted which included focus group discussions, observation through transect drives, markets interviews, households and community interviews.

A multi-sectorial approach was adopted whereby technical working group briefed and developed the transect routes on 16th and 17th July 2023. The field assessment covered only Mbeere North and Mbeere South sub-counties within Embu County. The technical members analyzed both quantitative and qualitative data collected and based on convergence of evidence and thereafter a current snapshot county report was produced with possible recommendations and projected scenario development based on prevailing most likely assumptions whose preliminary findings were disseminated to CSG during debriefing meeting held on 21st July 2023 at Deputy County commissioner's boardroom in Mbeere South Sub County.

2.0 DRIVERS OF FOOD AND NUTRITION SECURITY IN THE COUNTY

2.1 Rainfall Performance

Mbeere generally experienced a normal onset of the long rains season in the second dekad of March 2023. Large areas of Mbeere North received enhanced rains of approximately 111-125 percent of their normal with the northern most part (Kamarandi) receiving 126-140 percent of normal. Large areas of Mbeere South received 91-110 percent of normal rains with the rest receiving 111-125 percent of normal. A section of Kiambere received 126-140 percent of normal rain for the region.

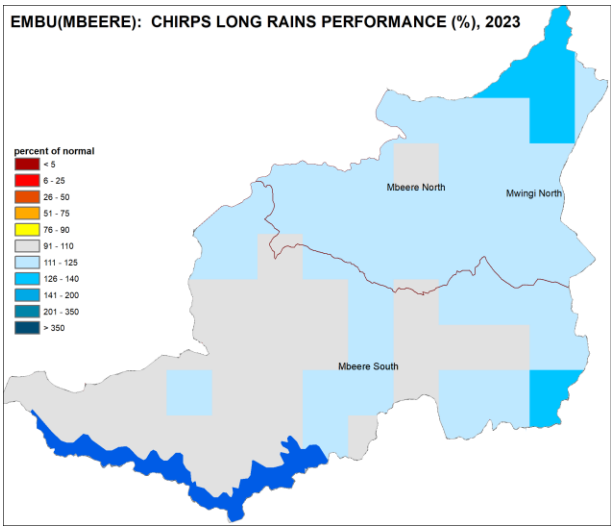

Figure 2: Rainfall performance as a % of normal

Cumulatively, the area received 297 millimeters (mm) of rains for the period between March and June 2023 compared to the long term average (LTA) of 286 mm.

Distribution over space was uneven with majority of Mbeere south receiving 90-110 percent of normal rains while large areas in Mbeere North received 111-125 percent of normal rains. Temporal distribution was fair with all dekads in May receiving below average rains. Cessation was normal in the third dekad of May.

2.2 Other shocks and hazards

Shocks

High cost of farm inputs

The cost of certified seeds and fertilizer was high within the county which caused many farmers to plant low quality seeds and failed to use fertilizer in their farms. This led to moderate to low production in areas where traditionally it should be good.

High food commodity prices

The prices of essential food commodities remained consistently high from the previous year. This had posed a negative impact on household expenditure patterns as household disposable incomes had been severely eroded.

Crop failure

There was maize crop failure in some parts of Makima ward (Mbondoni Location), Mavuria (Mavuria Location, Rogogwe, Gichiche), Parts of Mwea, Muminji ward (Kirie and Mutitu), Evurore ward (Kamarandi, Kianjeru, Mugwa Njogu) Kiambere (gacabari, Ntharawe, Riaciina).

Low crop production was occasioned by poor distribution of rainfall, minimal use of fertilizers and uncertified seeds and high incidences of pests such as fall army worm maize, aphids.

3.0 IMPACTS OF DRIVERS ON FOOD AND NUTRITION SECURITY

3.1 Availability

Crop production of both irrigated and rain fed farming was better than the same period in the previous year occasioned by the near normal rains thereby replenishing the household stocks. Markets were fairly well stocked with food commodities due to the realized harvest and importation from other counties but the prices remained high occasioned by the previous poor performance of crops in the three consecutive seasons in the Mbeere region of the county.

3.1.1 Crops Production

The main crops grown in Mbeere region include maize, green gram, cowpeas and beans. Other crops grown are pigeon peas, sorghum and millet. Maize contributes 50 percent to food and 10 percent to cash income in Marginal Mixed Farming zone while in the Mixed Farming zone it contributes 75 percent to food and 25 percent to cash income while beans contribute 17 percent to food and six percent to cash income in Marginal Mixed Farming zone while in the Mixed Farming zone it contributes 23 percent to food and 15 percent to cash income **(Table 1).**

Table 1: Crop Percentage contribution to food and cash income per livelihood zone

Livelihood Zone	Crop	% Food	% Cash Income
Marginal Mixed Farming	Maize	50	10
	Beans	17	6
	Green Grams	10	30
	Cowpeas	15	5
Mixed Farming	Maize	75	25
	Beans	23	15

Rain-fed Crop Production

The four main crops grown under rain fed production in the county were maize, green grams, cowpeas and beans. The hectares under green grams, maize, beans, and cowpeas declined by 37, 27, 23 and 18 percent respectively when compared to the long term average (LTA) **(Table 2).** The decrease in area planted is attributable to high cost of planting seeds and the low consideration of the long rains season for food production. Farmers were also accustomed to late onset of rains and the timely onset meant inadequate time for land preparation. Reduction in area planted led to significant decline in the production for beans, maize, green grams and cowpeas by 71, 57, 46 and 37 percent respectively. Additionally, high cost of inputs and fertilizers, use of non-certified seeds, high incidences of pests and diseases and early cessation of rains especially in marginal mixed framing zones also led to decline in production. Access to subsidized fertilizers was significantly hampered by the long distances to the national cereals board storage facilities for the farmers in the far-flung areas and te farmers were used to buying the fertilizers in small quantities as opposed to 50 kg bags.

Table 2: Comparison of the current area planted and current production with LTA

Crop	Area planted during 2023 Long rains season (Ha)	Long term average (5 year) area planted during the Long rains season (Ha)	2023 Long rains production (90 kg bags) Projected/Actual	Long term average production (5 year) during the Long rains season (90 kg bags)
1. Maize	8,000	11,000	61,000	143000
2.Green Grams	5,600	8,836	38,000	69,750
3. Beans	4,550	5,900	19,900	67,975
4. Cowpeas	4,500	5,500	34,500	55,000

Irrigated Crop Production

The main crops under irrigated farming include tomatoes, water melons and kales. The irrigation takes place and along the rivers and in irrigation projects (Riandu, Kiamuringa, Rupingazi weru and Evurore). The area under tomatoes, water melons and kales decreased by 18, 21 and 18 percent respectively when compared to the short term average (STA) .This led to reduction in production for water melons and kales by 26 and 17 percent respectively. However, production of tomatoes increased by nine percent compared to the STA (**Table 3)**. The decline in production can also be associated with high cost of fertilizers, fuel for pumps and pesticides.

Table 3. Irrigated Crop

Crop	Area planted during the 2023 Long rains season (ha)	Long term average (3 years) area planted during Long rains season (ha)	2023 Long rains season production (90 kg bags/MT) Projected/Actual	Long term average production (3 years) during Long rains season (90 kg bags/MT)
1.Tomatoes	305	330	5,760MT	5,240MT
2.Water melons	220	280	4,750MT	6,400 MT
3.Kales	115	140	530MT	640 MT

3.1.2 Cereals Stock

The main cereal stocks held by different actors were maize, beans, sorghum and green grams. The total maize stocks held by farmers and traders was 38 and 48 percent respectively below the LTA while beans stocks held by farmers and traders decreased by 48 and 41 percent respectively compared to LTA. Sorghum stocks held by farmers and traders decreased by 80 and 81 percent respectively compared to LTA. Total green grams stock held by farmers and traders also decreased by 51 and 16 percent respectively compared to LTA. The decline in stocks held by farmers was attributed by reduced area planted and production in both livelihood

zones occasioned by early cessation of rainfall and poor temporal distribution of rainfall. Stocks held by traders are below LTA due to low production within and outside the county in the previous three seasons. Stocks held by both players in the current season was higher compared to the same period in 2022, which was attributable to the better performance of the 2023 long rains season. The source of the stocks was from farmers within the county and from external markets through importation.

Table 4: Quantities held currently (90 kg bags)

Commodity	**Maize**		**Beans**		**Sorghum**		**Green gram**	
	Current	***LTA***	***Current***	***LTA***	***Current***	***LTA***	***Current***	***LTA***
Farmers	40,000	64,400	12,500	24,250	300	1,500	21,500	44,000
Traders	14,000	27,000	5,600	9,500	370	1,950	8,000	9,500
Millers	0	0	0	0	0	0	0	0
NCBP	0	0	0	0	0	0	0	0
Total	**54,000**	**91,400**	**18,100**	**33,750**	**670**	**3,450**	**25,500**	**53,500**

The available food commodity stock was expected to last for 2-3 months in the mixed farming livelihood zone and 1-2 in the marginal mixed farming zones compared to the normal period of 3-4 months in mixed farming zone and 2-3 months in the marginal mixed farming zones. The duration was slightly below normal occasioned by the reduced production.

Table 5: Duration stocks will last

Livelihood zone	**Duration the stock will last**	**Normal duration**
MF zone - Mbeti South ward, Mwea ward, parts of Mavuria ward,parts of Nthawa ward (Riandu, Siakago), parts of Evurore ward (Kanyuambora and Nguthi locations)	2-3	3-4
MMF zone – Kiambere ward, Makima ward, parts of Mavuria ward, Muminji ward, parts of Nthawa ward and parts of lower Evurore ward	1-2	2-3

3.1.3 Livestock Production

Main livestock species kept in Mbeere region are cattle, goats, sheep and poultry. In the

Marginal Mixed Farming zone, poultry keeping contributed 40 percent to food and 25 percent to cash income while goat keeping contributed 25 percent to food and 50 percent to cash income. In Mixed Farming zone, goat rearing contributed 15 percent to food and 35 percent to cash income while poultry and cattle rearing contributed 35 and 30 percent to food and 25 and 10 to cash income respectively as shown in Table 5.

Table 6: Percentage contribution of livestock to food and cash income

Livelihood Zone	Livestock Species	Contribution to Food (%)	Contribution to Cash Income (%)
MMF	Goat	25	50
	Poultry	40	25
	Cattle	15	10
MF	Goat	15	35
	Poultry	35	25
	Cattle	30	10

Pasture and browse situation

The pasture and browse condition was fair to good across both livelihood zones occasioned by enhanced rains during the first two months of the long rains season thereby allowing adequate regeneration. The current pastures were expected to last for less than three months but in parts of marginal mixed farming zone like Muminji ward and Evurore ward (Iriatune, Ndurumori, Kamarandi, Kiamathuku, Nthigirani), Makima (Ndune), Kiambere (Karura, Gacavari, Ntharawe, Mariari) Muminji (Ngiiri, Ceiria, Mukororia) and parts of Mavuria ward (Kirathe and Gichiche) the available pasture can last for about two months. Crop residues from harvested crops will supplement available pastures. Contribution of crop residues in the Marginal Mixed Farming zones by farmers was 20 percent compared to normal which was 50 percent while in Mixed Farming zone was 40 percent in comparison to normal which is 60 percent.

Table 7: Pasture and browse condition

	Pasture					Browse				
Livelihood zone	**Condition**		**How long to last (Months)**		**Factors Limiting access**	**Condition**		**How long to last (Months)**		**Factors Limiting access**
	Current	**Normal**	**Current**	**Normal**		**Current**	**Normal**	**Current**	**Normal**	
MF	Fair to Good	Good	1.5-2.5	3-4	None	good	Good	2-3	3-5	None
MMF	Fair	Good	1-2	2-3	None	Fair	Good	1	3-4	None

Livestock Body Condition

The body condition for all livestock species was good to fair across both livelihood zones. The current stable body condition for all species is attributed to availability of pasture and browse and shorter trekking distances watering points. The body condition is likely to remain stable until pasture and browse deteriorated as well as increase in watering distances in the marginal mixed framing zones occasioned by faster depletion of the available pastures and browse as the lean season sets in as from August.

Table 8: Livestock body condition

Livelihood zone	Cattle		Sheep		Goat	
	Current	Normal	Current	Normal	Current	Normal
MF	BCS 3-BCS 4 – Fair to Good	BCS 4 – Good	BCS 4 – Good	BCS 4 – Good	BCS 4 – Good	BCS 4 – Good
MMF	BCS 3 – Fair	BCS 4 – Good	BCS 3 – Good	BCS 4 – Good	BCS 3 – BSC 4 Fair to Good	BCS 4 – Good

Note: BCS – Livestock Body Condition Score

BCS 1 – Very Poor (Emaciated) BCS 2 – Poor BCS 3 – Fair BCS 4 – Good BCS 5- Very Good

Tropical livestock units (TLUs)

Households in Marginal Mixed Farming zone depend on livestock keeping as their main source of livelihood and have larger land parcels thus have higher number of TLUs than in the Mixed Farming. It is however noted that farmers in mixed farming are keeping higher production livestock as more grazing land was being converted for *muguka* farming. The TLUs in both livelihood zones had been reducing due to recurrent droughts that have been experienced in the region and reduced land holding. Reduced TLUs has led to low productivity and thereby affecting food security in terms of consumption and incomes

Table 9: Tropical Livestock Units

Livelihood zone	Poor income households		Medium income households	
	Current	Normal	Current	Normal
MF	1	2	1.5-2	2-3
MMF	2	3	3	5

Milk Production and Consumption

Milk used in the Mbeere region was from cattle and goats kept at households while the deficit was covered by importation from high potential areas such as Manyatta and Runyenjes. Other households depend on packaged milk sold in shops within the livelihood zones. The milk production at the household level has declined over time due to reduced TLUs, Intermittent droughts and low restocking. The current milk production was low compared to the LTA due to inferior breeds and poor animal husbandry practices consequently milk consumption had reduced significantly in both livelihood zones. The current milk prices had increased by 40 percent in the mixed farming zones to Ksh.70 and by 33 percent in the marginal mixed framing zone to Ksh 80 compared to LTA.

Table 10: Milk availability

Livelihood zone	Milk Production (Litres)/Household		Milk consumption (Litres) per Household		Prices (Kshs)/Litre	
	Current	LTA	Current	LTA	Current	LTA
MF zone	2.5	4	1.0	2	60-70	50
MMF zone	1.0	1.5	<1	1.0	70-80	60

3.1.5 Livestock Diseases and Mortalities

There were no livestock disease outbreaks for the period January-July 2023 except occurrence of the endemic livestock diseases such as Contagious Caprine Pleuro Pneumonia, Warts in Evurore ward , skin infections, lumpy skin disease, Pox in sheep and goats, Newcastle Disease, Fowl Pox and Gumboro in poultry, Pest Related Diseases, ,Endo-parasites and Ecto-parasites.

Table 11: Estimated Livestock mortalities

County	Livestock species	Total county Population per species	Reported Livestock deaths per species	Mortality rate (= number of reported deaths per species/ total population per species)	Remarks
Embu(Mbeere North Sub-County)	Cattle	188,246	65	0.0345%	Normal
	Sheep and goats	270,480	100	0.03%	Normal

	Poultry	736,915	737	0.1%	Normal for LTA ,Deaths not related to drought but Endemic Diseases)

3.1.6 Migration

Due to the reported forage and water availability for livestock in Mbeere North and South, there were no livestock migrations in the reporting period

3.1.7 Water for Livestock

The main sources of water for livestock across both livelihood zones included piped water system, water pans/dams, rivers, boreholes. Recharge rates for surface water was normal during the long rains with some earth pans recording up to 95percent recharge in both sub counties. Flows of permanent rivers such as Ena, Thiba, Thuci and Tana was normal at 75 percent and are expected to decline as the dry periods sets in. Average return distance to water sources for livestock was normal with marginal mixed farming zones recording an average of 1-5km as compared to the normal of 1-4 km while for mixed framing zones distance was shorter at less than two kilometres. The open surface water sources are expected to last for the next 2-3 months. Watering Frequency for livestock was on daily basis in both livelihood zones.

Table 12: Water for livestock

Livelihood zone	**Return average distances (km)**		**Expected duration to last (months) for each source**	
	Current	**Normal**	**Current**	**Normal**
MMF	1-5	1-4	2-3	3
MF	0.5 -2	0.5 -2	3	3-4

3.1.8 Impact on Availability

The long rains led to moderate production of maize, beans and green grams. The harvests realized during the season coupled with the improved livestock prices had led to an improvement in household purchasing power. Household stocks for all the staples were also available. Recharge of the open surface water points was also adequate and led to regeneration of forage and hence stable body conditions for animals.

3.2 Access

3.2.1 Market Prices

Market operations

Major markets in Mbeere region are Ishiara, Kiritiri, Makutano, Mutuobare, Siakago and Ngiiri. All markets within both livelihood zones were operational and sufficiently stocked with food commodities and livestock species.

The three main livestock in the Mixed Farming livelihood zone were cattle, sheep goats and chicken. The traded volumes for cattle are 1,600, goats 2,655, chicken 2,755. In the Marginal Mixed Farming livelihood zone cattle traded were 1,435, chicken 3,400 and goats 3,080. In comparison to normal, livestock traded have declined.

More volumes of cereals and pulses were traded as seasonal harvests were realized. The main food commodities in major markets were maize, beans, cowpeas, green gram while the main livestock species were cattle, goats, sheep and poultry. The food commodities were sourced locally and externally from markets in Kajiado, Busia and Makueni. Livestock from other counties such as Kitui were also supplied in the local markets in addition to the animals sourced locally. The traded livestock volumes were likely to increase owing to the onset of dry period.

Table 13: Livestock Commodity Demand.

Livelihood zone	Commodity	Current demand	Normal demand
MF zone	Cow's milk	high	high
	Goat's milk	high	high
	Chicken meat	stable	Stable
	Beef	Stable	Stable
	Eggs	Medium	Medium
MMF zone	Cow's milk	High	High
	Goat's milk	High	High
	Chicken Meat	stable	stable
	Beef	Stable	Stable
	Eggs	Medium	Medium

Market Prices

Maize Price

Average price for one kilogram of maize was Ksh 80 in June 2023, 82 percent higher than the 2018-2022 LTA of Ksh 44.the price of maize had remained significantly higher than the long-term average in the 2022 and 2023 years. This was attributed to the reduced production during the previous and current seasons. The maize price in mixed farming livelihood

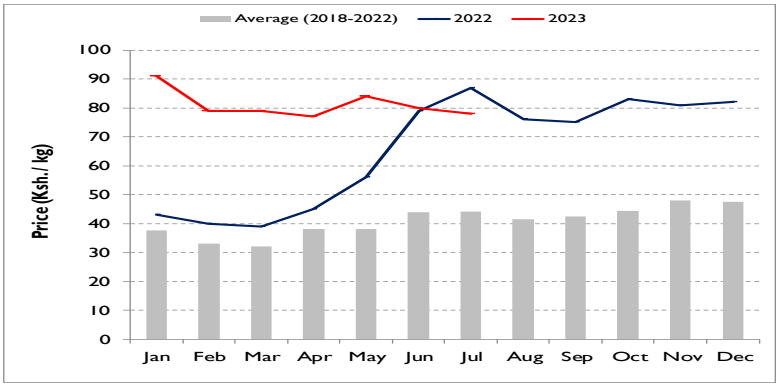

Figure 3: Trends in maize prices

zone was Ksh. 60-70 as compared to the normal of Ksh. 30-40 while in markets across the marginal mixed farming zone the price was higher at Ksh. 70-85 as compared to the LTA of ksh 40-50.

Goat Price

The market price for a medium sized goat price was Ksh. 5,600, which is 12 percent above the LTA attributed to good body condition due to the regeneration of browse but the price was 9 percent above the average price recorded in the same period last year. Market prices depicted an upward trend since the household food stocks were replenished from the long-term season harvest thereby reducing dependence on animal sales. Higher prices were recorded in Ishiara and Kiritiri livestock markets in marginal mixed farming zone with price ranging between Ksh 5500 to Ksh 6,500 while in the Karaba and Siakago markets in mixed farming zone recorded low price range of Ksh 4,500 – 5,000.

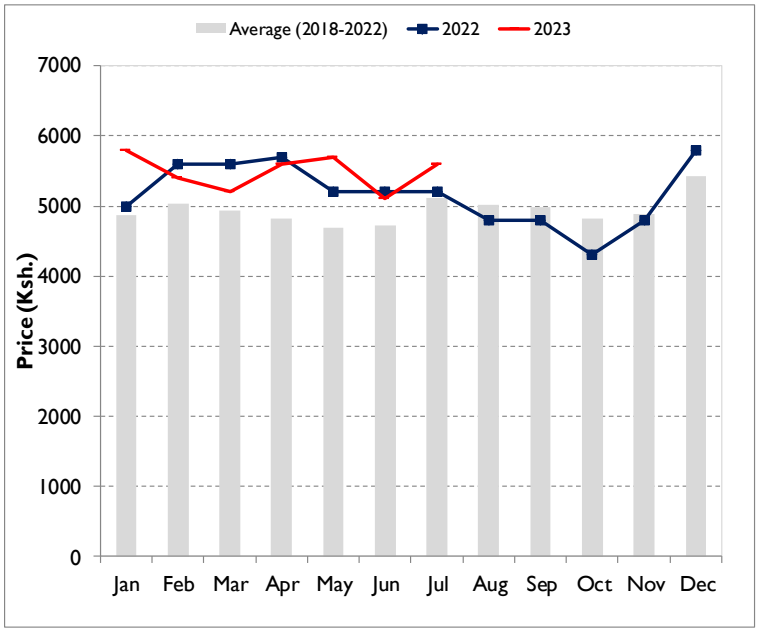

Figure 4: Trends in goat prices

3.2.2 Terms of Trade

The terms of trade in July 2023 was 72 kilograms of maize for sale of a medium sized mature goat. The current terms of trade were 63 percent below LTA but 18 percent above the average TOT recorded in the same month last year. Terms of trade had remained significantly lower than the long term average for the year 2023 and 2022 attributed to increased maize prices in all major markets in both livelihood zones. The terms of trade were likely to remain low as the price of maize was expected to remain high occasioned by the depressed performance of maize in

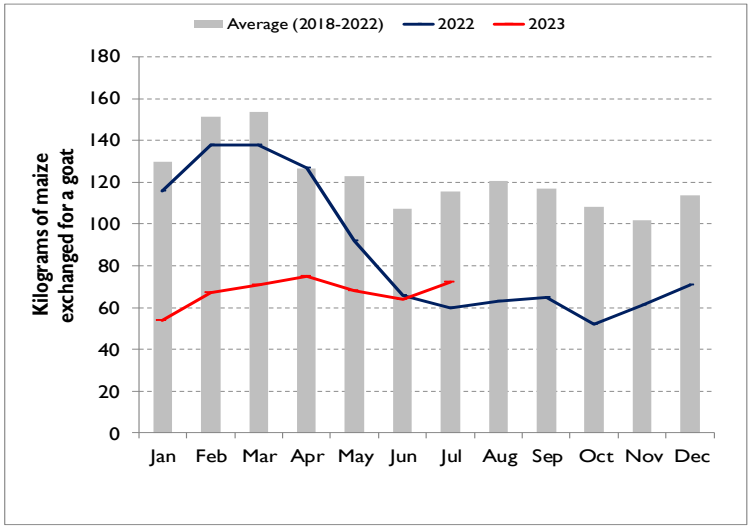

Figure 5: Trends in terms of trade

the current season.

3.2.3 Income Sources

According to NDMA monthly early warning monitoring, sale of crops and casual labour were the main income sources in the month of July 2023 at 28 and 43 percent respectively. Sale of crops had increased as many households harvested and sold the green grams Sale of maize was also taking place especially to traders. Casual labour was readily available as harvesting works and other post-harvest management activities intensified after the long rains season.

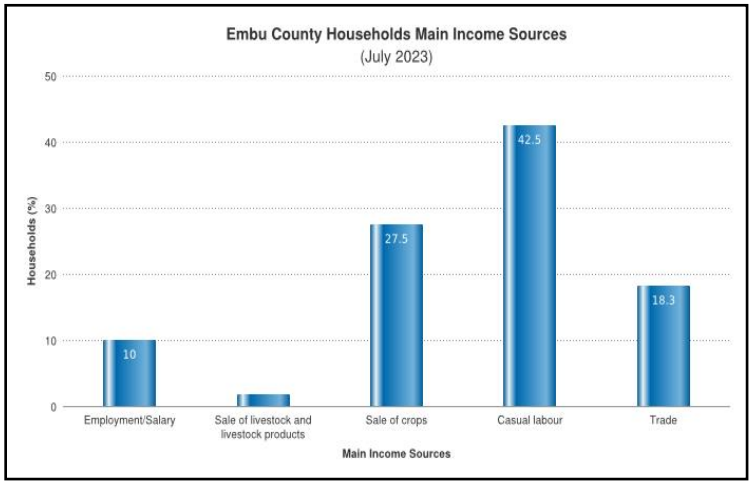

Figure 6: Main sources of income

3.2.4 Water Access and Availability

Major water sources

Major water sources in Mbeere North and South were Rivers, boreholes and earth dams/ water pans. The current status of the water sources is; rivers flowing at 75 percent of their normal flow and earth dams at 60 percent. Areas with low water point concentration were Kiambere (Gacabari), Muminji (Kirie) and Mung'au (Nthawa) attributed to few water sources, lack of groundwater resources and hilly state of Mung'au village. The main rivers are Ena, Thuci, Tana, Thiba, and Rupingazi in the Mixed Farming Zones, and rivers Tana and Thiba in the Marginal Mixed Farming zone.

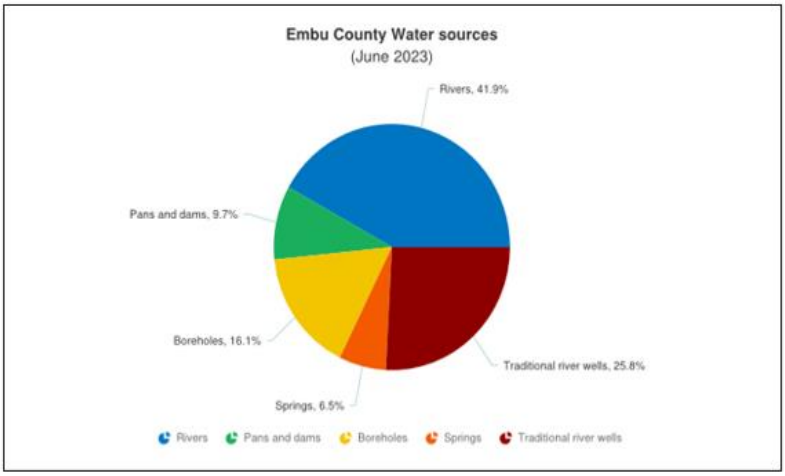

Figure 7: Main sources of water

Seasonal rivers were drying thus households were constructing traditional wells along them. Ten out of 52 boreholes were non-operational due to mechanical faults, and two earth dams in the Marginal Mixed Farming Zone (Mariari and Mashamba) had no water due to high seepage rates and evaporation Mbondoni sand dam was non-operational due to siltation while Ikang'o and mugwanjogu dams walls collapsed. The impact of the long rain season on the recharge of the sources was above normal compared to the previous season. The recharge was up to 70 percent

in the Mixed Farming zones and expected to last 3-5 months while in the marginal mixed farming livelihood zone will last for 2-3. Most affected dams are located in Kiambere, Makima, Mavuria, Muminji, Lower Evurore and Mwea.

About 75 percent of households in the Mixed Farming and 60 percent in the Marginal Mixed Farming zone relied on protected water sources respectively. The proportion of households relying on water vendors in the Mixed Farming zones was about 20 percent while in the Marginal Mixed Farming was about 40 percent. The variance in the livelihood is due to the availability of piped water systems in the mixed farming zone. About 37 percent of households in the mixed farming zones and 22 percent in the Marginal Mixed farming zones treated water. The households primarily used either boiling or chemicals to treat their water.

.**Distance to Water Sources.**

Return trekking distances to water for domestic use in both livelihood zones was majorly within the normal as shown in the table 12 below. However, dostances had slightly increased in isolated areas attributed to households seeking alternative sources as water levels dropped and some sources dried up. The Highest return distances were up to 20 Km in Kiambere (Mutuobare and Gacabari) Evurore (Mugwanjogu) and Nthawa (Mung'au) was attributed to break down of boreholes, reduced discharge at strategic boreholes, drying up of small earth dams and hilly state. Majority of the households in the Kiambere ward (Mutuobare location) are currently relying on river Tana which is infested with crocodiles.

Table 14: Return distance to water sources

Livelihood Zone	**Return distances to water for domestic use (km)**	
	Current	**Normal**
Mixed Farming zone	0.5-2.5	0.5-3
Marginal Mixed Farming zone	1-6	1-6

Waiting Time at the Source.

Waiting time remained within the normal except in isolated water points where it had slightly increased. The slight increase in average waiting time in both livelihood zones can be attributed to congestion and long queues at the alternative water points since households were seeking alternative water sources. One water point at Issako in Kiambere has a waiting period of up to 45 minutes depending on the water discharge capacity and the number of households depending on the source.

Table 15: Waiting time at source

Livelihood Zone	**Waiting time at the source (minutes).**	
	Current	**Normal**
Mixed Farming zone	5-10	5-10
Marginal Mixed Farming zone	25 -30	20- 30

Cost of Water

The current cost of water at source was within the range of Ksh.5-15 per 20 litre jerrican Where the cost has increased, it had been attributed to increased inflation, increasing water systems and boreholes maintenance costs as well as increase in diesel for generator sets..

About 40 percent of households in marginal mixed farming zone and 20 percent of households in mixed farming zones relied on water vendors. The cost of a 20-liter jerry can from a water vendor in the marginal mixed farming zone was 25 shilling compared to the normal Ksh 10 while in the Mixed Farming zones it was Ksh 15 from Ksh 10 during normal period. In area like Makima where they mainly relied on private water providers, the cost of water per 20 litre jerrican was costing at Ksh 15-20. In Mung'au (Nthawa) residents mainly relied on water vendors as there were no pipeline, boreholes or dams and that was why the cost of water was high (15-30) per 20 litre jerrycan. Water from open water sources was free of charge for all households.

Table 16: Cost of water at source

Livelihood Zone	Cost of Water at source Ksh per 20 liter jerry can	
	Current	Normal
Mixed Farming zone	5-15	5
Marginal Mixed Farming zone	5-20	5-15

Water Consumption.

The average water consumption in litres per person per day(lpppd) in both livelihoods was within the normal 30-40 lpppd except in isolated areas where distances and waiting time have increased households havd reduced their daily usage to 20-30 lpppd . In Mugwanjogu (Evurore) and Mbarwari (Muminji) the consumption levels are below average, this was because water pipeline have been destroyed by contractor constructing Kanyuambora-Kamumu-Siakago road.

Table 17: Average water consumption

Livelihood Zone	Average water consumption (liters/person/day)	
	Current	Normal
Mixed Farming zone	30-40	30-40
Marginal Mixed Farming zone	25-30	25-30

3.2.5 Food Consumption

Food consumption score

During the month of July, 23 percent of the sampled households were at borderline food consumption category while 77 percent were in the acceptable food consumption category. Forty five percent of households in marginal mixed farming zone recorded low food consumption due to lack of diversity and high market prices of food commodities and the diminished purchasing power of the poor households. The households across both livelihood zones consumed meals mainly composed of cereals and grains.

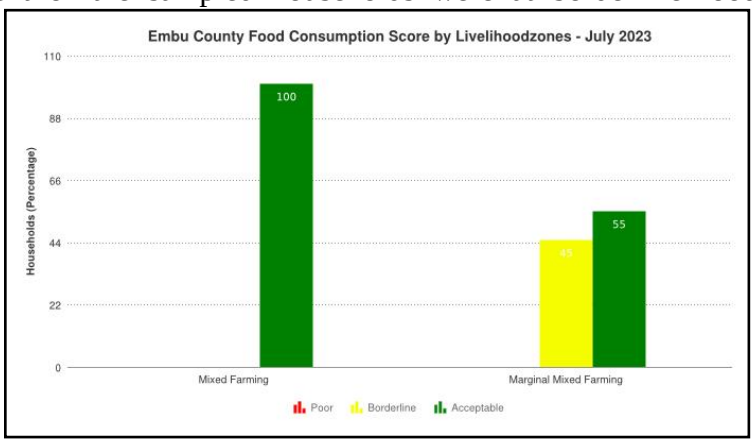

Figure 8: Food consumption scores

Milk consumption

Milk consumption had reduced in both livelihood zones as a result of reduced milking herds from consistent droughts in the region. The current average consumption in the mixed farming was one litre compared to the long term average of two litres while in the marginal mixed farming livelihood zone, the consumption was less than a litre compared to the long term average of one litre. The prices had also increased making it even more difficult to access the commodity for the households that were not producing. The reduction in milk consumption was negatively affecting the nutrition of children especially those below five years of age.

3.2.6 Coping Strategy

Reduced coping strategy index

In July 2023, the mean coping strategy index stood at 3.58, which was 31 percent lower than the 2018-2022 LTA. This could be attributed to most recent harvests realized and the availability of agricultural labour. The coping index of households in mixed farming zones was higher at 3.7 as compared to that of households in marginal mixed farming zones with 3.5. However, the coping index remained within the normal range.

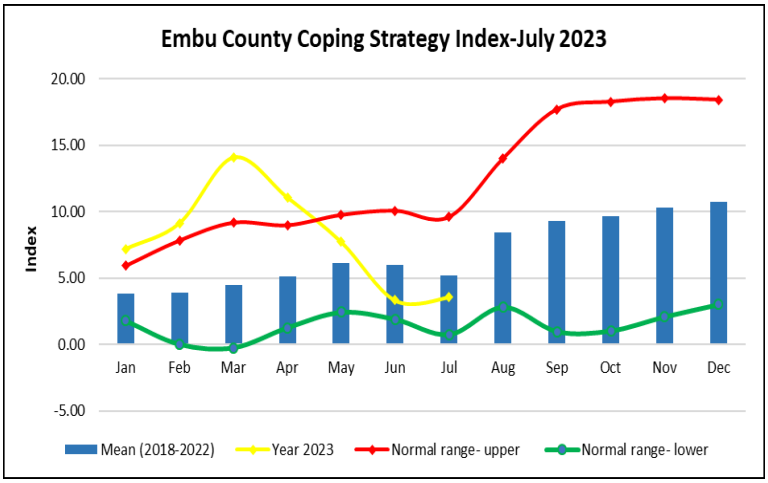

Figure 9: Trends in rCSI

3.3 UTILIZATION

3.3.1Morbidity and mortality patterns

In the period under review, cases of Upper Respiratory Tract Infections (URTI) increased by 36 percent in 2023 as compared to same period in 2022 for the children under five years. The increase is attributable to the influenza flu outbreak in the county coupled with dust and cold conditions.

The diarrhoeal cases increased by 12.3percent, which could be associated to Rota vaccine stock out, poor hygiene and sanitation due to water shortage and slowly increasing distances to water points in some areas within the county.

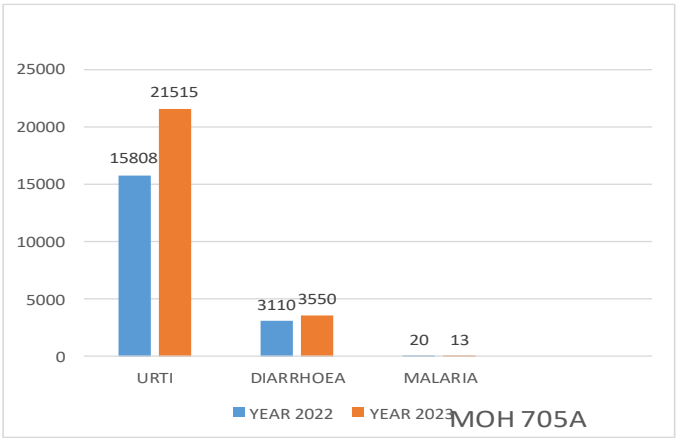

Figure 10 Morbidity & Mortaliry for U5

In the period between January to June 2023, cases of URTI increased by 62 percent attributable to outbreak of influenza flu in the county and the cold weather conditions during the rainy seasons. However, diarrhea cases decreased by 7.8 percent attributable to increased sanitation practices.

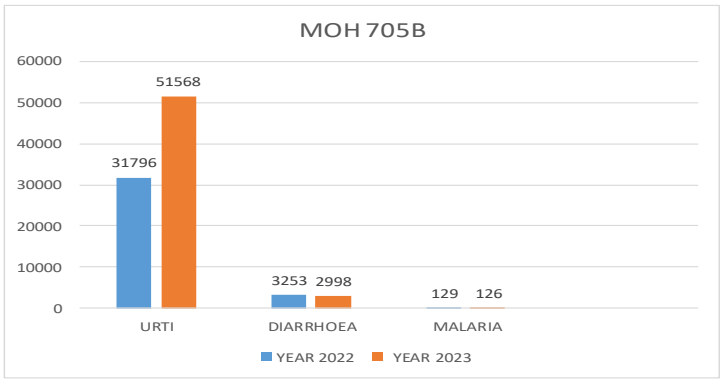

Figure 11: Morbidity & Mortality for general population

The epidemic prone diseases showed a decline in cases reported in the period between January and June 2023 compared with the same period in 2022. None of the dysentery reported cases were culture confirmed. There was no outbreak of cholera and typhoid. The measles cases reported were spread out within the period, there were no more than 5 suspected cases reported in one month neither was there any laboratory confirmed cases to warrant an outbreak as per the disease surveillance guidelines.

In the marginal and mixed farming zones, the average distances to health facilities range between 5-10 kilometers.

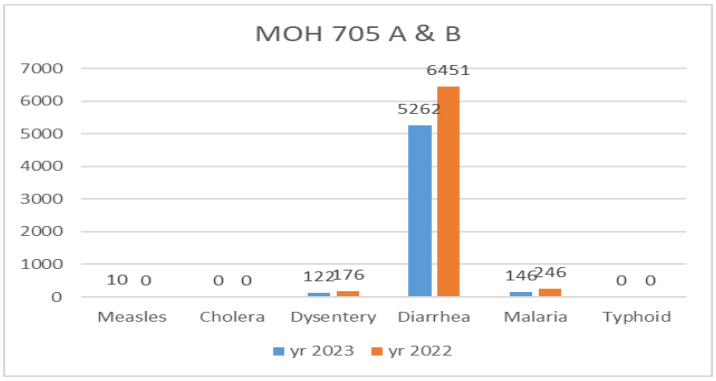

Figure 12: Epidemic prown diseases

According to the reports from the sub county office for births and deaths, the crude mortality rates were as follows:

Table 18: Under 5-year old Mortality (death) rate:

Period	Under 5 deaths	Total under 5 population
Jan – June 2022	71	30,594
Jan – June 2023	42	31,615

Source: County Births and Deaths Office:

Table 19: Crude Mortality rates:

Period	Total number of deaths	Total population
Jan – June 2022	509	281634
Jan – June 2023	450	292507

Source: County Births and Deaths Office:

There has been no suspicious deaths reported, the crude mortality rate in the period under review is 0.0415492.

3.3.2 Immunization and Vitamin A supplementation.

Fully immunized children stands at 96.1 percent, which is above the national target of 80 percent. This represented a four percent increase when compared with the same period of the previous year.

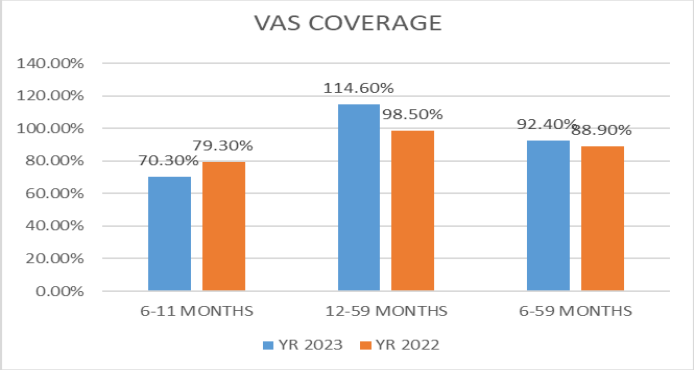

Figure 13: Immunization & Vit A supplementation

In the period under review, vitamin A supplementation coverage was above the national target of 6-59 months cohort of children. The coverage was boosted due to the efforts by the county government facilities to reach many children through the community health promoters and the programmes such as *malezi bora* that accelerate issuance of vitamins and other health services.

3.3.3 Nutritional status and dietary diversity

Adults and children in both livelihood zones were consuming 2-3 meals per day which is normal at this time of the year. The main composition of the meals were

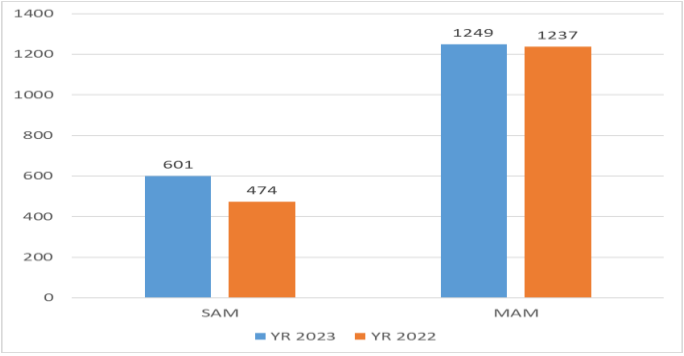

Figure 14: Nutrition and dietary diversity

grains, vegetables and legumes. In mixed marginal farming zones some families were consuming less preferred foods like mashed legumes due to lack of resources to purchase grains and grain products

Cases of moderate acute malnutrition remained stable in the current period as compared to the same period last year while the severe acute malnutrition cases increased by 27 percent in the year 2023 as compared to the previous year. The most probable causes of malnutrition were consumption of foods made up only two food groups, poor childcare practices reduced purchasing power and general illnesses. Additionally, poor health seeking behavior had also contributed to poor nutrition, as mothers do not regularly attend child monitoring clinics where malnutrition can be detected early.

3.3.4 Sanitation and Hygiene

There was an increase in the number of households treating water from 48 percent in the year 2022 to 54 percent in the current year attributed to awareness creation and advocacy on hygiene and sanitation practices. The method mostly used by households was boiling and use of treatment chemicals at 30 and 17 percent respectively. Most of the households used the 20 litre jerrican to collect and store water that increases chances of contamination. In the period under review, no community water sources were contaminated though cases of some learning institutions using raw water led to upsurge of diarrhea cases.

According to data obtained from the public health offices, latrine coverage remains above 80 percent in both livelihood zones. Eighty five percent of the households own latrines in the mixed farming zone while 88 percent of the households in marginal mixed farming zones own latrines, however about a percent in both livelihood zones still practiced open defecation. The high latrine coverage was attributed to the community led total sanitation (TCLS) programme that advocates against open defecation.

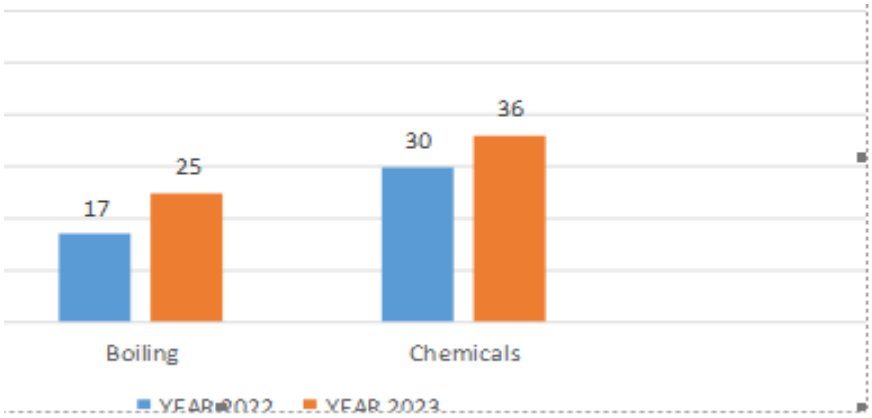

Figure 15: Household water treatment

In both livelihood zones, domestic waste is disposed in a compost pit and burnt when full.

Table 20: Latrine Coverage and Utilization

Sub County/ Livelihood zone	Latrine Coverage		Household Relieving Points in Percentage		
	January to June 2022 % Coverage	January to June 2023 % Coverage	Own Latrine	Shared Latrine (%)	Open defecation (bushes)

			(%)		(%)
MF zone (Gachoka, Mwea, Nthawa, Kanyuambora)	88.1%	89.2%	85.1%	3.1%	1%
MMF zone (Kiritiri, Kiambere, Makima, Evurore, Muminji)	91.6%	92%	88.4%	2.7%	0.9%

Hand washing practices at critical times

Hand washing practices remained stable for the years 2020-2023 attributable to the COVID-19 practices.

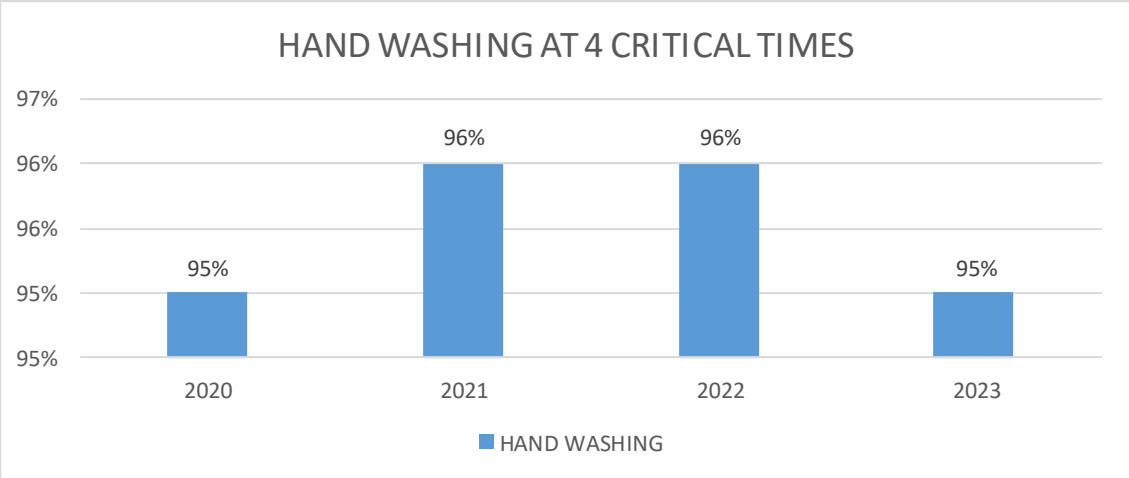

Figure 16: Hand washing at critical times

3.4 Trends of key food security indicators

Table 21: Food security trends in Mbeere

Indicator	Short rains assessment, Feb 2023	Long rains assessment, July 2023
% of maize stocks held by households (agro-pastoral)	Farmers-1600 Traders 4000	40,000(62% of LTA) 14,000 (52% of LTA)
Crop production Maize Beans Green grams	 11% of LTA 37% of LTA 57% of LTA	73% of LTA 77% of LTA 63% of LTA
Price of maize (per kg)	91	80
Return distance to water sources (km)	MF: 1-5 MMF :5-15	1-5 1-6
Terms of trade (pastoral	60	72

zone)		
Goat price (Ksh)	5,400	5600
Reduced Coping strategy index (rCSI)	7.21	3.58
Food consumption score	Poor – 0 Borderline – 11 Acceptable—89	Poor – 0 Borderline – 23 Acceptable—77

3.5 Education

3.5.1 Enrolment

At Early Childhood Development Education (ECDE) level, there was an increase in enrolment of 206 for the boys and 1298 for the girls. The increase was attributed to parents heeding to the call to take children to school upon attaining school age.

At primary level, there was an increase in enrolment of 600 boys and 350 girls. This was attributed to free and compulsory primary school education for all which is enforced by various government agencies including the NGAOs.

At the secondary level, there was an increase in enrolment of 185 for boys and 18 for the girls. The rise was attributed to the policy of 100 percent transition from Primary to Secondary school. There was also adherence to policy of non- repetition of learners which contributed to this increase.

Transfers in and out of the County were reported and this were mainly due to parents relocating in and out of the County. The other reason being that high boarding school fees were forcing parents to transfer their children to day schools near their homes.

Table 22: Enrolment.

	Term I 2023			Term II 2023			Indicate Increase (+) and Decrease (-)	Reasons for increase/ decrease
Enrollment	№ Boys	№ Girls	Total	№ Boys	№ Girls	Total		
ECD	3,722	3,563	7,285	3,928	4,861	8,789	+ 1504	Parental awareness on the importance of education leading to more learners being enrolled in centres

Primary	19,892	18,722	38,614	20,492	19,072	39,564	+ 950	Free and compulsory primary education.
Secondary	11,983	9,752	21,735	12,168	9,770	21,938	+ 203	Government policy on 100% transition and FDSE funds and inwards transfers from other counties

3.5.2 Effects of Long rains season on schools

The long rains season did not have any notable effect on all levels of learning from ECDE to secondary level.

3.5.3: School Feeding

Table 23: School Feeding Programmes

Category of School	Total Number of Public schools/ECDs in the Sub-counties	No. of schools/ECDs with SMP in the sub-counties	Types of School Meal Programmes Offered				Total number of beneficiaries on SMP	
			Cash Transfer		CSSMP			
			№ Boys	№ Girls	№ Boys	№ Girls	№ Boys	№ Girls
ECD	183	126	0	0	2689	2660	2689	2660
Primary	185	128	9108	8423	11235	10523	20,343	18946
Secondary	79	79	0	0	12168	9770	12168	9770
Subtotal	447	333	9108	8423	26, 092	22,953	35,200	31,376
Grand total (boys + girls)			**17531**		**49045**		**66576**	

There wre mainly two types of school feeding programmes in the County: the Cash Transfer under which funds are disbursed directly into the schools' accounts and then the Boards of Management procure the foodstuff through the normal procurement procedures. Community Supported School Meals Programme which relies on parents support by providing foodstuff to the schools or pay cash equivalent to the schools to cook for the children.

About 9,108 boys and 8,423 girls benefitted from the cash transfer programme while 26,092 boys and 22,953 were on the Community Supported School Meals Programme.

The access, retention and participation rates in the schools were greatly enhanced in schools which had school meals as evidenced by the increase in enrolment and attendance.

It is important to note that there have been challenges experienced as a result of delayed disbursement of funds to schools greatly hampering the continuity of the programme. There is also the need to review the capitation so as to align it with the current market prices which have since skyrocketed meaning the Kshs. 10.00 per child per day is no longer feasible and cannot cover the fourteen-week term.

3.5.4 Cross cutting issues in Education

The water, sanitation and hygiene in the schools was satisfactory with most schools having the requisite latrine coverage, hand washing facilities and access to water. It was however realized that the schools that sourced their water from the rivers and other unprotected sources like water pans and earth dams did not treat the water exposing the learners to the risks of contracting water borne diseases.

There was need for the County Government to re-introduce the ECDE school milk programme as this would boost the nutritional needs of the learners especially in the marginal mixed farming zones where milk production at household level was very low.

Girls' sanitary kits were supplied to 175 schools in the month of June 2023 and were expected to last to the end of the year as all girls in primary schools were issued with six packets each. There was need for timely supply of the same to avoid the inconveniences associated with late distribution. There is also needed to expand the coverage to secondary schools. Non provision of the sanitary kits leads to absenteeism, low esteem as well as poor performance while provision of the kits ensures that the girls do not miss classes.

There were no reported cases of internally displaced population in school compounds in the County.

Table 24. School Health and Nutrition

School category	State health and nutrition challenges experienced in schools during the season	Indicate some of the interventions offered e.g. deworming, vitamin A	Which organizations provided the interventions
ECD	-County Govt. discontinued milk supply to ECDE children thereby compromising on the nutritional needs of the children especially in areas where milk is hard to come by.	-Deworming and Vitamin A	-Ministry of Health (County Government)
Primary	-Some schools have no feeding programmes which impacts negatively on the nutrition status of the children in times of drought	-Eye screening -Oral health training -HPV sensitization	-Fred Hollows Foundation -Colgate Palmolive -MoH
Secondary	-Lack of balanced meals -Ignorance of the benefits	-Eye screening -Oral health training	-Fred Hollows Foundation

	of NHIF cover for secondary students. Students -Unprotected sex exposing learners to risks of HIV and un-wanted pregnancies -Dangerous abortions	-HPV sensitization -HIV sensitization	-Colgate Palmolive -MoH -MoH

The children in schools received Vitamin A supplementation, De-worming, HPV and HIV sensitization which was conducted by the Ministry of Health. The Fred Hollows Foundation also conducted eyes screening where they offered treatment and provided glasses to those in need.
The Colgate Palmolive Company had a session with Primary schools in Evurore and Makima wards where oral hygiene was inculcated into the children.

4.0: FOOD SECURITY PROGNOSIS

4.1 Prognosis Assumptions

- According to the preliminary Kenya Meteorological Department forecast, in addition to World Meteorological Organization and other global producing centers, and based on historical analogs of El Niño events, the 2023 October to December short rains will likely be above average in most parts of the county. There is more than 90 percent probability that El Niño will continue during the remaining part of the year and may extend into early 2024. The land surface temperatures are also forecast to be above average.

- According to FEWSNET June 2023-January 2024 Kenya Food Security Outlook, across the pastoral areas, the above-average March to May 2023 rainfall is expected to drive a significant recovery of forage and water resources to above-average levels, which will persist at least through August. From September through mid-October, high temperatures and high forage consumption by livestock will drive a decline in forage and water resources to near-average levels. However, the forecast above average October to December short rains will regenerate forage and water resources to above-average levels, persisting through January.
- According to FEWSNET June 2023-January 2024 Kenya Food Security Outlook, staple food prices are expected to follow seasonal patterns but will likely be higher than last year, and the recent five-year average driven by below-average staple food production, and the depreciation of the KES will likely sustain above-average prices across many markets. Livestock prices will vary depending on the availability of feed and water.
- According to FEWSNET June 2023-January 2024 Kenya Food Security Outlook ,the above-average regeneration of forage and water resources, households and livestock are expected to result in lower-than-normal distances to access water and pasture. However, from September through mid-October, the dry season will likely result in the typical movement of livestock to dry-season grazing areas. As the above-average October to December short rains begin, trekking distances to water and pasture will likely reduce to below-average levels and remain so through January, keeping livestock in wet season

grazing areas. The presence of livestock close to the homesteads is expected to significantly increase the availability and access to milk at the household level, improving household access to food and income

4.2 Food security Outlook (August – October)

The replenished households food stocks realized from March to May season harvest , good livestock body condition and improving milk consumption will likely continue to support better diversify food groups taking 2-3 meals of 4-5 food groups in a day, which will most likely sustain typically the same food consumption scores through to end of October. Favorable terms of trade are likely to boost households purchasing power as the prices of goats will be on an upward trajectory. Land preparation in October for short rains planting will likely provide agricultural labour activities enhancing household waged labour income and also supporting better purchasing power**.**

4.2 Food security Outlook (November to January)

The short season crops are expected to be at the weeding stage by November and December and in the harvesting stage by January 2024. The livestock body condition will likely improve with regeneration of pasture lead to increased milk production and consumption. In December, household food consumption and diversity will most likely improve as fast maturing crops are likely to be harvested replenishing household food stocks supporting more food group's consumption and meal frequency. coping strategies will likely reduce as food availability, accessibility and utilization improves in both mixed and marginal mixed farming livelihood zones occasioned by own production and vibrant market operations.

5.0: CONCLUSION AND INTERVENTIONS

5.1 Conclusion

5.1.1 Phase classification

The current food and nutrition security situation in the county is stable. The indicative phase classification for the mixed farming livelihood zone is Minimal (IPC Phase 1) an indication that most households are able to meet food needs without engaging in unsustainable strategies and that the priority response objective here is to build resilience and for disaster risk reduction. However, the indicative phase classification for the marginal mixed farming livelihood zone is Stressed (IPC Phase2) The overall phase classification for the two Sub counties is Stressed (IPC Phase 2). The priority actions required are those geared towards disaster risk reduction and to protect livelihoods

5.1.2 Summary of Findings

Mbeere generally experienced a normal onset of the long rains season in the second dekad of March 2023 but cessation was early in the third dekad of April. Most parts of Mbeere North received enhanced rains of approximately 111-125 percent of the normal while most areas of Mbeere South received 91-110 percent of normal rains. The area planted for all the major crops declined compared to LTA and consequently production reduced significantly**.** High cost of farm inputs and high incidences of pests such as fall armyworms and aphids within the county led to poor crop conditions and ultimately reduced production. There was maize crop failure in some

parts of Makima ward (Mbondoni Location), Mavuria (Mavuria Location, Rogogwe, Gichiche), Parts of Mwea, Muminji ward (Kirie and Mutitu), Evurore ward (Kamarandi, Kianjeru, Mugwanjogu) Kiambere (Gacabari, Ntharawe, Riaciina) occasioned by poor distribution and early cessation of the of rainfall and minimal use of fertilizers. Available stock for maize, beans, sorghum and green grams is below the LTA for both farmers and traders but higher compared to the same period last year is attributable to the poor performance of the previous season. The source of the stocks held is from farmers within the county and from other external markets.

Food prices had remained high for the period of January to June 2023 while livestock prices remained stable across both livelihood zones in the same period attributed to availability of pasture and browse and shorter trekking distances watering points. The body condition is likely to deteriorate in the next three months in the marginal mixed farming zones occasioned by faster depletion of the available pastures and browse as the dry period progresses. The water availability is stable and the average return distances are within normal for both livestock and people. No congestion at water points currently and the cost is within the LTA. Food consumption is largely acceptable for majority of households but 23 percent of households in marginal farming zones continue to struggle to meet sufficient food quantities with adequate diversity.

Cases of moderate acute malnutrition remain stable in the current period as compared to the same period last year while the severe acute malnutrition cases increased by 27 percent in the year 2023 as compared to the previous year due to lack of supplementary and therapeutic commodities for management of both forms of malnutrition in most rural health facilities.

5.1.3 Sub-County/Ward Ranking

Ward	Food Security Rank (Worst - Best)	Main Food Security Threat
Makima	1	• early cessation of rainfall • Low recharge of water sources • Water logging in the black cotton soils • Poor vegetation cover • Reduced harvest of green grams which is a cash crop
Kiambere	2	• early cessation of rainfall in most parts • Water stress in areas of Mutuobare • Increased distances to water sources in most parts • Increased land degradation
Mavuria	3	• early cessation of rainfall • Moisture stress leading to crop failure • Low recharge of water sources and few water sources • Increased distances to water sources
Muminji	4	• Nonfunctional boreholes • Poor forage situation • Poor vegetative cover

Ward	Food Security Rank (Worst - Best)	Main Food Security Threat
		• Normal distances to water
Evurore	5	• early cessation of rainfall • maize crop failure • Deterioration of pasture condition
Mwea	6	• Non-functional boreholes • Pockets with poor forage situation • Water logging in black cotton soils • Pests and diseases • Poor vegetative cover • Average harvests
Mbeti south	7	• Pockets with poor pasture and browse condition • Early cessation of rains • Long distances to domestic water sources. • reduced crop harvest but the adoption of *muguka* helps in coping • Good pasture and browse • Normal distances to water • Average harvests
Nthawa	8	• Rationing of piped water • Good pasture and browse • Normal distances to water • Failure of maize in parts Gitiburi location and Siakago location but there is coping strategies such as *muguka* farming • Average harvests

5.2 Ongoing Interventions

5.2.1 Food interventions

Table 25: Ongoing food interventions

Sub County	Type of food	Quantity (90- kg bags)	No. of beneficiaries (People)
Mbeere North	Beans	366 bags	11,574
	Maize	208 bags	
	Rice	255 bags	
	Cooking oil	1,180 litres	
Mbeere South	Beans	633 bags	15,488

	Rice	594 bags	
	Canned beef	200 cartons	
	Cooking oil	500 litres	
Mwea	Beans	200	5000
	Rice	113	
	Cooking oil	500 litres	

5.2.2 Non Food Interventions

Table 26. On-going nonfood interventions

Sub-county	Ward	Location	Intervention	No. of beneficiaries	Implementers	Impacts in terms of food security	Timeframe
Education							
Mbeere South	ALL	ALL	Release of cash transfer fund for purchase of food	29 schools	Ministry of Education	Food available in beneficiary schools	May/June 2023
	ALL	ALL	Supply of relief food	10 schools	Ministry of Interior	Food available in beneficiary schools	May/June 2023
Mbeere North	Evurore, Muminji, Nthawa	All locations	Relief food supply	2,516 pupils (12 schools)	Ministry of Interior	Food available in beneficiary schools	May/June 2023
Agriculture (Immediate)							
Mbeere South and Mbeere North	8 wards	Implementation of micro livelihood projects by Common Interest Groups along Green Grams, poultry, dairy, mangoes, value chains	Target about7,200 direct beneficiaries	NARIGP	Increased productivity and profitability	Target cost about 86.4M	JAN 2023-JUNE 2023
Mbeere South and	8 wards	Capacity building of NARIGP funded groups	22irect beneficiaries	NARIGP/MOA	Increased productivity and profitability	456,000	OCT 2022 – JUNE 2023

Mbeere North		on Technology Innovation & Management practices					
Mbeere South and Mbeere North	6 Wards Mavuria Mwea Kiambere Makima Muminji Evurore	ELRP (Emergence Locust Response Project) Funding of Common Interest Group along Green gram, Poultry, Bees and Goats Value Chains	2,400 direct beneficiaries	NARIGP/ELRP	Restoration of those affected by Desert Locust Destruction	5M	JAN 2022-DEC 2023
Mbeere North	All	Capacity building farmers on post-harvest management	1000 farmers	Department of Agriculture	Improved knowledge and skills	150,000	July-August. 2023
Medium/long term interventions							
Mbeere South	Mavuria	Irrigation water-Rupingazi Weru irrigation scheme	200 HH	NARIGP	Increased productivity and profitability	Over 32M	5 years
Water							
	Muminji	Borehole drilling	Kathanje	800	EABL/ Constituency office	5M	2Months
	Muminji	Borehole drilling	kivwe	600	EABL/ Constituency office	5M	2Months
	NTHAWA	Borehole drilling	Cianyi and Munou	600	County government	6M	3 Months
	Makima	Rehabilitation and solarization of Kamwea Borehole.	Makima	500H/H	NDMA	2.5M	3 Months
	Kiambeere	Cieria pipeline extension	Kiambere	250H/H	NDMA	1M	3 Months

	Kiambere ward	Kangondo Earth Dam	Kiambere	600 H/H	NAGRIP	12M	Sep 2022 August 2023
Health (High Impact Nutrition Interventions)							
Sub-county	**Intervention**	**Location**	**No. of beneficiaries**		**Implementers**	**Estimated Cost (Ksh)**	**Timeframe**
			Male	Female			
Mbeere South and North	Vitamin A Supplementation	Health facilities in all divisions	12683	11250	DOH, NI	400,000	Routine and biannually
All	Zinc Supplementation	Only therapeutic at health facilities level	11,402	8484	DOH, NI	200,000	Routine
All	Management of Acute Malnutrition (IMAM)	All facilities implementing feeding programmes	1787	1714	DOH, KEMSA,USIAD	8M	Routine
All	Food Fortification	Mbeere North and south	23,933		DOH	500,000	Routine
County	**Sub County**	**Intervention**	**No. of beneficiaries**	**Implementers**	**Impacts on food security**	**Cost (Kshs)**	**Time Frame**
Livestock							
Embu	Mbeere North	Sensitization on Routine animal husbandry	2500 H/holds	Livestock production department	Improved Living standards Increased income	Normal extension work	Year round
Embu	Mbeere North	Livestock up-grading (poultry)	50 households	Livestock production department	Improved Living standards Increased income	NARIGP,	1 Year
Embu	Mbeere North	Livestock up-grading (poultry)	50 households	Livestock production department	Improved Living standards Increased income	NARIGP,	1 Year

5.3 Recommended Interventions

5.3.1 Food interventions

1. Distribution of 7600 food hampers from The National Steering Committee on Drought Response by NDMA (each hamper with 21 kilograms of diverse food commodities).
2. Distribution of food hampers by the Hindu community in Gachoka (370 households) and Kiambere (400 households).
3. Distribution of 1500 bags of rice and 2100 bags of beans for households in Mbeere North, Mbeere South and Mwea sub counties by the national government.
4. Distribution of 700 bags of rice and 800 bags of bean to schools in all the three sub counties by the national government.

Table 27: Proposed populations in need of food assistance

Ward	Rank	% of Population in need of assistance	Projected % of population in need (Nov/Jan)	Form of intervention
Makima	1	15-20	20-25	Cash Transfer/Food relief
Kiambere	2	15-20	20-25	Cash Transfer /Food relief
Mavuria	3	10-15	15-20	Cash Transfer /Food relief
Muminji	4	5-10	10-15	Cash Transfer /Food relief
Evurore	5	5-10	10-15	Cash Transfer /Food relief
Mwea	6	0-5	5-10	Cash Transfer /Food relief
Mbeti south	7	0-5	5-10	Cash Transfer /Food relief
Nthawa	8	0-5	5-10	Cash Transfer /Food relief

5.3.2 Recommended Non-food interventions

Table 28: Recommended non food interventions

Sub County	Ward	Intervention	No. of beneficiaries	Proposed Implementers	Required Resources	Available Resources	Time Frame
Agriculture							
MBEERE SOUTH	8 WARDS	Provision of relief seed	15,000 HH	Embu County government and other stakeholders	75M	Staff	AUG-SEPT 2023

Mbeere North & South	8 wards	Training on Home garden local vegetable production	5,000	county Government	Funds	0.5M	Aug-Oct. 2023
Mbeere North & South	8 wards	Excavation of farm ponds for water harvesting	100	KCEP CRAL	funds	16M	Aug-Oct. 2023
Mbeere North	Evurore	Expansion of Kamarandi irrigation scheme intake and supply line	800	ELRP	Funds	Land	2023/2024
MBEERE SOUTH	5 WARDS	Irrigation water	5,000HH	Embu County government and other stakeholders	100M	Land, labour	5 YEARS
Counties	**Sub County**	**Intervention**	**No. of beneficiaries**	**Proposed Implementers**	**Required Resources**	**Available Resources**	**Time Frame**
Livestock							
EMBU	Mbeere North& South	Mechanization of pasture establishment and conservation	3,300	ECG, NARIGP	Fund 1,700,000	Technical expertise	July to 2022December
EMBU	Mbeere North & South	Construction of community hay stores	10 groups	ECG/ NARIGP	3,800,000	Technical expertise	July to December 2022
EMBU	Mbeere North &South	Restocking with goats	2000	ECG/NDMA	600,000,000.	Technical expertise	Long term
EMBU	Mbeere North & South	Vaccination of livestock	11,000	ECG	3,300,000,000.	Technical expertise	July – September 2022
EMBU	Mbeere North & South	Disease surveillance along the stock routes	17,500	ECG	700,000	Technical expertise	continuous
Sub County/ Ward	**Intervention**	**Location**	**No. of beneficiaries**	**Proposed Implementers**	**Required Resources**	**Available Resources**	**Time Frame**
Water & Sanitation							

Mbeere North	Construction and solarization of borehole	Nthawa	200 H/H	NDMA/County Government	Funds and Technical Personnel	Technical Personnel	5M
Mbeere North	Rehabilitation and Solarization borehole	Nthawa	200 HHS	NDMA/County Government	Funds and Technical Personnel	Technical Personnel	3m
Mbeere South	Solarization of boreholes: Kikulani ,Ciorindagwa ,Nthiginiand Kasevebholes	Makima,Mavuria,MweaMakima	3300 HHs	NDMA, County government of Embu	Funds and Technical Personnel	Technical Personnel	July/Sep. 2023
Mbeere North	Construction of earth dam	Nthawa (Mung'au)	500 H/H	NDMA	Funds and Technical Personnel	Technical Personnel	20M
	Rehabilitation of Njiga earth dam	Evurore (Mugwanjogu)	400 H/H	NDMA/County Government	Funds and Technical Personnel	Technical Personnel	10M
	Construction of earth dam	Evurore (Kariru)	500 H/H	NDMA/County Government	Funds and Technical Personnel	Technical Personnel	20M
	Construction of water storage tank-	Muminji (Kiamugongo)	400 H/H	NDMA/County Government	Funds and Technical Personnel	Technical Personnel	7M
Mbeere South	Desilting of Dams 1.Mbondoni 2. Ikang'o 3.Kimweli 4. Mariari 5. Wango	Makima Kiambere Mavuria Kiambere Mwea Kiambere	700 HHs 500 HHs 600HHs 500HHs 400 HHs	NDMA, County Government of Embu NDMA, County	Funds and Technical Personnel Funds and Technical Personnel	Technical Personnel	Aug./Sep. 2023

	6. Mutindwa			Government of Embu -do-	-do-		
Sub County/ Ward	**Intervention**	**Location**	**No. of beneficiaries**	**Proposed Implementers**	**Required Resources**	**Available Resources**	**Time Frame**
Health & Nutrition							
Mbeere South and North	Procurement and distribution of nutrition supplementary and therapeutic feeds	Makima Gitaraka, Riakanau, Iriaitune, and Kamarandi	2714	DOH,NDMA, USAID,KEMSA	12M	0	Immediately
	Conduct integrated health and nutrition out reaches in hot spots	Makima Gitaraka, Riakanau, Iriaitune, and Kamarandi	7200	MOH (Embu County) NDMA	500,000	100,000	Sept 2023
Mbeere South and North	Conduct integrated health and nutrition out reaches	Mutuovare, Riachina Gitaraka, Riakanau Kamarandi iriaitune	entire community within target areas	MOH (Embu County) NDMA	250,000	50,000	Sept 2023
Mbeere North and larger Mbeere South	Nutrition survey	All locations in Mbeere South	157,413	County government NI NDMA UNICEF	4.3M	0	July 2024
Sub-county	**Ward**	**Intervention**	**No. of targeted beneficiaries**	**Proposed Implementers**	**Required Resources Kshs**	**Available Resources Kshs**	**Timeframe**
Mbeere South	All	Provision of water tanks	2500	CDF, County Government, parents	2M	0	Before Oct 2023

		Provision of sanitary facilities	3500	CDF, County Governmen t, parents	2.1M	0	Before Oct 2023
		Provision of laboratories for grade 7	2500	CDF, County Governmen t, parents	258M	0	Before Oct 2023
Mbeere North	All	Water tanks provision	1,750	CDF, County Governmen t, parents	700,000	0	Before Oct 2023
	Muminji and Nthawa	Equip schools with UV water treatment kits	4,441	County Govt. of Embu, NG-CDF, Water Ministry, NDMA	14 kits @ 12,500 = 75,000	0	Before Oct 2023