



A Vision 2030 Flagship Project



National Drought Management Authority
SAMBURU COUNTY
DROUGHT EARLY WARNING BULLETIN FOR JUNE 2022

JUNE 2022 EW PHASE

Drought Status: **ALARM**



Mipango ya kukabiliana na ukame

Drought Situation & EW Phase Classification

Biophysical Indicators

- In June 2022, most parts of the county were dry. However, a few places in Agro Pastoral livelihood zone received depressed rainfall for 1 – 3 days with poor distribution in space and time.
- The vegetation condition remained poor as evidence by low vegetation condition index indicative of severe vegetation greenness deficit.
- Water sources were poorly recharged during the 2022 long rains season thus low water levels and other have dried up.

Socio Economic Indicators Details

- Larger proportion of cattle have poor body condition across the livelihood zones. However, body condition for goats, sheep and camels is ranging between poor to fair. Communities reported a number of livestock death due to drought however decline was noticed during the period under review. Household and livestock walking distances to water points remained above the seasonal average.
- Market and farmgate prices for livestock remained below the average. Prices of cereal and other food items continue to skyrocket. Prevalence of children at risk of malnutrition based on MUAC remained above the recommended thresholds.

Early Warning Phase Classification

LIVELIHOOD ZONE	EW PHASE	TRENDS
Agro-pastoral	Alarm	Worsening
Pastoral (North)	Alarm	Worsening
Pastoral (East)	Alarm	Worsening
County	Alarm	Worsening

Biophysical Indicators		Value	Normal range/Value
VCI 3-month	County	19.36	35-50
	Samburu East	14.37	35-50
	Samburu West	24.16	35-50
	Samburu North	23.15	35-50
Production indicators		Value	Normal ranges
Livestock Migration Pattern		Out & intra	No Migration
Livestock Body Conditions		Back bones, ribs & pins are sharp & visible.	Good Smooth appearance
Milk Production (Litres/Household/day)		Nil	>1.8
Livestock deaths due to drought		16.9% Mortality	No death
Access Indicators		Value	Normal ranges
Terms of Trade (TOT)		42.6	>69
Milk Consumption (Litres/Household/day)		Nil	>1.7
Return distance (km)	Household	4.9	<4.9
	Livestock	12.8	<9.8
Utilization indicators		Value	Normal ranges
MUAC (%) Severely Malnourished		2	2.1
FCS (%)	Poor	10.1	0 - 21
	Borderline	52.2	21.5 - 35
	Acceptable	37.6	>35
rCSI	Mean	11.43	56

<ul style="list-style-type: none"> ▪ Short rains harvests ▪ Short dry spell ▪ Reduced milk yields ▪ Increased HH Food Stocks ▪ Land preparation 	<ul style="list-style-type: none"> ▪ Planting/Weeding ▪ Long rains ▪ High Calving Rate ▪ Milk Yields Increase 	<ul style="list-style-type: none"> ▪ Long rains harvests ▪ A long dry spell ▪ Land preparation ▪ Increased HH Food Stocks ▪ Kidding (Sept) 	<ul style="list-style-type: none"> ▪ Short rains ▪ Planting/weeding 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1.0 CLIMATIC CONDITIONS

1.1 Rainfall Performance

The month of June 2022 was characterized with cold weather in Agro pastoral livelihood zone while sunny and dry in Pastoral livelihood zones of the county. Few places in Kirisia Forest, Maralal, Lossuk, Poro and Suguta wards received 1- 3 days off-season showers with low intensity between 19th – 21st June 2022.

1.2 Amount of Rainfall and Spatial Distribution

During the month of June 2022 remained relatively dry. Rainfall estimates according to satellite data indicated that during the first and second dekads of the month, the county received precipitation estimates which are 52 – 56 percent below the 1994 – 2013 average at the similar time of the year as

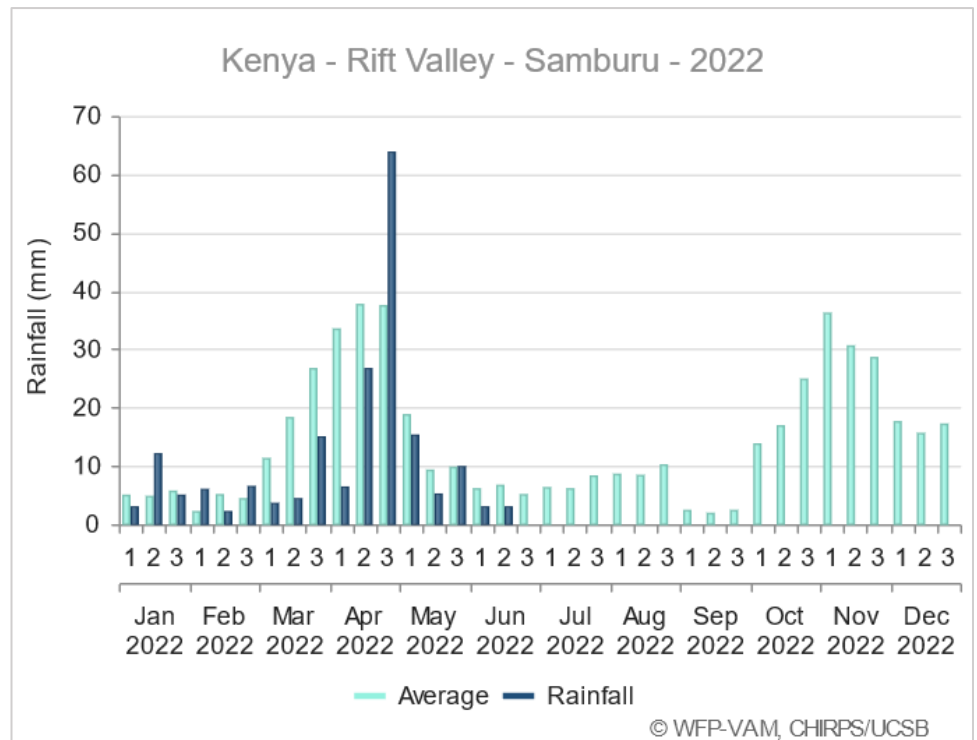


Figure 1: Dekadal Rainfall Estimates (RFE)

per Climate Hazards Group InfraRed Precipitation with Station data (CHIRPS) (Figure 1).

2.0 IMPACTS ON VEGETATION AND WATER

2.1 Vegetation Condition

2.1.1 Vegetation Condition Index (3 month-VCI)

- The quality and quantity of pasture and browse remained poor across the livelihood zones attributed to rainfall deficits due to underperformance of the March to May 2022 rainfall seasonal. In addition, previous three consecutive rainfall season performed poorly resulting into negative vegetation anomalies. This has led to more degraded land. Bare land supports high surface run-off thus low ground water absorption. Vegetations impacts the speed of water that will move across a surface.
- According to satellite imagery, the county is generally in severe vegetation deficit as evidenced by low VCI of 19.36 which way below the normal VCI of 35 – 50. Lowest VCI was recorded for Samburu East sub county at 14.37. Samburu North and West sub county had 23.15 and 24.16 average 3-month VCI respectively.
- The prolonged dry spell has supported environmental degradation thus emergence of various weeds that have invaded and decimated pasture and browse across the county especially climbers like *cissus rotundifolia* (Raraiti), *Acacia reficiens*, *ipomoea* species and *Prosopis juliflora*.

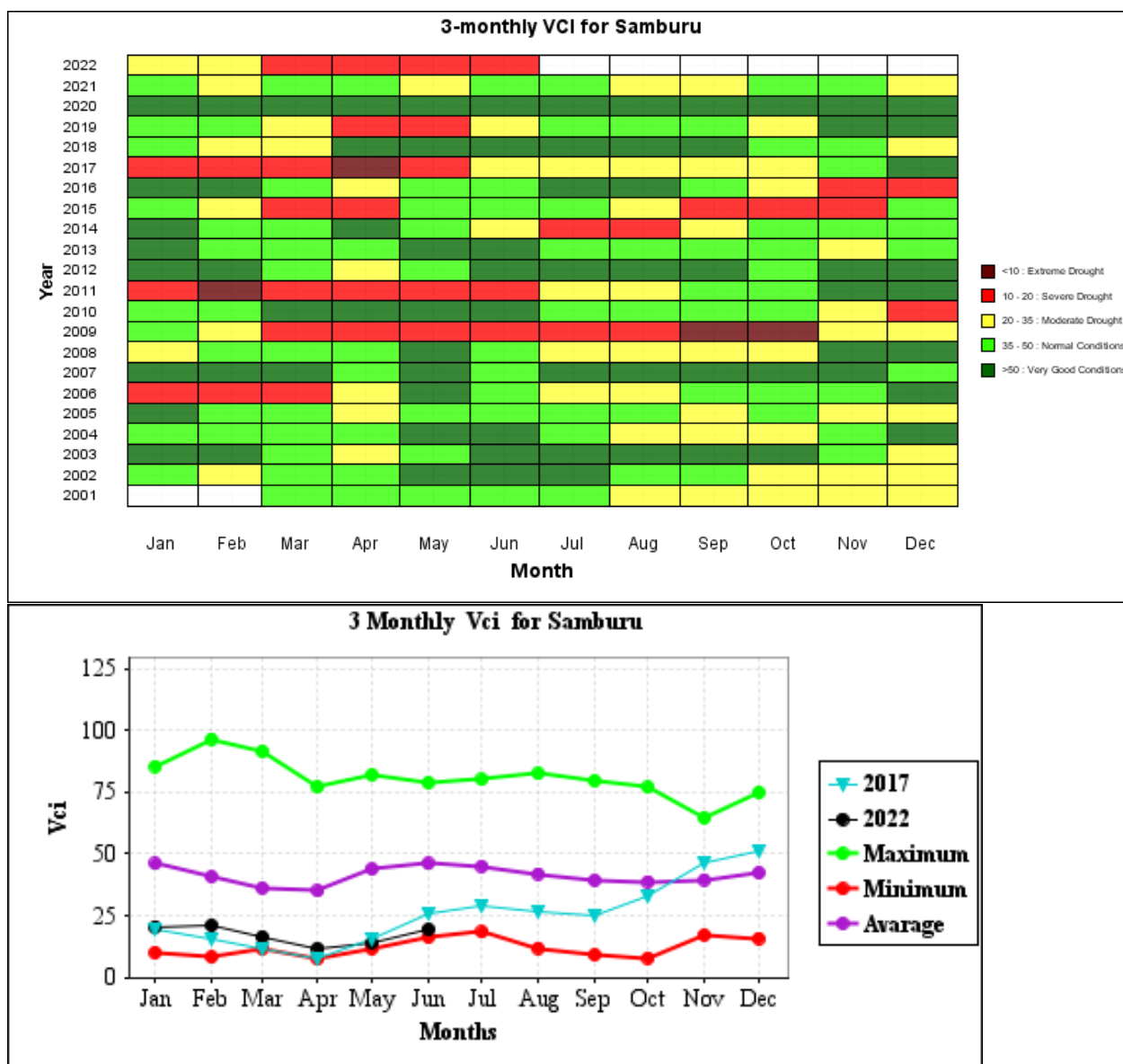
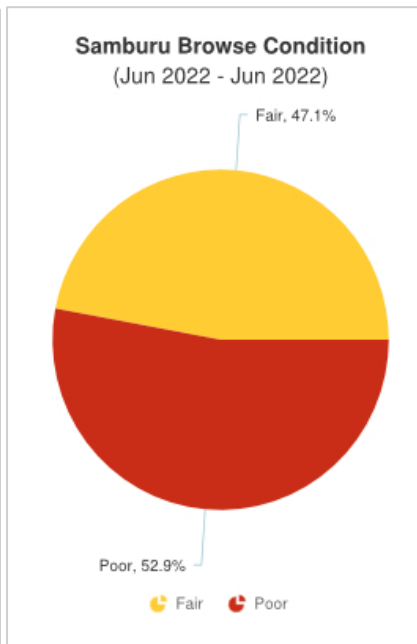
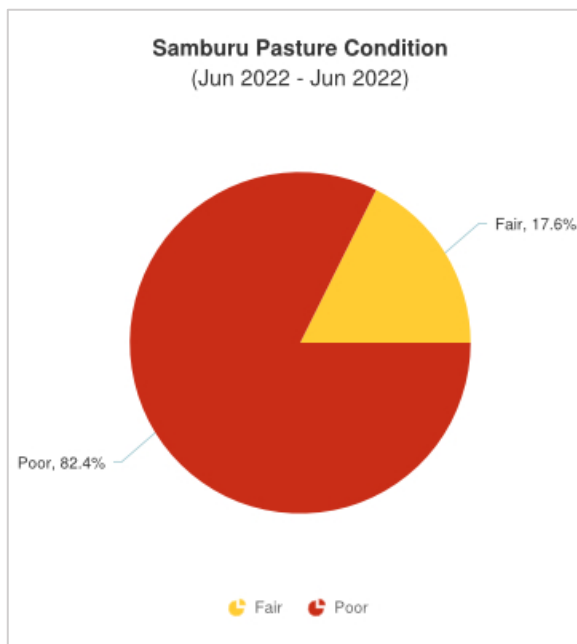


Figure 2: VCI 3-monthly Trends for Samburu County

(Source: Boku University)

2.1.2 Field Observations (Pasture and Browse Conditions) Quality and Quantity

The vegetation cover has been below the average due to poor performance of the 2022 long rains season. The underperformance of the last three consecutive rainfall seasons have also compounded negatively on rangelands across the livelihood zones. Few places such as Kirisia Forest and surround of Baragoi that



received depressed rains experienced mob grazing (grazing a large concentration of livestock in a small area for a short duration). Consequently, this resulted into overgrazing and livestock trampling all over the ground which in turn result into degraded rangeland. A larger proportion (82.4%) of interviewed community key informants reported that

Figure 3: Pasture and Browse Condition

pasture is poor with only 17.6 percent of the sampled key informants responding that pasture is fair. In terms of browse condition, 52.9 percent of the sampled key informants said browse is in poor condition and 47.1 percent said browse is fair (Figure 3). The rangeland cover is likely to remain depleted in most parts of the county till the next rainfall season most probably towards end of October 2022.

2.2. Water Resource

2.2.1 Sources

The three main water sources that were frequently used are Wells, Boreholes, Pans and Dams. However, open water sources in most parts of pastoral livelihood zone remained dry. Boreholes usage increased due to households avoiding using open water sources due to wading by livestock thus leading to high water turbidity in pans and dams. Most of the interviewed households (46.9) percent indicated that relying on natural and hand dug wells. Boreholes was depended by around 25 percent of the households compared to 17.1 percent reported last month. Another 15.6 percent of the households reported getting water for domestic and livestock use from pans and dams (Figure 4). Water consumption remained comparable to last month. Out of the sampled households, 57.1 percent of them said they are using 40 litres per household per day which

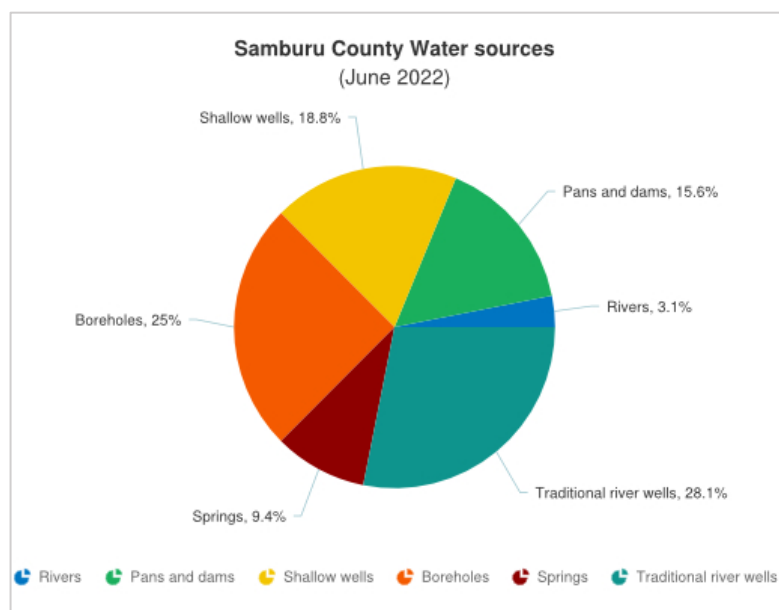


Figure 4: Frequently Used water Sources

translate to 8 litres per day per person. Another, 25.2 and 17.7 percent reported using 20 litres and 60 litres per household per day respectively. Majority of the households were getting water free of charge from the source however a few of the reported being charged around Ksh 2.5 – 10 per 20 litre jerrican.

2.2.2 Household Access and Utilization

- Households are trekking long distances to access water for domestic use. Water shortage has persisted since the beginning of the year attributed to poor performance of the last four consecutive rainfall seasons. Livestock wading into pans and dams have also forced humans to walk far to fetch water for drinking and cooking in boreholes.
- The current average return trekked distance was 6.4 km which an increase compared to last month average distance of about 4.9 km. The average distance is 19 percent above the normal range and 45 percent above the 2016 – 2021 average at the same time of the year (Figure 5).
- The distances are likely to increase further if the dry condition persist until the onset of the 2022 short rains season expected in October 2022.

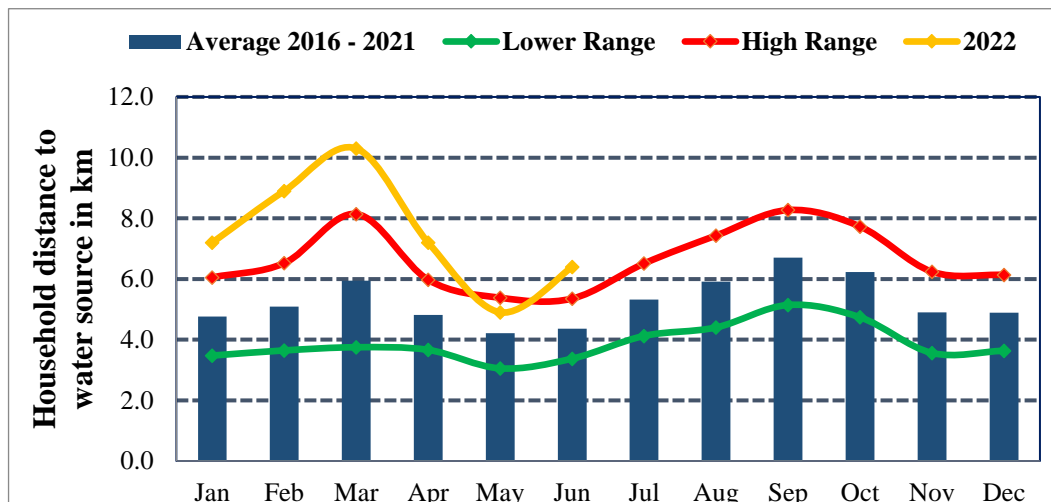


Figure 5: Average Distance Travelled by Households in Search of Water

2.2.3 Livestock Access (Grazing Distances to Water Points)

- A slight decrease was noted in trekking distances for livestock in search of water due to slight recharge of the surface water sources. However, the distances remained above the normal ranges attributed to poor performance of the 2022 long rains season.
- The current average return distance is 9.7 km down from 12,8 km recorded in the month of May 2022. In reference to long term average, the current average return grazing distance is 13 percent above the 2019 – 2021 average at the same time of the year (Figure 6).

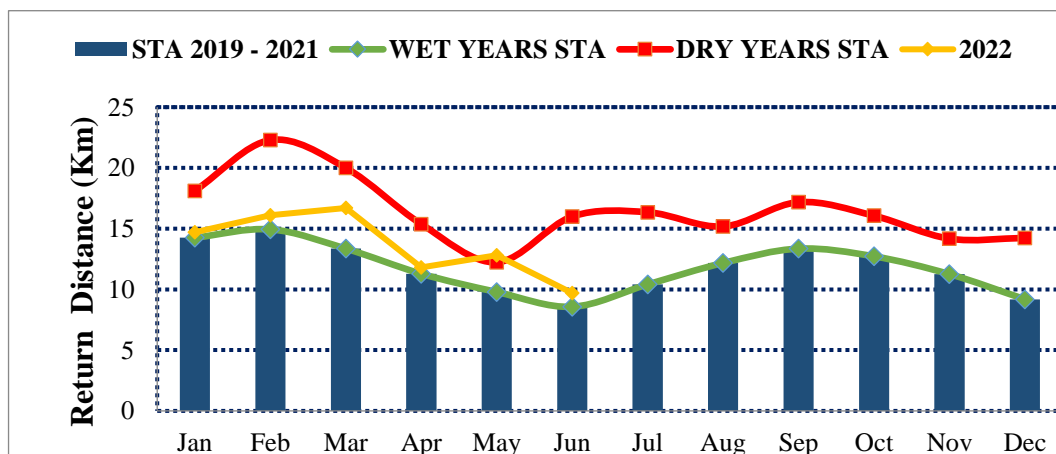


Figure 6: Distance Travelled from Grazing Areas to Water Points

3.0 PRODUCTION INDICATORS

3.1 Livestock Production

3.1.1 Livestock Body Condition

- Cattle body condition remained poor across the livelihood zones while sheep and goats had poor to fair body condition. Majority of the cattle have bone structure of shoulder, ribs, back, hooks and pins are sharp to the touch and easily visible. The poor body condition is attributed to poor rangeland condition owing to poor performance of the last four consecutive rainfall seasons.

3.1.2 Livestock Diseases and Deaths

- During the month of June 2022, livestock deaths reduced owing to slight vegetation rejuvenation in marginal pockets of Kirisia Forest, Ndoto hills and surrounding of Baragoi.

3.1.3 Milk Production

- Low milk production continued to be reported across the county attributed mass migration of livestock coupled poor body condition of the herds left at home. Also, tropical livestock units have drastically reduced due to high mortality rates. Out of the sampled households, only seven reported milk production of about 2 – 4 litres from camels.

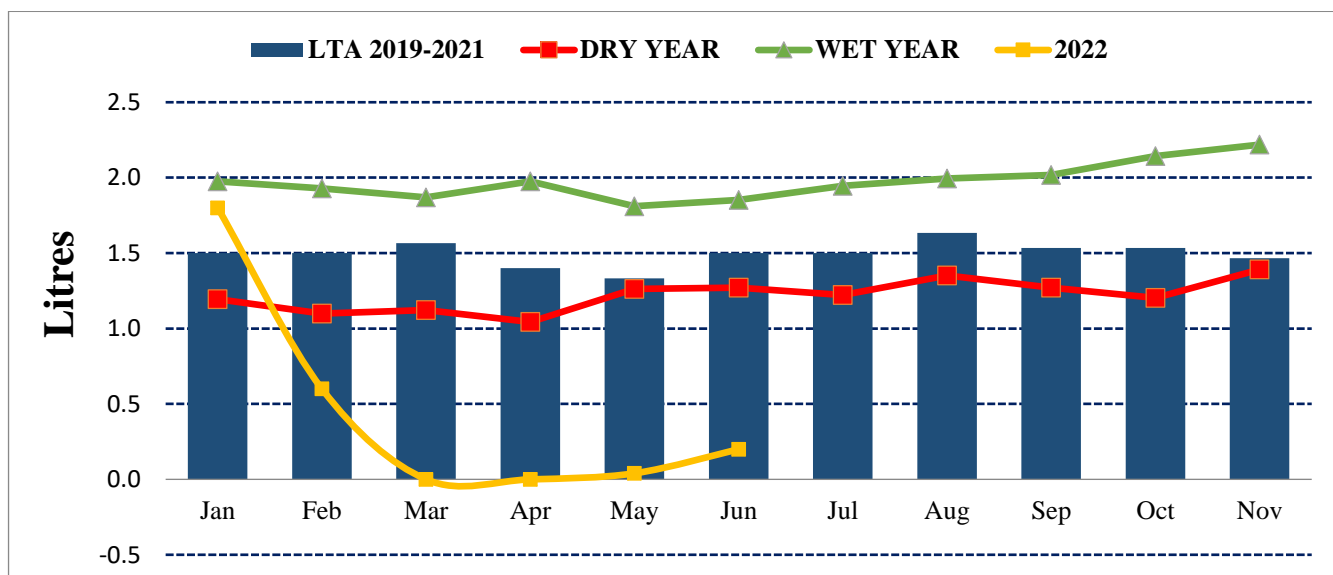


Figure 7: Trends in Milk Production per Household

3.2 Rain Fed Crop Production

3.2.1 Stage and Condition of Food Crops

- Maize crops in Poro are at knee high however with poor condition due to water stress.

3.2.2 Harvest of Crop

- There was no crop harvest realized in the county due to prolonged drought that resulted in poor weather condition thus no crop planted.

4.0 MARKET PERFORMANCE

4.1 Livestock Prices

4.1.1 Cattle Prices

- Cattle prices have been below the average for the last six months due to depletion of rangeland resources across the county. The poor forage and diminished water sources have occasioned poor body condition of cattle thus attracting very low prices at the markets.
- Cattle producers continue to struggle with low prices for their livestock at the market while consumers paid more for beef at butchery.
- The average market price for a cow during the month of June 2022 was Ksh 12,750 which is 29 percent below the 2016- 2021 average and 20 percent below the lower range at the same time of the year (Figure 8).
- Longewan market reported low prices average at Ksh 7,500 for a cow and Lolkuniani market reported better prices averaging at Ksh 20,500 for a mature and healthy cow.

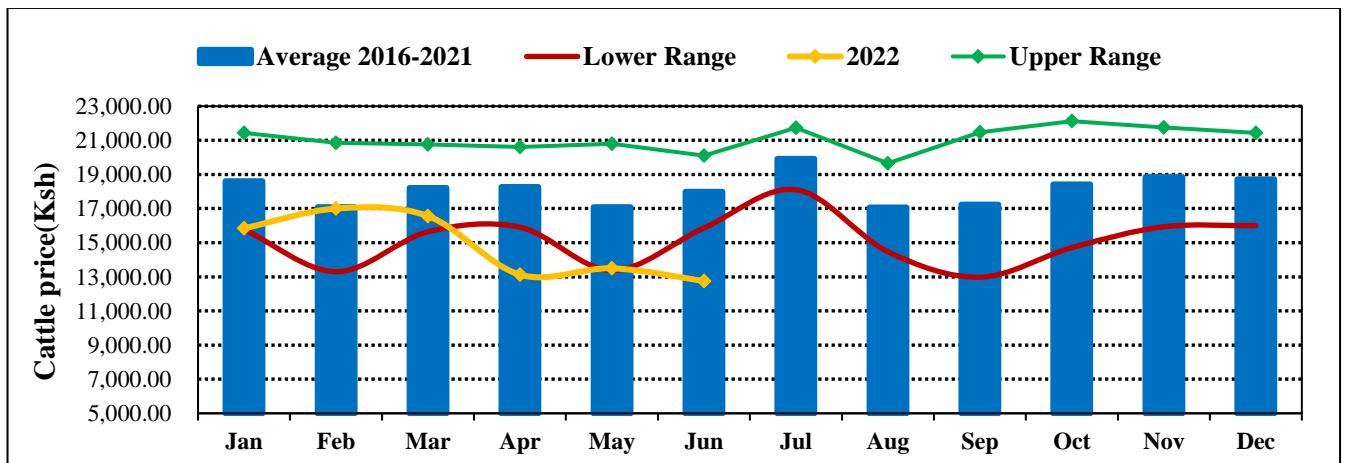


Figure 8: Cattle Selling Price Trends at Market Level

4.1.2 Goat Prices

- The current average price for a healthy goat was Ksh 2,665 which was 10 percent below the 2016 – 2021 average. However, the current average price is within the normal range (lower and upper limits) at the same time of the year (Figure 9). Goats have better prices than cattle due to goats being hardy and heat-tolerant hence stand resilient even in tough climates.
- Better goat's prices were recorded in Lolkuniani market which is terminal market averaging at Ksh 4,550 while lowest average price was reported in Illaut market at Ksh 2,000.

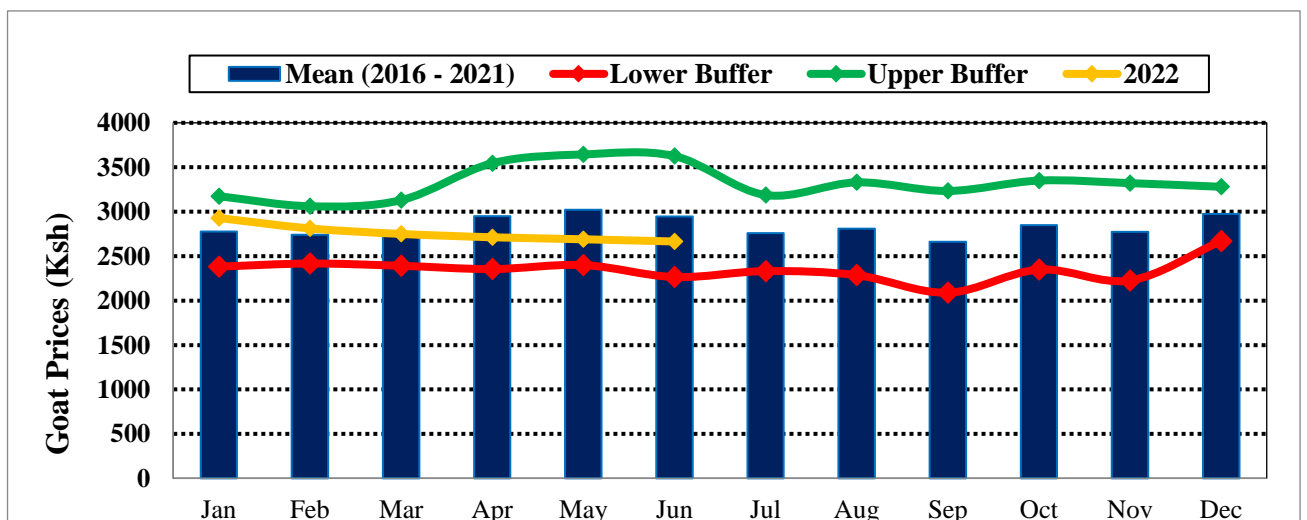


Figure 9: Goats' Selling Price Trends at Market Level

4.1.3 Sheep Prices

- The average selling price for a sheep was relatively comparable to last month price. The little lush grass supported minimal improvement for sheep thus cushioning further decrease in prices. The current average price was below the long-term average (2019 – 2021) by 17 percent (Figure 10).
- Few markets which include Lolkuniani and Nairimirimo recorded selling prices ranging between Ksh 2,300 – 2,600. Other sampled markets such as Longewan, Illaut, Lpus and Achers Post reported a price of Ksh 2,000 for a sheep whereas Baragoi reported low price of about Ksh 1,800 for a sheep.

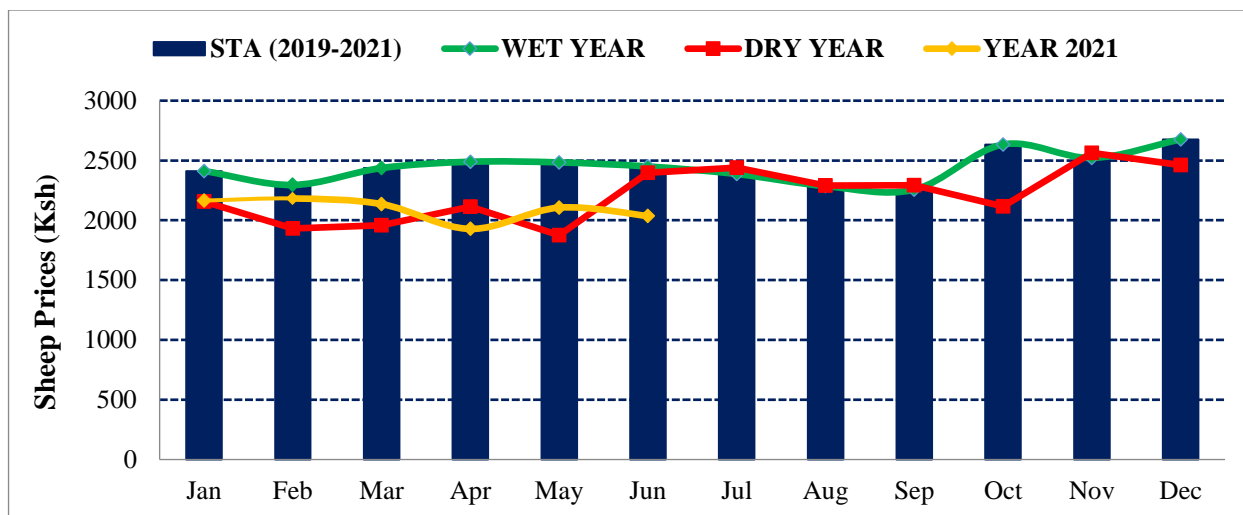


Figure 10: Sheep Selling Price Trends at Market Level

4.2 Crop Prices

4.2.1 Posho (Maize)

- The price of maize has significantly increased attributed to shortage of the commodities coupled with high cost of fuel and other economic shocks in the country. Maize and/or maize flour are the most important commodities consumed by majority of the households.
- The current average price for a kilogram of maize in the county is Ksh 82 which is an increase of about 30 percent from last month average price. Majority of the sampled markets reported a price of Ksh 70 – 80 whereas Illaut recorded a price of Ksh 100 per kilogram of maize.
- In comparison to the 2016 – 2021 average, the current average maize selling price for a kilogram is 57 percent above the average at same time of the year (Figure 11).

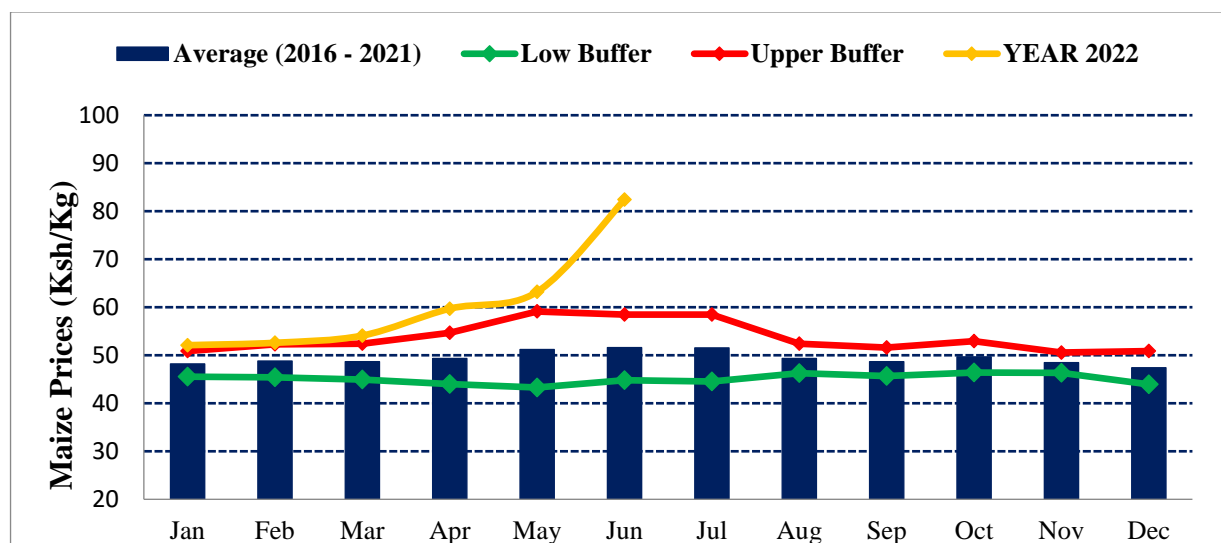


Figure 11: Maize Meal Price Trends

4.3 Terms of Trade (TOT)

- The household purchasing power has been deteriorating due to low selling prices of livestock and skyrocketing of cereal prices. The low purchasing power signifying huge food gaps at the household level.
- Currently, a household on average can only buy 32 kilograms of maize from proceeds obtained by selling one healthy and mature goat. The current average price is 21 percent below the normal threshold (lower buffer) and 44 percent below the 2016 – 2021 average at the same time of the year (Figure 12).
- Households in Pastoral livelihood zone were able to get 40.4 kilograms of maize by selling one goat whereas households in Agro Pastoral livelihood zone were able to purchase 51 kilograms using income obtained by selling one goat.

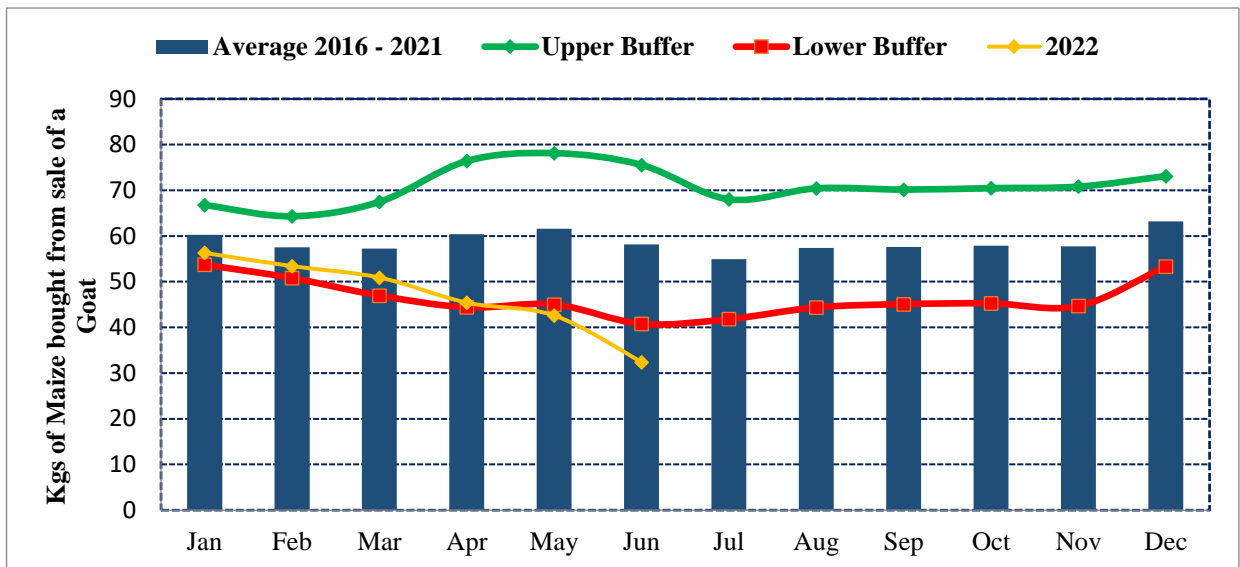


Figure 12: Trends in Terms of Trade (TOT)

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

- Majority of households reported no consumption of milk at household level. Out of 179 interviewed households, only six of them reported consuming 1 – 2 litres produced from camels.

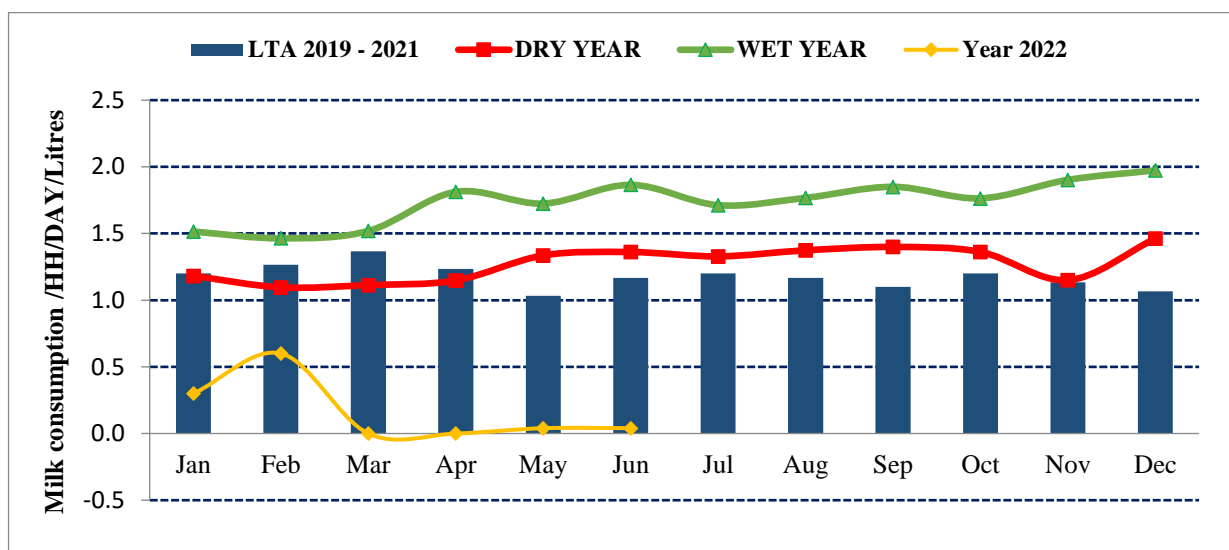


Figure 13: Trends in Milk Consumption per Household

5.2 Food Consumption Score (FCS)

During the period under review, a number of households shifted from acceptable food consumption to either borderline and/or poor food consumption bands. The deterioration of food consumption scores signifies food gaps. During the period under review, 70 percent and 39 percent of households in Agro Pastoral and pastoral livelihood zones had borderline food consumption respectively. Households in borderline are consuming staples and vegetables every day, accompanied by oil and pulses a few times a week. Another 30 percent and 53.7 percent of the sampled households had in Agro pastoral and Pastoral livelihood zones had acceptable FCS. Households consume staples and vegetables every day, frequently accompanied by oil and pulses and occasionally meat, fish and dairy. Out of the sampled households, only 7.4 percent of the households in Pastoral livelihood zone had poor food consumption which implies households are not consuming staples and vegetables every day and never or very seldom are consuming protein rich food such as meat and dairy.

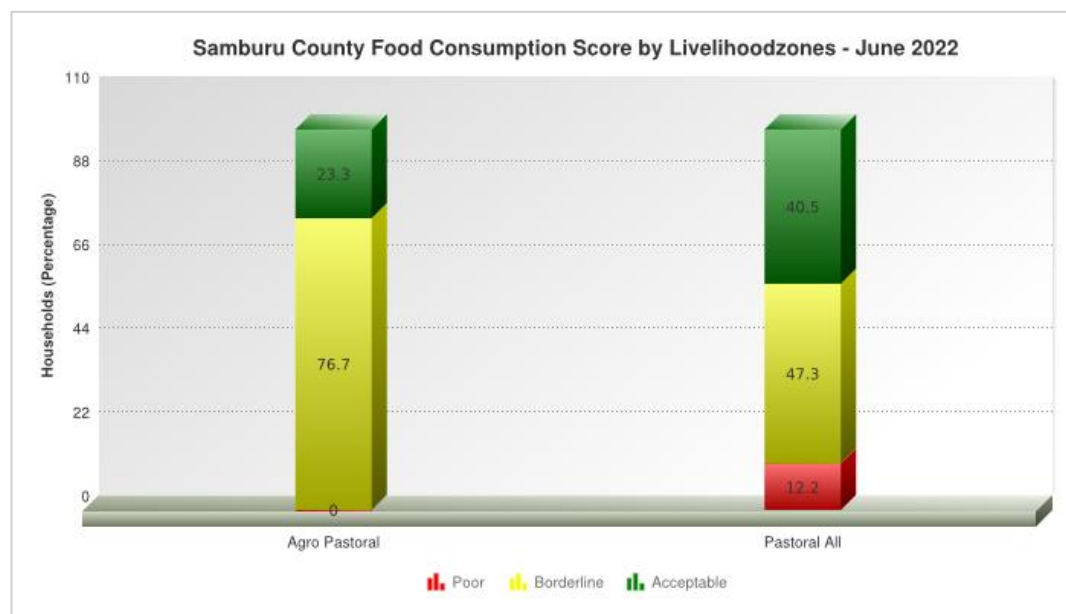


Figure 14: FCS Per Livelihood zone

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5.3 Health and Nutrition Status

5.3.1 MID Upper-Arm Circumference (MUAC 125-134 mm)

The proportion of sampled children below five years at risk of being malnourished slightly increased from 33.3 percent to 35 percent. The increase may be attributed to poor maternal practices such as poor breastfeeding practices coupled with low dietary diversity. High malnutrition rates of children at risk of malnutrition were recorded in Wamba North, Waso and Ndoto wards. Majority of community key informants narrated that most of them are taking about 1 – 2 meals per day comprising of milled posho, vegetables and oil.

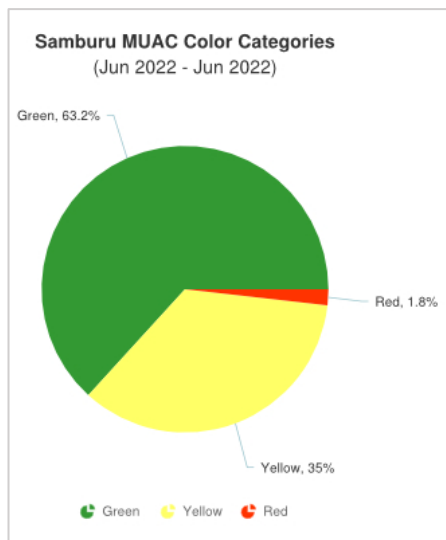


Figure 15: Nutritional Status (Family MUAC) for Children Under Five

facilities across the county for diagnosis were 14612 for under-fives and 29995 for the general population (above five years).

Health

According to the Kenya Health Information System (KHIS2), a larger proportion of patients were diagnosed as having symptoms of Upper Respiratory Tract Infections (URTI), diarrhoea and Pneumonia. Around 8393 children under five years and 12050 general population were diagnosed with URTI respectively. Other diseases suffered by the population include diarrhoea and pneumonia as shown in the table 1 below. The number of first attendances (attending once) to the health

Table 1: Morbidity for Under-fives and General Population from April – June 2022

DISEASE	UNDER FIVE	GENERAL POPULATION
Upper Respiratory Tract Infections	8393	12050
Diarrhoea	4019	2583
Pneumonia	1541	3083

(SOURCE: KHIS2 - MOH 705 A & B)

5.3 Reduced Coping Strategies Index (rCSI)

The Coping Strategy Index (CSI) is an indicator of a household’s food security assessing the extent to which households use harmful coping strategies when they do not have enough food or enough money to buy food. The current mean rCSI is 14.04 which is an increase compared to last month mean of 11.43. this indicates that more households are engaging in destructive food related coping strategies. In terms

of livelihood zones, households in Pastoral livelihood zone applied more coping strategies with a mean index of 14.2 and households in Agro Pastoral livelihood zone had a mean index of 9.8. The current mean index is 17 percent above the 2017 – 2021 average at the same period of the year (Figure 16). some of the strategies that were reported to be used by most of the sampled households

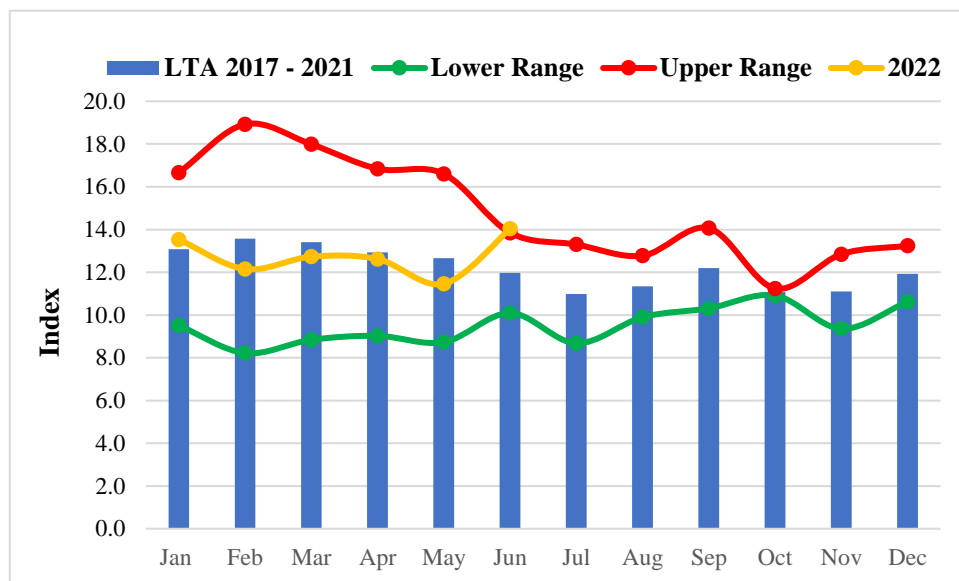


Figure 16: Mean rCSI Trends

include reduced number of meals, reduced portion meal size and borrowed food from neighbours.

6.0 EMERGING ISSUES

6.1 Insecurity/Conflict/Human Displacement

- Incidences of livestock theft were experienced along the border of Samburu and Baringo counties leading to death of one lady in Longewan village. Samburu north insecurity situation is calm due to concerted efforts by stake holders however animosity still persist among the warring communities.

6.2 Migration

- Majority of the cattle have been outside the county since the beginning of the year due to poor performance of the October to December 2021 rainfall season. Some herders who have been grazing in Kirisia Forest have transported their cattle to Menengai in Nakuru County and others to Mochongoi in Baringo County.

Table 2: Livestock Migration Patterns

Livestock Species	From	To	Nature
Cattle (Out-migration)	Samburu Centra sub county	Mochongoi (Baringo County), Menengai (Nakuru County), Mt. Kenya	Abnormal
	Waso ward	Koom (Isiolo)	Normal
Cattle (Intra – Migration)	Samburu North	Ndoto Hills, Elbarta Ward	Normal
	Suguta and Loosuk ward	Kirisia Forest	Normal

6.3 Food Security Prognosis

- According to Kenya Meteorology, July 2022 rainfall forecast indicates that Samburu County will likely be sunny and dry.

- The rangeland resources especially forage and water will likely be below average through end of October 2022.
- The market selling prices for livestock will most likely maintain a downward trend while maize prices and other staple food commodities will likely increase further.
- The prevalence of acute malnutrition will likely increase through the scenario period due to reduced food access following three consecutive below-average rainfall seasons.
- Resource based conflict is projected to increase aggravated competition of scarcity forage and water resources.

8.0 RECOMMENDATIONS

Table 3: Proposed Interventions per Sector

SECTOR	INTERVENTION
Water	<ul style="list-style-type: none"> • Support repair and maintenance of boreholes.
Livestock	<ul style="list-style-type: none"> • Upscale livestock commercial offtake and slaughter destocking.
Health and Nutrition	<ul style="list-style-type: none"> • Intensify medical outreaches to reduce defaulter rates as household migrate with their livestock in search of pasture.
Education	<ul style="list-style-type: none"> • Support vulnerable students in boarding schools with bursaries and food to sustain 100 percent school attendance.
Peace and Security	<ul style="list-style-type: none"> • Support peace initiatives in the hot spots areas where livestock have converged and inter county negotiations.

ANNEXES

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Non-Food On-going Interventions

Table 4: Non-food On-going Interventions

Sub County	Intervention	Ward	No. of beneficiaries	Implementers	Cost (KSH)
Samburu North	Unconditional Cash Transfer (UCT)	Baawa	338	USAID Nawiri	6,760,000
	Unconditional Cash Transfer (UCT)	Elberta	474		9,480,000
	Unconditional Cash Transfer (UCT)	Nachola	161		3,220,000
	Unconditional Cash Transfer (UCT)	Nyiro	461		9,220,000
Samburu East	Unconditional Cash Transfer (UCT)	Waso	373		7,460,000
Samburu East	Repair of Lengusaka borehole	Wamba East	2200 HHs	ACTED	300,000
	Natiti borehole repair and pipe extension	Nachola	1500 HHs	UNICEF/SCG	2,000,000