



A Vision 2030 Flagship Project



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

MAY 2022 EW PHASE

Drought Status: **ALARM**



Mipango ya kukabiliana na ukame

Drought Situation & EW Phase Classification

Biophysical Indicators

- The month of June 2022 was characterized by sunny weather conditions with occasional depressed showers experienced in the begging of the month for only 2 – 3 days in isolated areas especially along Kirisia forest and surrounding environs of Baragoi.
- The precipitation had insignificant improvement rangeland vegetation cover. Open water sources recharged in the areas that recorded rains however are currently way below the normal capacity levels.

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	14.15	35-50
	Samburu East	10.96	35-50
	Samburu West	17.84	35-50
	Samburu North	16.86	35-50
Production indicators		Value	Normal ranges
Livestock Migration Pattern		Haphazard Out & intra	No Migration
Livestock Body Conditions		Emaciated, thin fore ribs 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	6	0 - 21
	Borderline	44.6	21.5 - 35
	Acceptable	49.4	>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 May normally marks the cessation of the March to May rainfall season. The 2022 long rains season was poor in terms of intensity and frequency across the county. Most parts of the county remained dry throughout the month; however erratic light showers were recorded in few places for 1 – 2 days.

1.2 Amount of Rainfall and Spatial Distribution

The 2022 long rains season had late and/or undefined onset and early cessation with poor distribution over most parts of the county both in time and space. The precipitation received in the period under review was considerably below normal amounts. According to satellite-derived rainfall data, the county recorded depressed and erratic rains which were 19 and 45 percent below the long-term average in the first and second dekad respectively as per Climate Hazards Group InfraRed Precipitation with Station data (CHIRPS) (Figure 1).

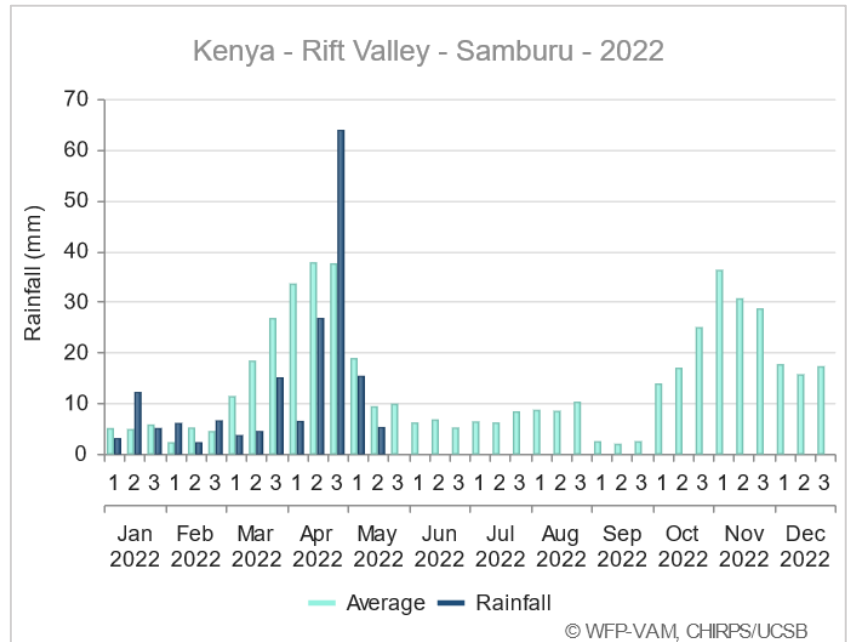


Figure 1: Dekadal Rainfall Estimates (RFE)

2.0 IMPACTS ON VEGETATION AND WATER

2.1 Vegetation Condition

2.1.1 Vegetation Condition Index (3 month-VCI)

- The poor performance of the seasonal rainfall has continued to negatively impact on rangeland conditions in the county with the 3-month average vegetation cover index being at 14.15 from 11.73 recorded in April 2022 as measured by VCI. The County has been in vegetation deficit since the beginning of the year.
- All the sub counties within the county had VCI values less than 20 indicating severe drought condition signifying depleted pasture and browse conditions. The current condition has only been experienced in four times in the last 21 years in 2019, 2017, 2011 and 2009 at similar time of the year. Samburu East sub county had the lowest average VCI of about 10.96 and Samburu North and West sub counties had 3- monthly average VCI of 16.86 and 17.84 respectively which are way below the normal VCI range of 35 – 50. The depressed precipitation received during the March to May 2022 seasonal had insignificant impact on pasture and browse across the county.

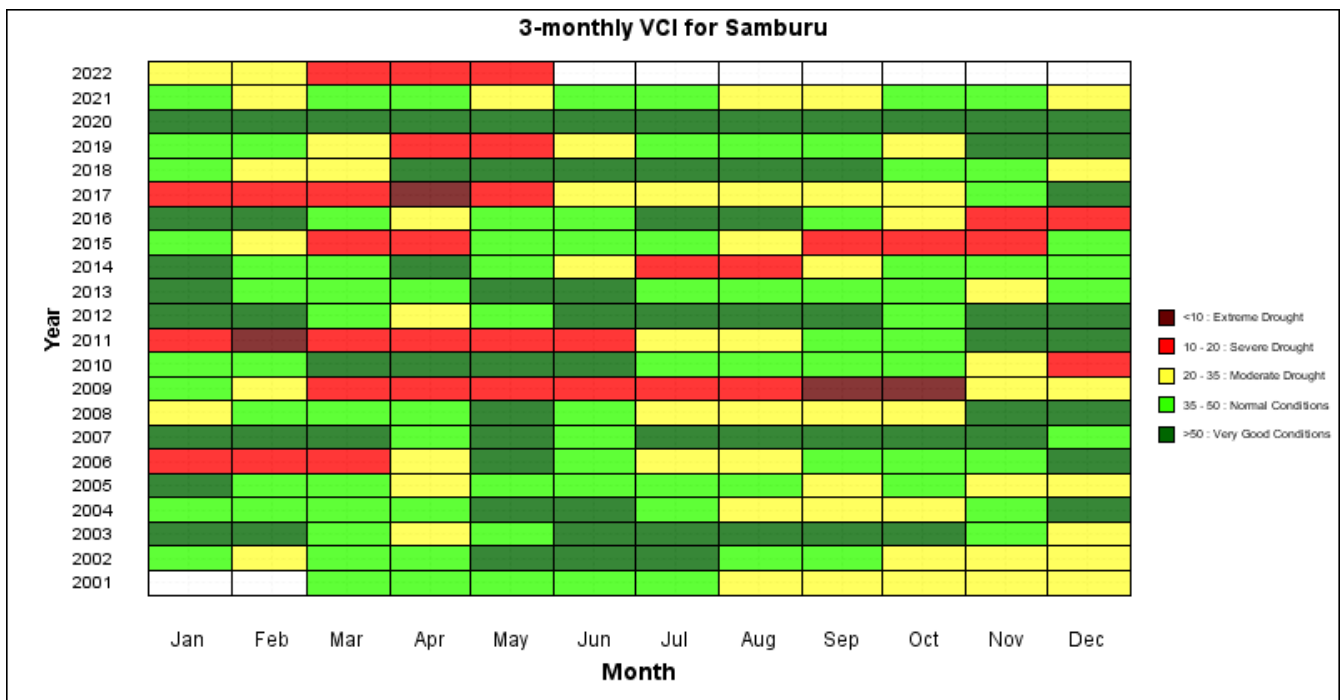


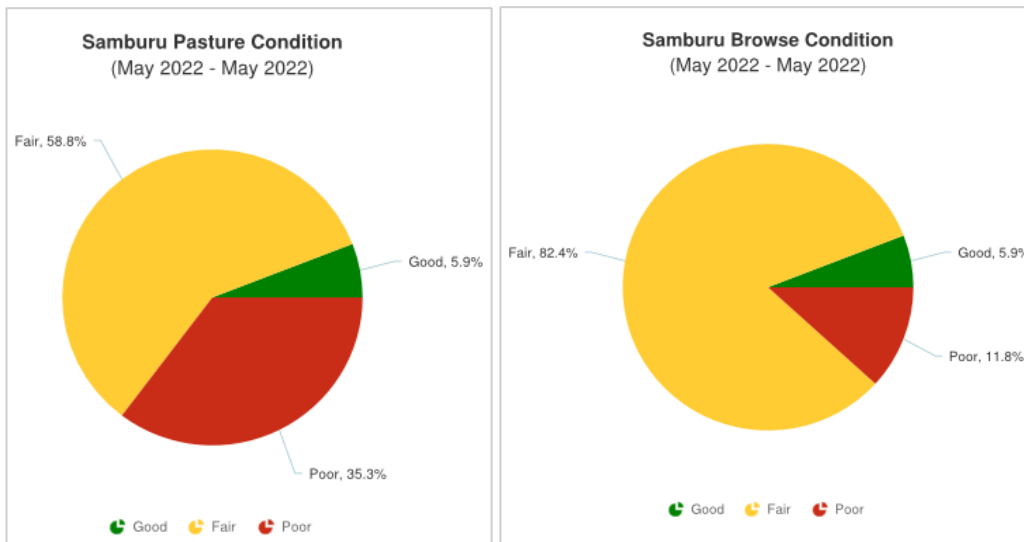
Figure 2: VCI 3-monthly Trends for Samburu County
 (Source: Boku University)

2.1.2 Field Observations (Pasture and Browse Conditions)

Quality and Quantity

Quality and quantity of pasture and browse still remains poor across all the livelihood zones despite the erratic rains received. However, only few places isolated places along the Kirisia hills and around Baragoi had slight pasture and browse regeneration which in turn attracted huge number of livestock thus resulting in overgrazing in the areas. Overgrazing reduces the productivity and biodiversity of the land thus likely cause of erosion of the rangeland.

According to community key informants, majority of them responded pasture condition is fair (58.8)



percent and 82.4 percent said browse is fair. Around 35.3 percent of the sampled respondents said pasture is poor and 11.8 percent responded browse condition is poor. The situation is likely to deteriorate through June 2022 thus expected to intensify food insecurity, haphazard migrations

Figure 3: Pasture and Browse Condition and escalated resource-based conflicts.

2.2. Water Resource

2.2.1 Sources

Water sources remained relatively similar to last month used sources with Wells, boreholes, pans and dams being the frequent used water sources. Sampled community households reported using various water sources. Natural ponds and hand dug wells were depended on by approximately 45.7 percent of household for water for domestic and livestock use. Another 22.9 and 17.1 percent of the households reported getting water from pans and boreholes respectively. Usage of boreholes declined to 17.1 percent from 24.4 percent reported in April 2022. Other water sources include seasonal rivers and springs contributing water to proportion about 5.7 percent and 8.6 percent of the households respectively

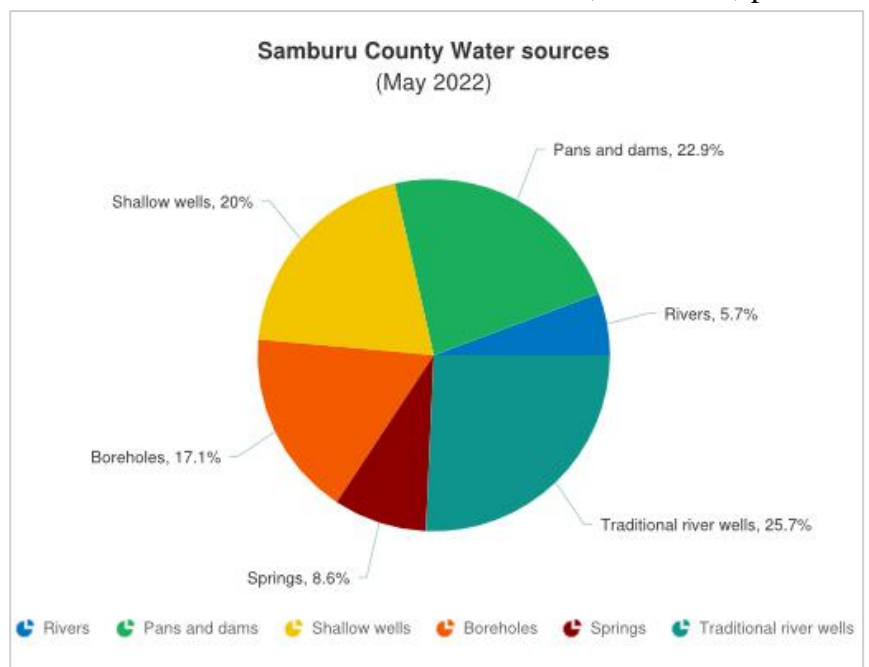


Figure 4: Frequently Used water Sources

(Figure 4). Most of the sampled households reported fetching 20 – 60 litres of water for domestic use which translates to around 4 – 12 litres per person per day to an average household size of 5 persons. Small percentage of sampled households reported boiling water for drinking with majority of them consuming water as it is fetched from the source.

2.2.2 Household Access and Utilization

- The erratic and intermittent showers in isolated areas supported surface run-off rainwater into streambeds. The wet streambeds in pastoral areas are sandy and households scooped for domestic water. The scooped water and water in pans have high turbidity due to soil erosion and wading

by livestock. This has driven slight reduction in households trekked distances in search of water for use at the household level.

- The current average trekked distance by household is 5 km compared to 7.2 km recorded in April 2022. The distances are likely to increase towards June as the 2022 rainfall season ends with a poor performance. The current average distance for households is within the 2019 – 2021 average at the same period of the year (Figure 5).

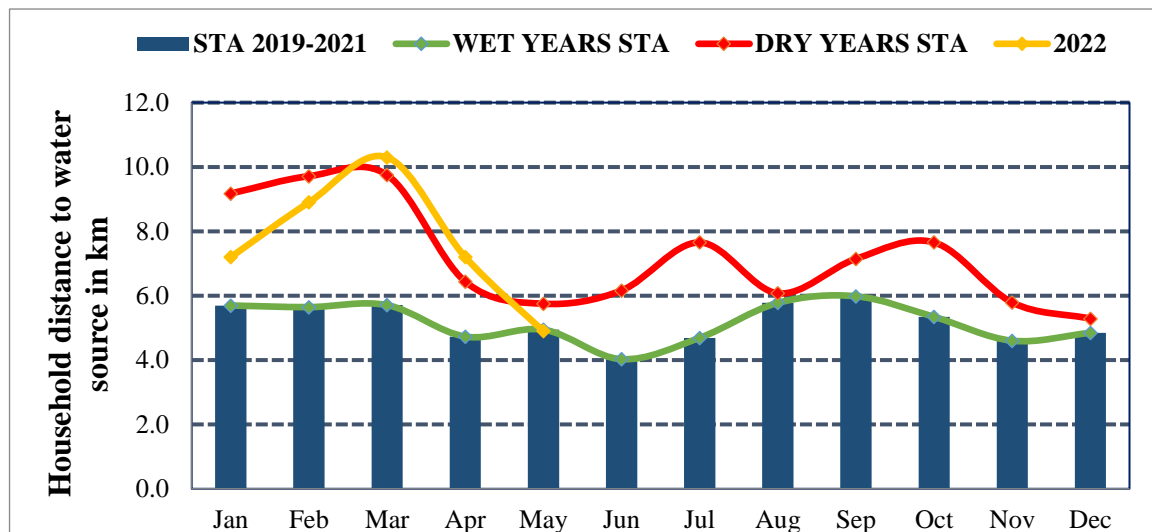


Figure 5: Average Distance Travelled by Households in Search of Water

2.2.3 Livestock Access (Grazing Distances to Water Points)

- Livestock in most areas continued to trek for long distances in search of pasture driven by shortage of water and forage. The current return average distance remained relatively stable at 12.8 km compared to 11.8 km recorded in last month.
- Longest distances were reported in areas of Wamba West, Nachola and Wamba North wards ranging between 12 – 20 km from grazing fields to watering points. The distances are projected to likely remain high as the received showers had insignificant impact on vegetation cover and water resources. The current average return grazing distance is above the 2019 – 2021 average by 31 percent at the same time of the year (Figure 6).

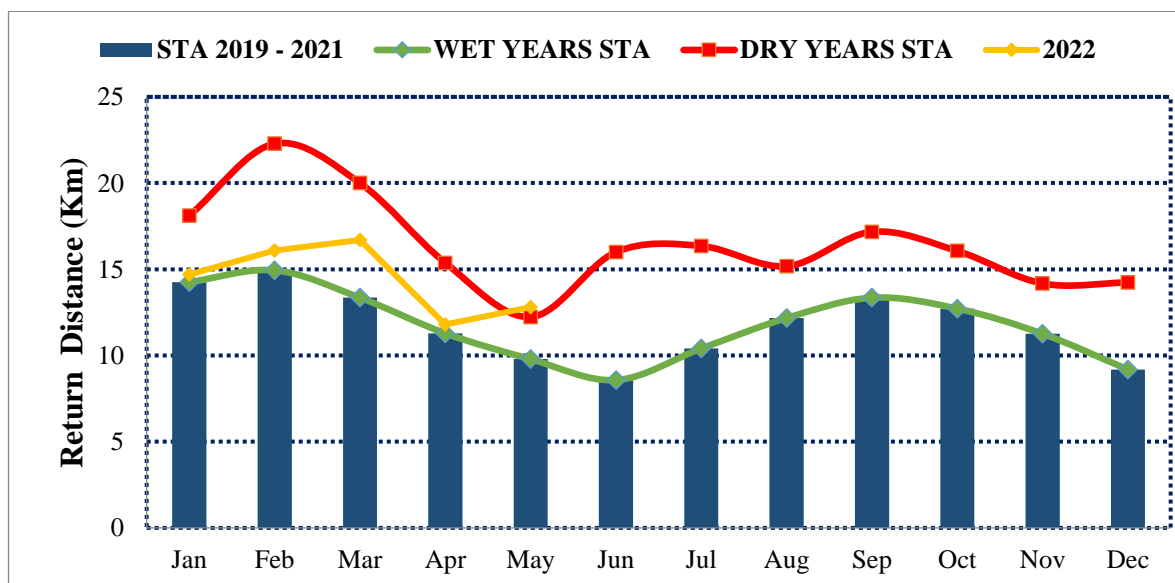


Figure 6: Distance Travelled from Grazing Areas to Water Points

3.0 PRODUCTION INDICATORS

3.1 Livestock Production

3.1.1 Livestock Body Condition

- The livestock body condition for cattle remained between alert worsening/alarm (thin fore ribs visible) and emaciated, little muscle left and very thin no fat, bones visible) attributed to prolonged dry spell which resulted in depleted rangeland resources. Camels and goats exhibit poor to fair body condition which is neither fat nor thin.

3.1.2 Livestock Diseases and Deaths

- The mortality rates for cattle continued to be reported as the precipitation received has not supported enough pasture regeneration. However, goats and sheep death rates has drastically decreased following the little lush grass and browse that has supported slight body condition improvement for small stocks. According to county department of Veterinary about 16.9 percent of the total livestock were reported to have died due to starvation occasioned by the prolonged drought.

3.1.3 Milk Production

- Majority of the sampled households reported nil milk production. Out of the sampled households across the six sentinel sites, 96.4 percent of them reported no milk production during the period under review and only 3.6 percent which six households out of 166 households reported production of around 2 – 4 litres of milk from Camels. Poor milk production at household level has been attributed to deterioration in livestock body condition. Mass migration of livestock in search of better rangeland resources has also driven to poor milk availability both at household and market level. Also, high abortion rates have been noticed in goats and sheep due to poor body condition thus resulting in very low milking herds.

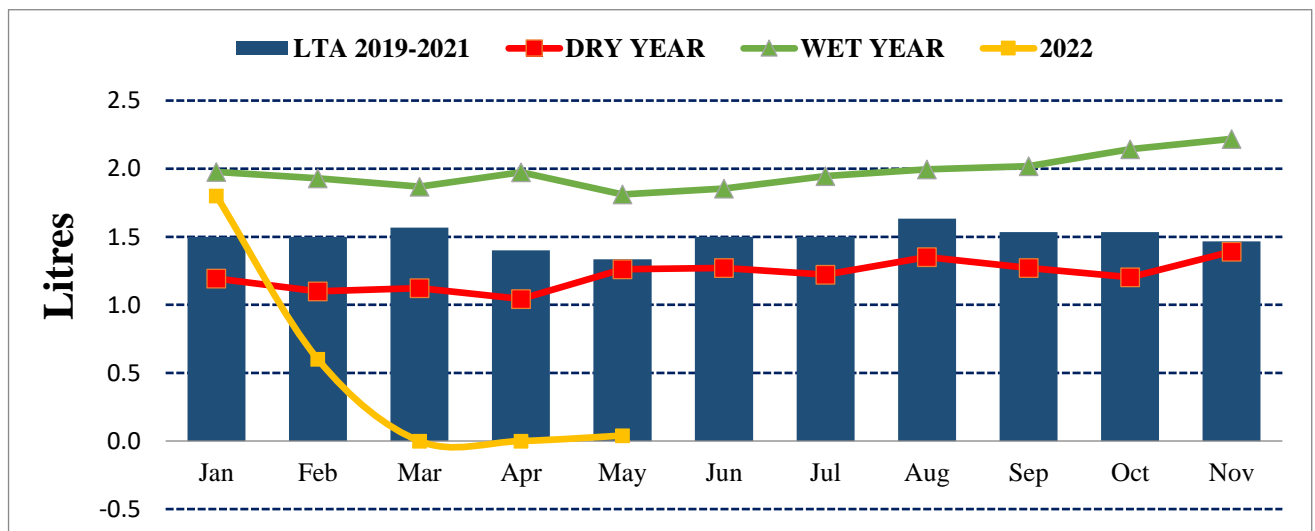


Figure 7: Trends in Milk Production per Household

3.2 Rain Fed Crop Production

3.2.1 Stage and Condition of Food Crops

- The few farmers that planted crops are currently in one leaf germination stage and wilting up 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 selling prices still remained very low due to poor body conditions driven by shortage of forage resulting in long trekking distances. The current average selling price for cattle was Ksh 13,500 which is relatively comparable to last month average selling price of Ksh 13,130.
- Larger proportion of cattle are still outside the county in search of better forage and water thus most internal market reported low volumes of cattle during the market days.
- The current average selling price for cattle is below the 2019 -2021 average by 29 percent at the same period of the year (Figure 8).

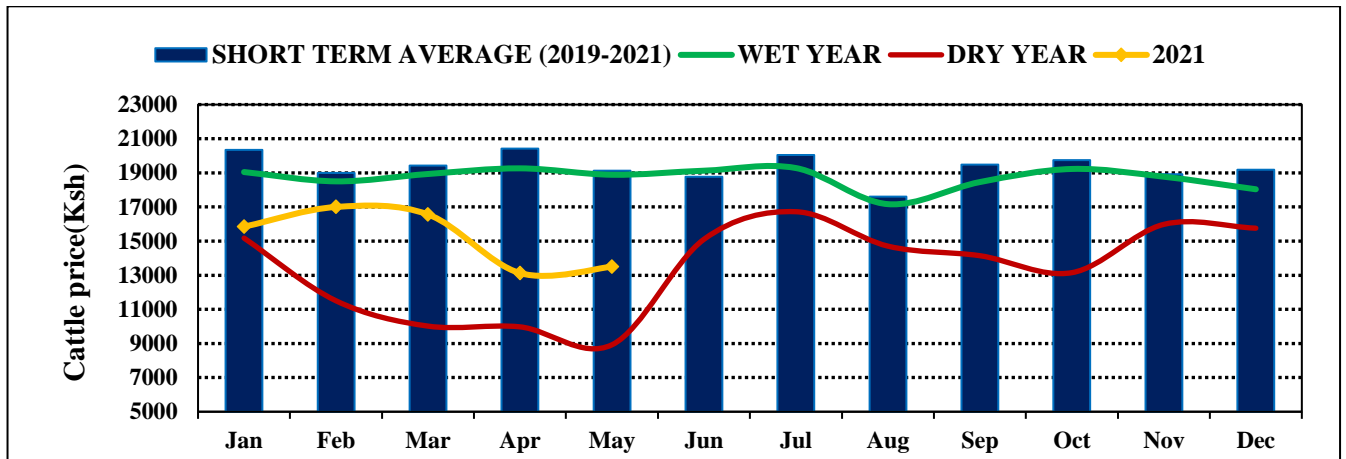


Figure 8: Cattle Selling Price Trends at Market Level

4.1.2 Goat Prices

- Price for goat remained low and below the long-term average due to fair to poor body conditions driven by dry weather conditions across the county.
- The current average price for a goat was Ksh 2,690 which relatively stable when compared to last month average price of Ksh 2,710.
- Illaut market recorded the least price at Ksh 2,000 whereas Nairimirimo market reported the highest average price at Ksh 4,300 for a goat. Other markets prices ranged in between the highest and lowest.
- In comparison to 2019 – 2021 average, the current average price is 20 percent below the three-year average at this time of the year (Figure 9).

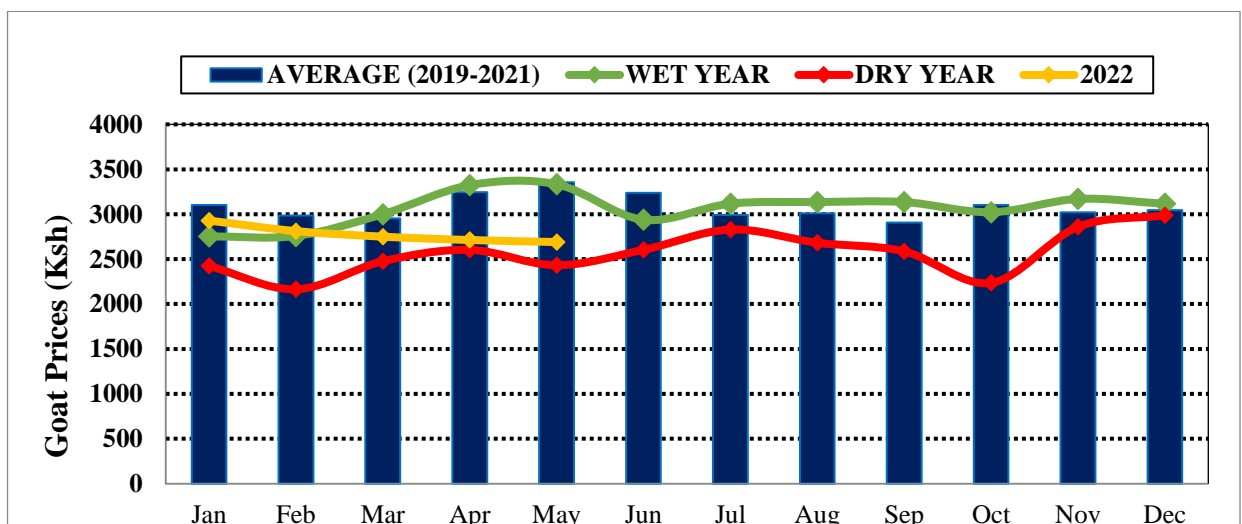


Figure 9: Goats' Selling Price Trends at Market Level

4.1.3 Sheep Prices

- Like goat's prices, sheep selling prices remained relatively stable compared to last month however remained below the long-term average. The prices have been low due to poor body condition driven by inadequate pasture and water resources due to failure of the last three consecutive rainfall seasons.
- Like other livestock species, better prices for sheep were noticed in Nairimirimo market at an average of Ksh 2,400 for a mature sheep and low prices of about Ksh 1,800 – Ksh 2,000 were recorded in Baragoi, Longewan, Illaut and Archers Posts for a mature sized ram.
- The current average price in reference to the 2019 – 2021 average remained below the three-year average by 15 percent at the same time of the year (Figure 10).

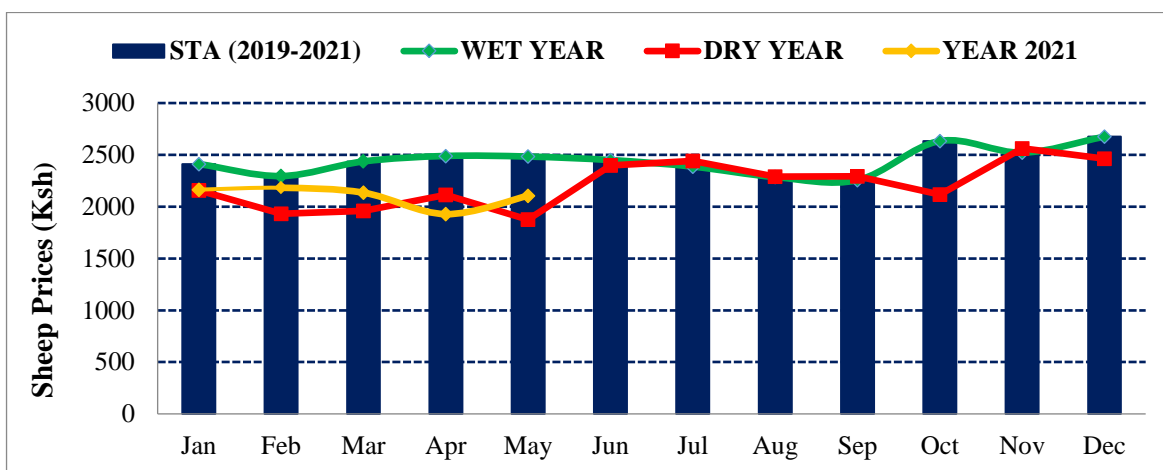


Figure 10: Sheep Selling Price Trends at Market Level

4.2 Crop Prices

4.2.1 Posho (Maize)

- The price of one kilogram maize has gone up averaging Ksh 63.20 from Ksh 59.70 per kilogram recorded in last month. The increase is attributed to deficit of maize at household as well as at market level following underperformance of the last three consecutive rainfall seasons resulting in crop failure.
- The prices are projected to increase further as the dry conditions is likely to persist in Eastern Africa placing Ethiopia, Kenya, and Somalia into a drought of a length not experienced in the last 40 years.
- The current average selling price for a kilogram of maize is about 28 percent above the 2019 – 2021 average at similar period of the year (Figure 11).

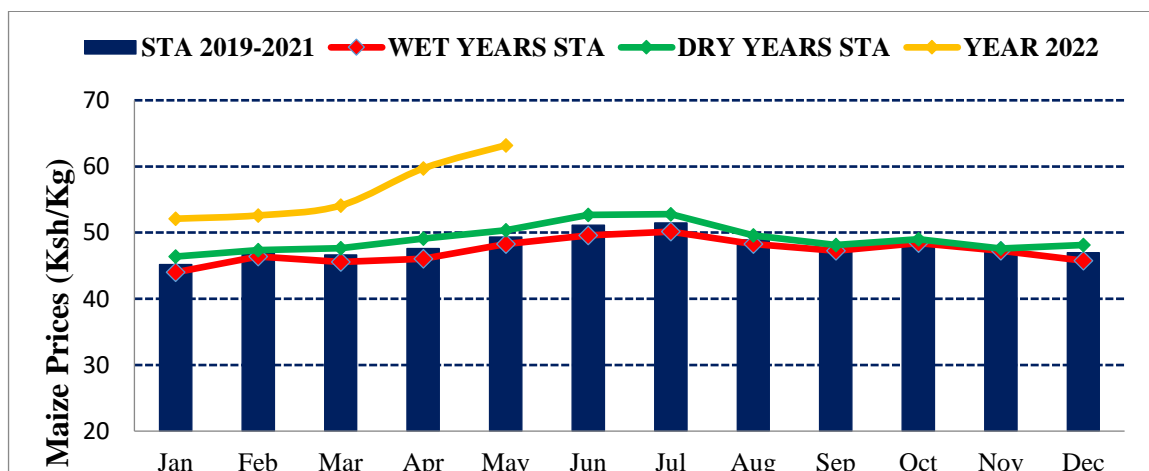


Figure 11: Maize Meal Price Trends

4.3 Terms of Trade (TOT)

- The escalating cereal prices and low livestock prices in the market have led to unfavourable purchasing power for the households. The current average term of trade was 43 which means a household can only purchase 43 kilograms of maize in exchange of income obtained by selling one goat.
- The terms of trade vary per livelihood zones with households in Pastoral livelihood zone were able to get 43 kilograms of maize by selling one goat whereas households in Agro Pastoral livelihood zone were able to purchase 56 kilograms using income obtained by selling one goat.
- Household terms of trade have been unfavourable and below the three-year average since the beginning of the year with current average ToT being below the 2019 – 2021 average by 38 percent at similar time of the year (Figure 12).

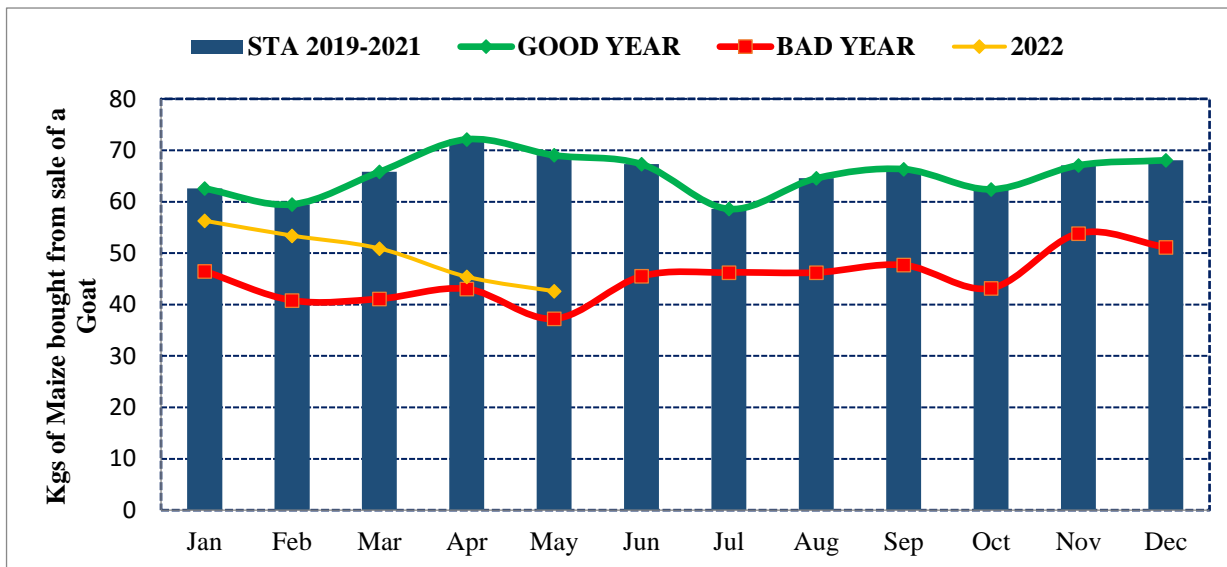


Figure 12: Trends in Terms of Trade (TOT)

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

- Following nil milk production, households have no milk to consume due to prolonged dry spell experienced in the county. The situation is likely to worsen till the October when the next rainfall season is expected following the poor performance of the 2022 long rains season.

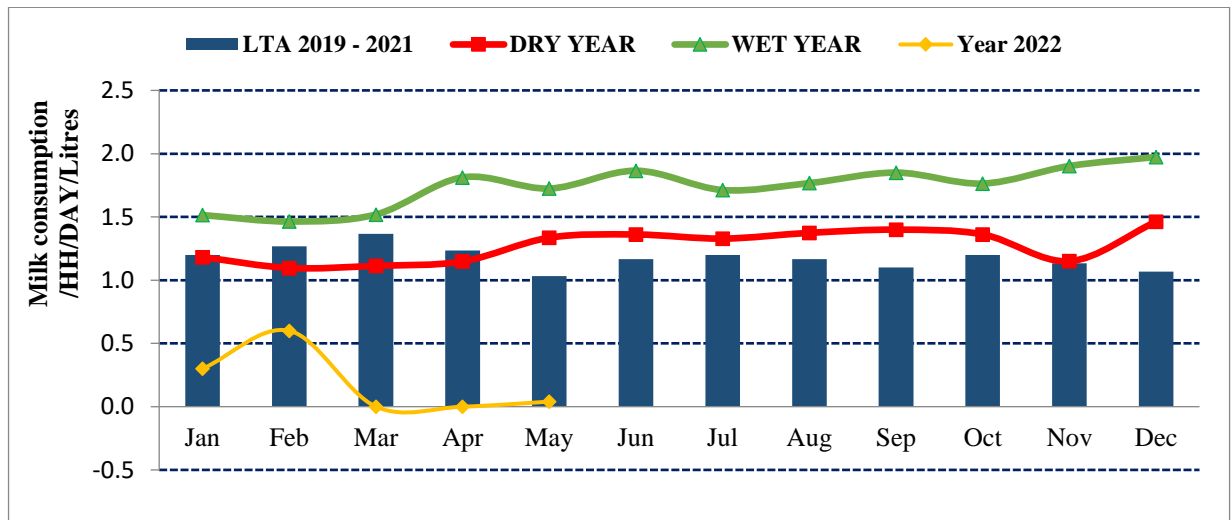


Figure 13: Trends in Milk Consumption per Household

5.2 Food Consumption Score (FCS)

Food consumption patterns at the household level remained below average with 70 and 39 percent of the households in Agro Pastoral and Pastoral livelihood zones respectively having borderline consumption. Around 53.7 and 30 percent of the sampled households had acceptable food consumption.

Approximately 7.4 percent of the sampled households in Pastoral livelihood zone had poor food consumption patterns.

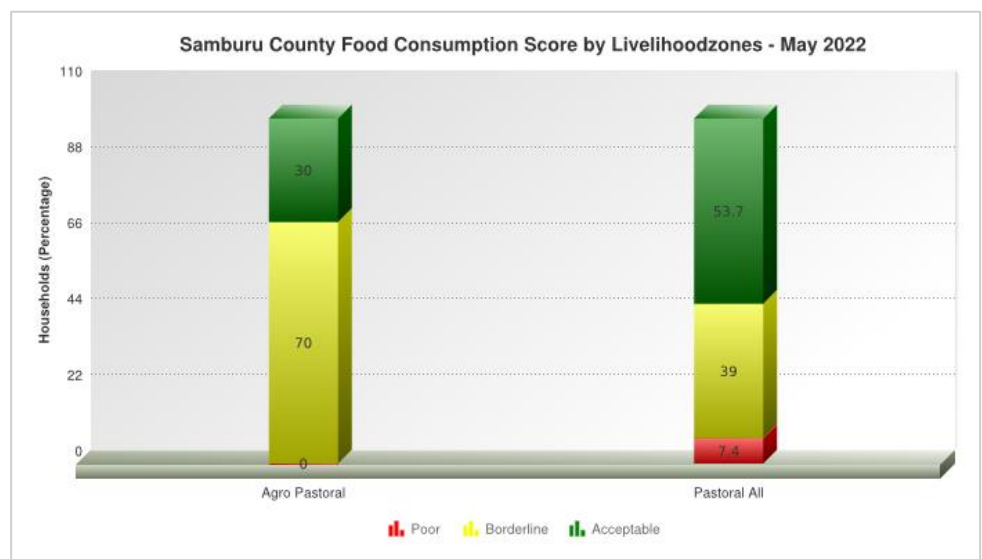


Figure 14: FCS Per Livelihood zone

5.3 Health and Nutrition Status

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

The prevalence of children at risk of malnutrition based on MUAC data has been high most probably attributed to poor dietary diversity, poor child maternal practices and illness such as Pneumonia, coughs and chills like malaria. In addition, milk consumption at household level has been very low due to inadequate production as livestock have migrated and few remaining have poor body conditions thus low productivity. The current malnutrition rates for children at risk stands at 33.33 percent compared to 35.7 percent reported in the month April 2022 based on family MUAC data from sentinel sites. High risks of malnutrition were reported in Pastoral areas of Wamba West, Wamba North, Waso and Ndoto wards.

High food prices in the market coupled with low livestock selling prices have forced households to engage in destructive coping strategies.

Sampled households reported taking 1 – 2 meals a day which below the normal 2 – 3 meals a day. Out of the total sampled children under-fives in six sentinel sites, 319 were females and 296 were males.

Health

The top three morbidity reported in health facilities are upper respiratory (URTI), diarrhoea and pneumonia. In the month of April and May 2022, about 3560 children under five and 4435 persons above five years were diagnosed with clinical signs of URTI. A total of 1829 children under five and 1041 general population were to have suffered with diarrhoea.

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

DISEASE	UNDER FIVE	GENERAL POPULATION
Upper Respiratory Tract Infections	3560	4435
Diarrhoea	1829	1041
Pneumonia	643	1268

(SOURCE: KHIS2 - MOH 705 A & B)

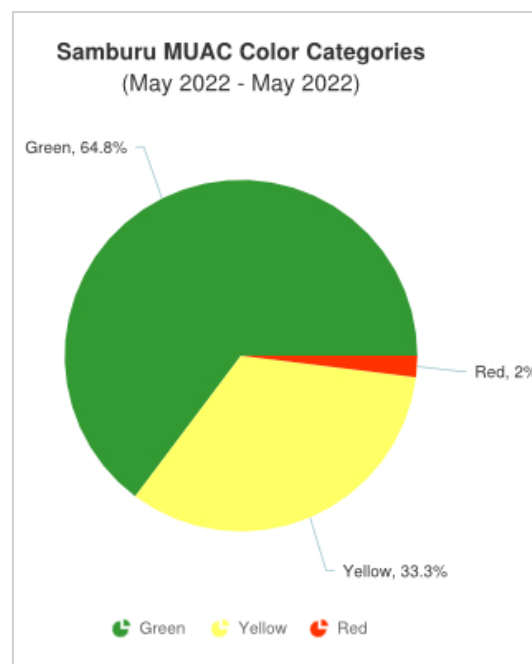


Figure 15: Nutritional Status (Family MUAC) for Children Under Five

5.3 Reduced Coping Strategies Index (rCSI)

- The current mean rCSI was 11.43 which is relatively comparable to last month mean rCSI of 12.69.
- Households in Pastoral livelihood zone coping strategy index was 11.7 while households in Agro pastoral livelihood zone had an index of 10.1.
- The most commonly utilized consumption-based coping strategies remained reduction in the number of meals eaten per day, reduction in the portion size of meals and relying on less preferred and/or less expensive food.

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Non-Food On-going Interventions

Table 2: Non-food On-going Interventions

SECTOR	INTERVENTION
Water	<ul style="list-style-type: none">• Repair, servicing and maintenance of boreholes
Agriculture	<ul style="list-style-type: none">• Provision of subsidized fertilizers by county department of Agriculture.
Livestock	<ul style="list-style-type: none">• Distribution of 3,576 bags of ranges of 50 kgs provided by FAO to 894 beneficiaries.
Health	<ul style="list-style-type: none">• Mass screening and planning meeting for SMART survey
Peace & Security	<ul style="list-style-type: none">• Community based peace dialogue and negotiations meetings

6.2 FOOD AID

- Office of County Commissioner and County department of Special Programs distributed relief food to targeted vulnerable households.

7.0 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- Isolated cases of livestock theft were reported along the border of Samburu and Baringo counties. A number of livestock were recovered through community conflict and peacebuilding initiatives coordinated by community elders (*wazee*) from both sides of the communities.

7.2 Migration

- A number of cattle from the county are still grazing outside the county with some being Narok and Kajiado counties. Other in Laikipia, Meru and Nyeri counties in search of better forage and water. Influx of livestock both cattle, goats and sheep have been noticed in Kirisia forest that received little rains that supported little regeneration of pastures and browse.

7.3 Food Security Prognosis

- The month of June in most cases in dry month thus there is likelihood that environmental and other production indicators are likely to remained much below the long-term average.
- Most areas are likely to have poor and below average pasture, browse conditions and water sources till the onset of the next rainfall season anticipated in October 2022.
- Scarcity of cereals and other staple food commodities in the markets is likely to persist as no any crop harvests expected throughout the year.
- Livestock prices are projected to decrease further below the long-term average as rangeland resources deplete.
- Due to increasing cereals prices and decreasing livestock prices, households purchasing power is likely to erode further hence likelihood of household intensify use of negative coping mechanisms.
- 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">• Strengthen rapid response team (RRT) and upscale boreholes maintenance, repair and servicing.
Livestock	<ul style="list-style-type: none">• Support livestock commercial offtake and slaughter destocking avert more livestock mortalities.
Agriculture	<ul style="list-style-type: none">• Support home economic skills at community level.
Health and Nutrition	<ul style="list-style-type: none">• Upscale outreaches in hard-to-reach areas and in dry season grazing areas to minimize health programs defaulter rates.• Distribution of water treatment chemicals such as Purr and Aqua tabs to households.
Education	<ul style="list-style-type: none">• Support food for fees for vulnerable students in secondary boarding schools.• Provision of food and water to targeted vulnerable schools in drought-stricken areas.
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.