National Drought Management Authority
MARSABIT COUNTY
DROUGHT EARLY WARNING BULLETIN FOR JANUARY 2023

A Vision 2030 Flagship Project

DROUGHT EW PHASE: EMERGENCY

Drought Situation & EW Phase Classification

Biophysical Indicators

Rainfall: Dekadal rainfall for estimates (RFE) were below normal. Off-season rains were received in Marsabit Mountain at 33mm.

Vegetation condition: Vegetation Condition Index for the month under review was 6.65 which is indicative of extreme vegetation deficit category. Dekadal NDVI values were below normal.

Socio-Economic Indicators (Impact Indicators)

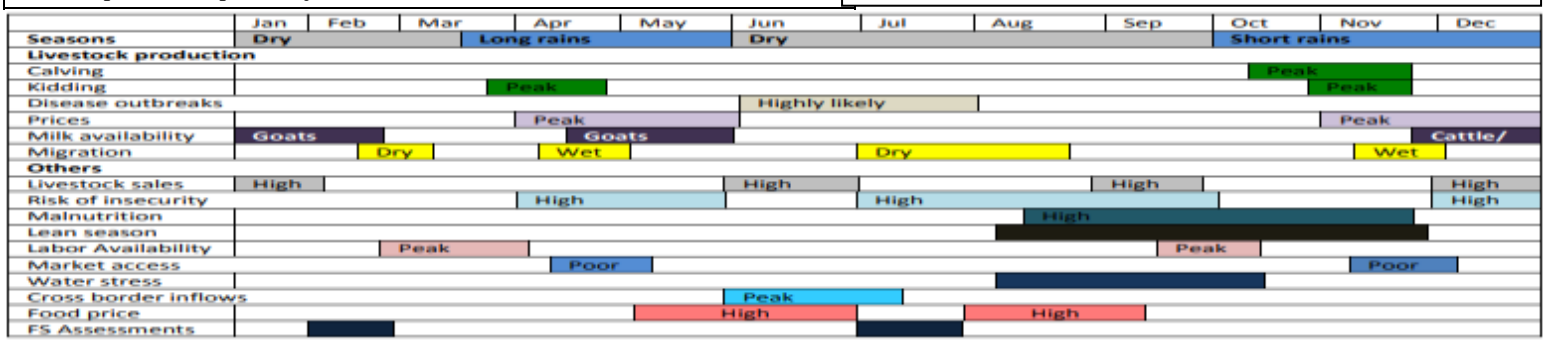
Production indicators: Livestock body condition was poor and milk production nil across livelihood zones. Widespread livestock migration reported in the dry season grazing areas. Livestock mortalities were recorded amongst cattle and small stock. Abortions in goats and sheep was reported in Laisamis and Moyale. Livestock birth rates was very low for all livestock species and tropical livestock units were below normal. Total crop failure of maize and beans reported in the agropastoral livelihood zone of Saku and Moyale sub-counties.

Access indicators: Household and livestock watering distances are significantly above average. 98percent of open water sources are depleted. Most monitored water points in Marsabit County fell below the median depth. Milk consumption was below average and terms of trade unfavourable. Livestock prices were below average and traded volumes low especially for cattle. Cereal prices surged and were above normal.

Utilization indicators: Crisis-emergency food security outcomes are likely to persist due to constrained household income and increased depletion of livelihood assets. Households majorly applied crisis livelihood coping strategies to address food shortage Overall Critical nutrition situation in Marsabit County that ranged from Alert levels in Saku (8.6percent), Critical levels in Moyale (15.2percent) and Extremely Critical levels in Laisamis and North Horr sub-counties at 32.6percent and 30.0percent respectively.

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Agro-pastoral	Emergency	Improving
Pastoral All species	Emergency	Improving
Fisher folk/Casual labour/Petty Trading	Emergency	Improving
County	**Emergency**	**Improving**
Biophysical Indicators	**Value**	**Normal Range/Value**
Rainfall (% of Normal)	< 75%	80 -120
VCI-3Month (County)	6.65	>35
Forecast SPI	< -0.98	-0.09 – (-0.98)
Forecast soil moisture	0.2	0.28-0.4
Production indicators	**Value**	**Normal**
Livestock Body Condition	Poor	Good
Milk Production	0.0	>2.1Litres
Livestock Migration Pattern	Unusual	Normal
Livestock deaths (from drought)	Deaths	No death
Access Indicators	**Value**	**Normal**
Terms of Trade (ToT)	32	>81
Milk Consumption	0.5	>1.6 Litres
Return distance to water	14.5	0.0-8.1Km
Livestock distances	28.5	< 17.9
Utilization indicators	**Value**	**Normal**
Nutrition Status	19.0	0.0-15.4
Coping Strategy Index	19.2	<18
Food Consumption	31.0	>35



1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

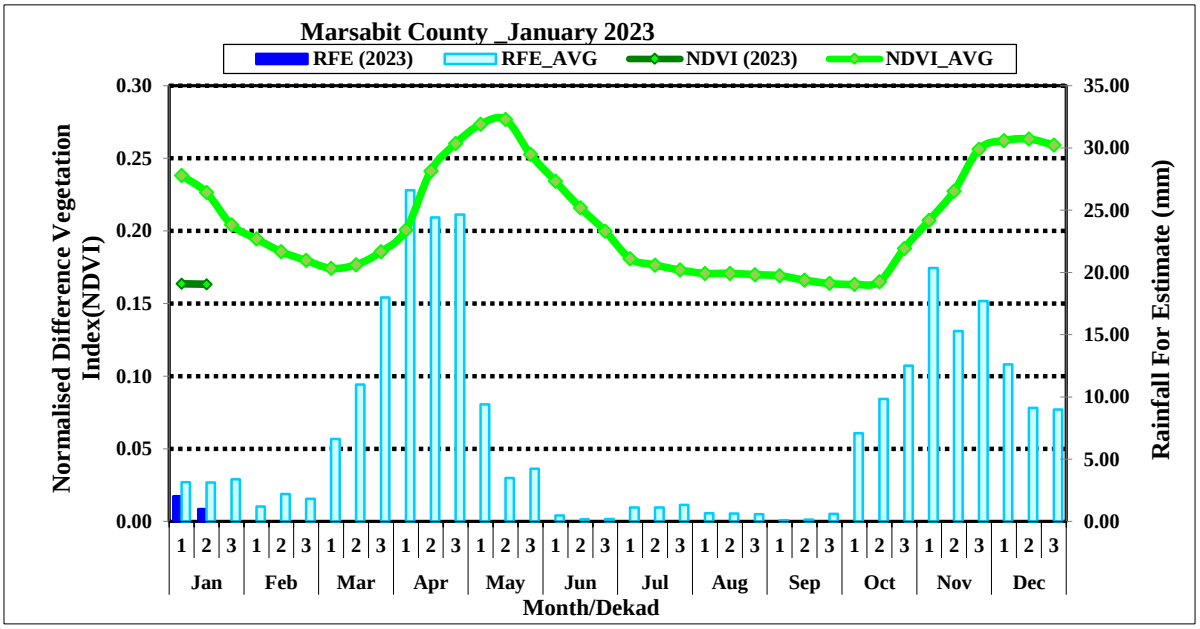


Figure 1: Dekadal Rainfall (mm) and NDVI values compared to the LongTerm Average

Source: WFP-VAM, CHIRPS/MODIS

- From the figure 1 shown above, decadal rainfall for estimate (RFE) amounts for the first and second dekads were below normal when compared to their respective long-term dekadal rainfall for estimate (RFE) averages.
- Equally, Normalized Difference Vegetation Index (NDVI) for the first and second dekads were below average compared to their corresponding long term dekadal NDVI average values. Below average Normalized Difference Vegetation Index was accelerated by cumulative seasonal rainfall shortfalls and persistence of warmer than usual temperatures.

1.2 Off Season Rains

- Marsabit Mountain received off-season rains in the month under review totalling to 33.3mm in 3 rainy days while Moyale Township majorly received trace rainfall amounts of 1.8mm. The off-season rains didn't impact on water recharge and forage regeneration.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

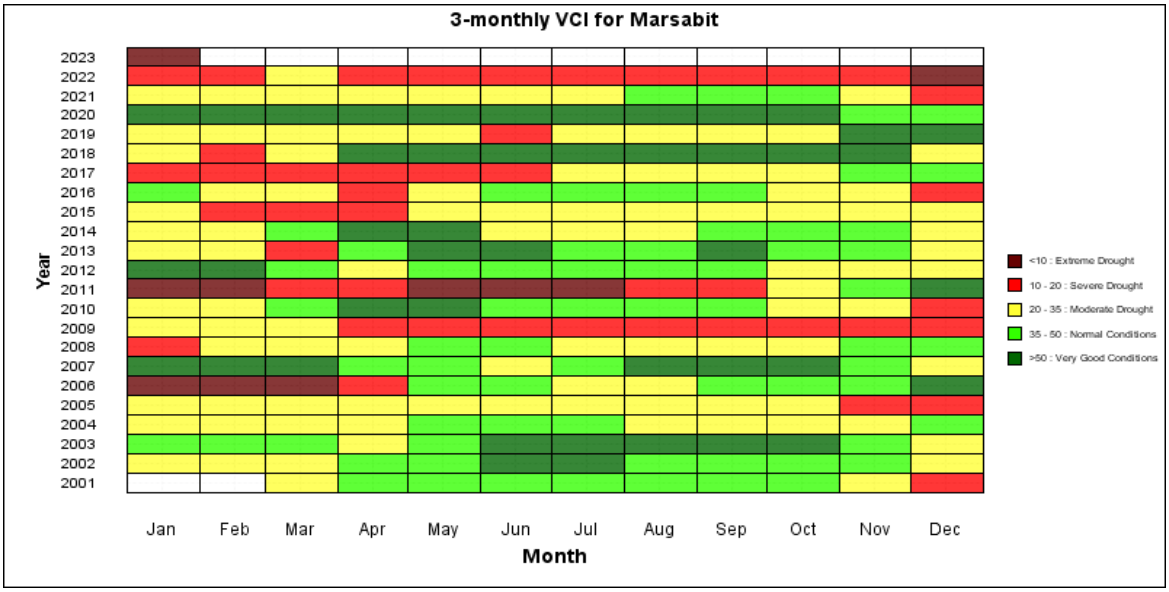


Figure 2: Vegetation Condition Index Matrix across Marsabit County

- In the month under review, vegetation condition index is 6.65 thus gradually worsened when compared to the preceding month's vegetation condition index of 8.79. Therefore, vegetation condition index remained in the extreme vegetation deficit occasioned by persistence of warmer than drier usual conditions.
- North Horr, Laisamis, Moyale and Saku sub-counties remained in the extreme vegetation deficit values of 7.08, 6.42, 5.4 and 3.96 respectively in the month under review. Notably, Saku sub-county posted significant deterioration in the vegetation cover with its extreme deficit value trending towards zero.

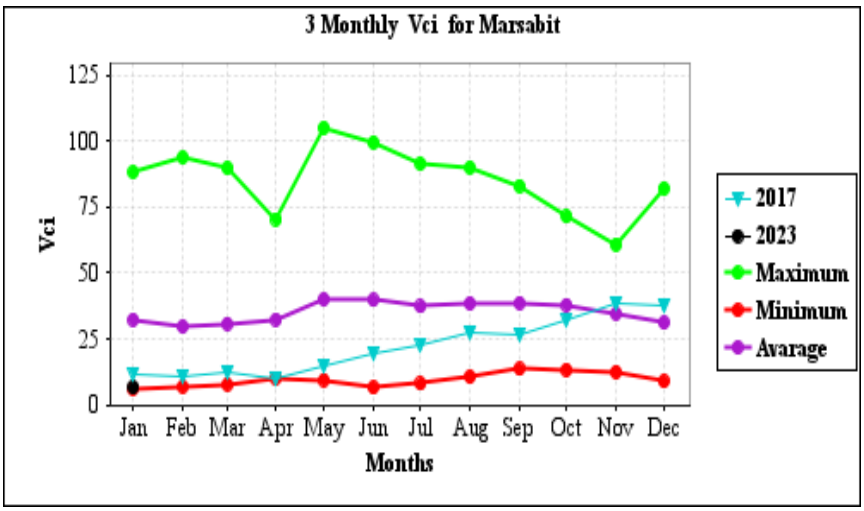


Figure 3: Vegetation Condition Index Trends across Marsabit County

- Figure (3) compares December 2022 vegetation condition index to December long term average, historical maximum and minimum vegetation condition index values. The current vegetation condition index is remarkably below average and vegetation condition index value of the recent bad year of 2017 in addition to coinciding with the minimum vegetation condition index ever recorded.
- From figure 4 shown below, all the wards were classified under the extreme vegetation deficit category with exception of Loiyangalani in Laisamis sub-county and Heillu Manyatta in Moyale sub-county.
- In the next month, Loiyangalani and Heillu Manyatta wards are likely to shift to the extreme vegetation deficit band. Therefore, Vegetation condition index declined significantly and fell below the long-term average due to unprecedented failure of fifth consecutive rainy seasons coupled by warmer than usual temperatures in most parts of the County.

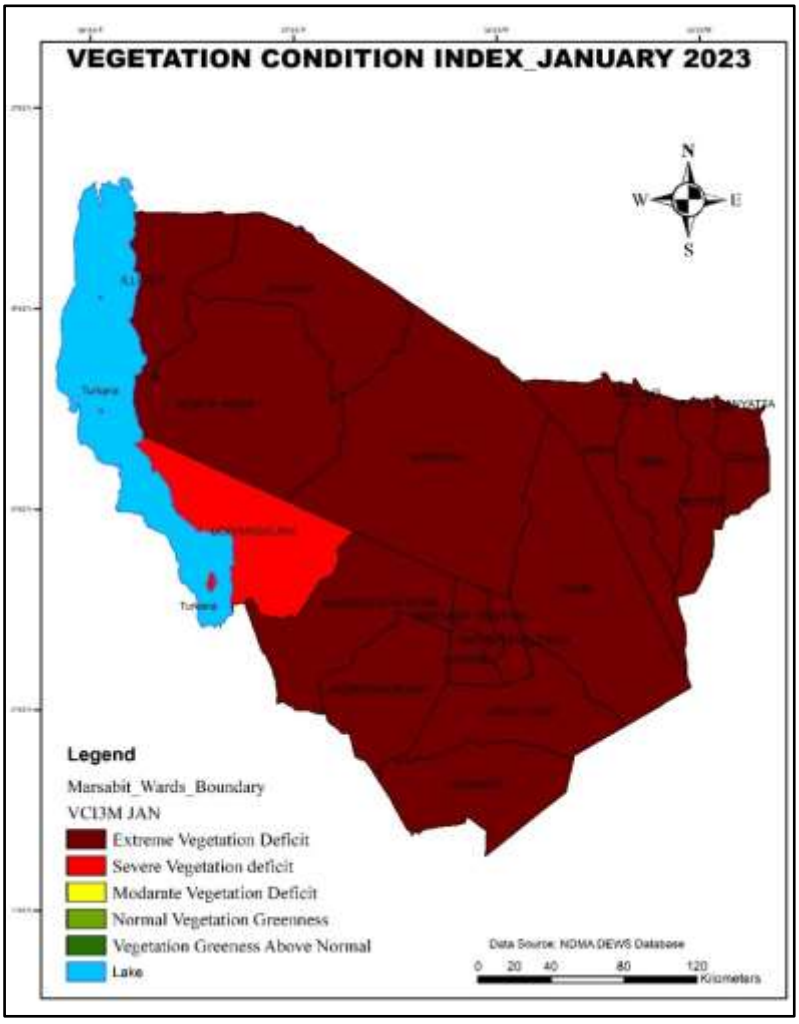


Figure 4: Vegetation Condition Index across Wards

2.1.2 Pasture Condition

- Pasture condition ranges from poor to depleted in the pastoral livelihood zone and mainly poor in the agro pastoral livelihood zone compared to fair at this particular time of the year. Poor to depleted forage condition was occasioned by poor performance of the short rains and the cumulative effects of the previous failed seasons.
- Poor pasture regeneration led to over concentration of livestock in the drought fall-back areas like Ririma, South Horr and Mount Kulal in Laisamis sub-county and Bulluk, Sibiloi, Sabare, Forole and Elbakoch in North Horr Sub County with sparse forage biomass.
- With failure of five consecutive rainfall seasons, available pasture is expected to last one month in the pastoral areas of North Horr and Laisamis sub-counties, three weeks in the agropastoral areas of Moyale and Saku sub-counties against a normal of three months.

2.1.3 Browse Condition

- Browse condition is generally poor in the pastoral livelihood zone while fair to poor in the agropastoral livelihood zone compared to the normal of good at this particular time of the year. With persistence of the dry season, the browse condition is expected to be depleted across all the livelihood zones in the next 1 month.
- Insecurity along the border of Kargi and Maikona, Loglogo and Shurr and Sarima in Laisamis sub county and along the border of North Horr and Illeret ward affected access of pasture by livestock. Other factors included depletion of pasture and browse, wildlife conservancies and National parks and poor livestock body condition that hampered livestock mobility to trek for longer distances.
- In the Pastoral livelihood zone of North Horr, Maikona and Dukana wards; invasive plants, Prosopis juliflora hindered livestock accessibility to forage. In North Horr ward (Bura area), a large chunk of land covering 15 km radius is covered by Prosopis spp. Prosopis juliflora is also predominant in Laisamis subcounty especially in the pastoral areas of Korr/Ngurnit, Loglogo and Loiyangalani wards. In Saku subcounty invasive species include Capparis tomentosa, Solanum incanum and Lantana camara.

2.2 WATER RESOURCE

2.2.1 Sources

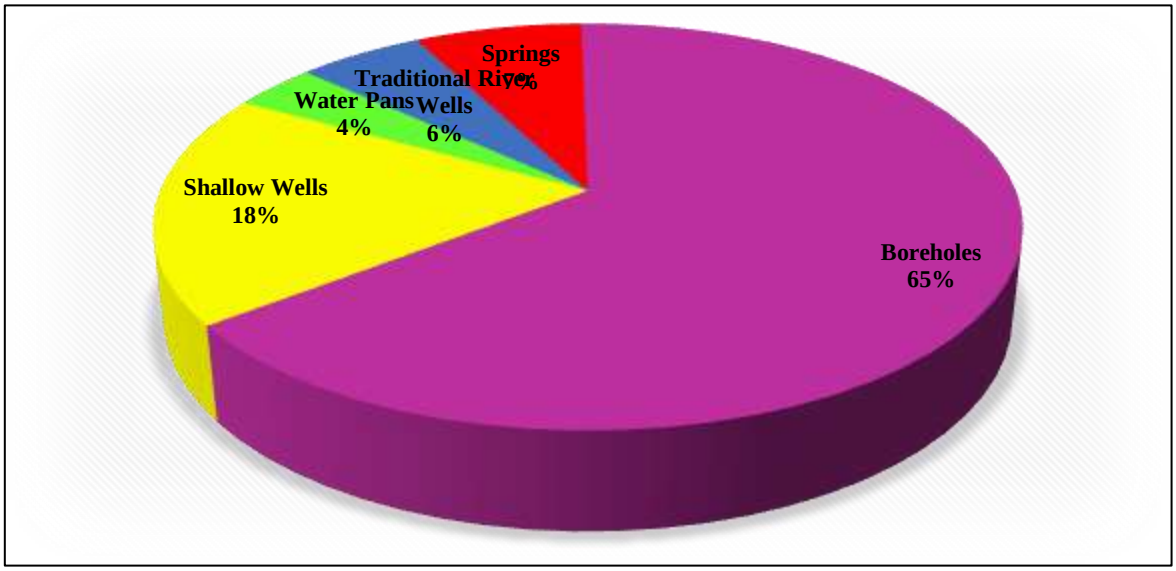


Figure 5: Main Sources of Water in Marsabit County

- Figure 5 above illustrates that 65 percent of households depend on borehole as the main water source across the livelihood zones. Other water sources employed by the communities

in the month under review were shallow wells, water pans, traditional river wells and springs at 18percent, 4percent, 6percent and 4percent respectively. With likely persistence of drier conditions in the next month, borehole will remain the main water source for household and livestock consumption across the livelihood zones.

- Currently 98percent of all open water sources have dried up with exception of some few water pans such as Ogomdi, Ambalo and Sololo of Moyale sub-county, Forole and Selegabaro in North Horr sub-county and Kargi water pan in Laisamis which is expected to last for the next one month. Bakuli water supply that supports the larger population of Marsabit Town residents is expected to last for a period not exceeding 2-3 weeks.

Table 1.0: Boreholes that have broken down

S/N	Sub-County	Name of Borehole
1.	Laisamis	Tirgamo I, Tirgamo II, Salmate, Lapikutuk
2.	North Horr	Forole II, Lag Il worabesa, Balchaloki, Elmasich, Gas, Burra and Balchakuoro
3.	Moyale	Qolob, Damballa Fachana, Badanrero and Mansile

- As a result of these major borehole breakdowns, major urban centres such as Laisamis and Turbi are currently experiencing acute water shortages at household and institutional level. Most of the boreholes that have broken down require motors, pumps and other accessories.

Table 2.0: Groundwater for domestic water needs (35+ L/pc/d)

Sub-county	Popl (000)	Popl (%)	Last year (% change)	5-year average (% change)
All	264.2	57.5	0.6	10.6
Laisamis	85.7	84.2	-0.9	8.5
Moyale	51.7	30.8	-7.1	11.0
North Horr	106.2	90.7	2.4	9.1
Saku	12.5	17.2	46.5	49.9

- From the (Table 2) shown above, two hundred, sixty-four thousand and two hundred persons which represents 57.5percent of the population (illustrating 10.6percent change) in Marsabit County depend on groundwater sources to meet their domestic water needs in the month under review.
- North Horr and Laisamis posted the highest proportion at 91percent and 84percent respectively of the population in the application of ground water sources. However, Moyale and Saku sub-counties posted the lowest proportion at 31 and 17 percent respectively of domestic ground water usage attributed to existence of other water sources such as springs mainly in Saku.
- Acute water shortage is currently being experienced in most parts of the pastoral and agropastoral livelihood zones. According to the USGS Water Point Viewer, water availability is below-average across most monitored water points in Marsabit County which are less than 4 percent of the long-term

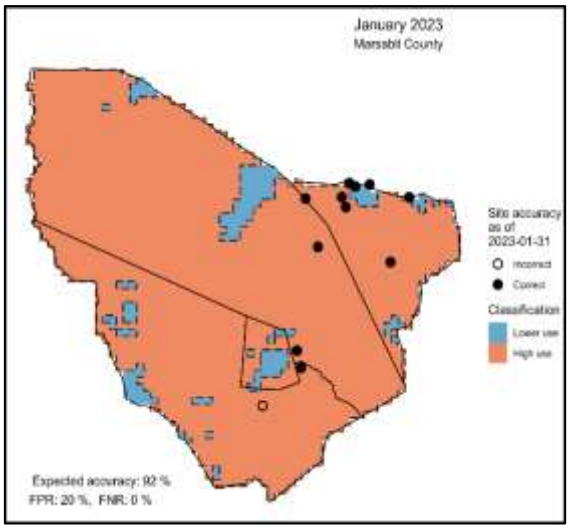


Figure 6: Ground water for domestic water needs

median water level (Near-Dry) to between 45 to 59percent of the long-term median water level (Watch).

2.2.2 Household Water Access and Utilization

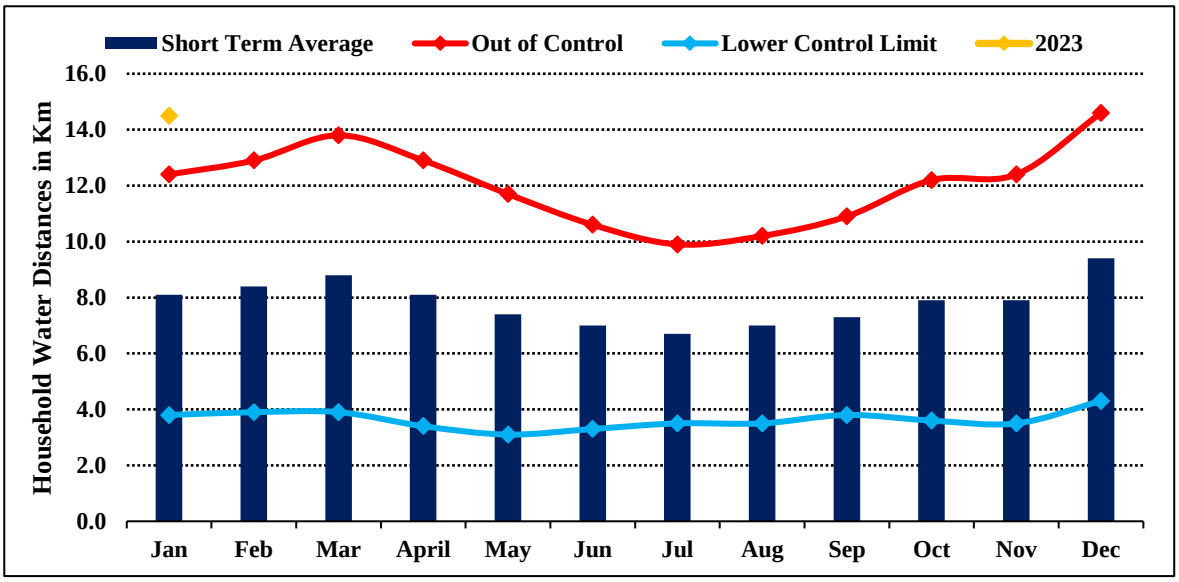


Figure 7: Current household return water distances compared to the Short-Term Average distances (Km)

- From (Figure 7) shown above, return household water distances to the main water sources is 14.5km in the month under review thus increased when compared to the preceding month's household water distance of 12.9km across the livelihood zones. Increased household water distances were driven by depletion of 98percent of the open water sources, high salinity of some of the boreholes and reduced ground water yields.
- Household water distance of 14.5km is significantly above the short-term average household water distance of 8.1km by 79percent and similarly above the out-of-control limit of 12.4km.
- Waiting time in the agro-pastoral livelihood zone varied between 60 and 75 minutes from the normal of 10-30 minutes while in pastoral livelihood zone, average waiting time is around 45-60 minutes against a normal of 20-30 minutes thus average waiting time has increased.
- In the agro-pastoral livelihood zone, water consumption per person per day is within the ranges of 5-7 litres per person per day against the normal of 15-20 litres per person per day while the areas within the pastoral livelihood zone reported an average water consumption per person per day of 3-5 litres against the normal of 15-20litres per person per day.
- Persistence of warmer than usual temperatures, frequent breakdown of strategic boreholes and rapid decline of ground water yields will likely reduce further household water consumption in the next month across the livelihood zones.

2.2.3 Livestock Access

- From (Figure 8) shown below, return livestock trekking distance from grazing areas to water points is 28.5km across livelihood zones thus was longer than the out of control grazing distance of 26.9km in the month under review.
- Livestock trekking distance of 28.5km is significantly above the short-term average livestock trekking distance of 17.9 which is indicative of unusually longer trekking distances.
- The average current return trekking distances in the pastoral livelihood zone are 30-45 kms compared to 8-10 kms normally. In the agro-pastoral livelihood zone, livestock trekking distances are 10-15 kms against a normal of 5-8kms.

- Above average livestock trekking distances from grazing areas to watering points was driven by rapid depletion of rangeland and water resources across the livelihood zones.

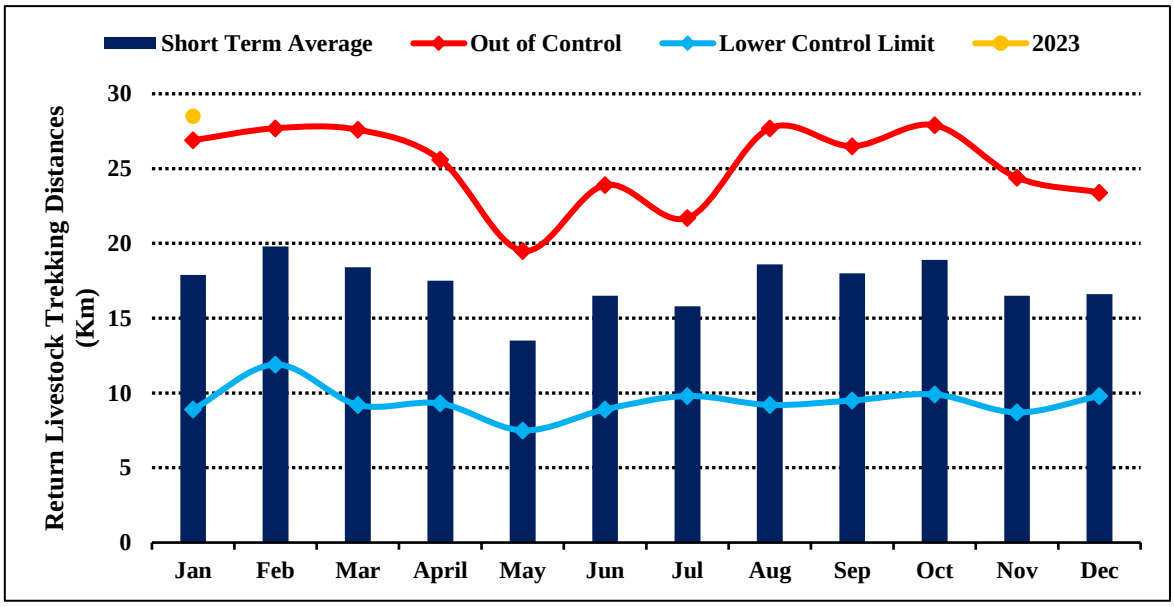


Figure 8: Current return livestock trekking distances compared to the Short-Term Average distances (Km)

- The watering frequency for cattle in both livelihood zones is after 2-3 days compared to a normal of 1 day in all the livelihood zones. Watering frequency for camels was 10-16 days in the pastoral areas while 7-10 days in the Agro-pastoral livelihood zone compared to a normal of 4-6 days in both livelihood zones. Small stock is watered after 4-6 days in the pastoral livelihood zones and 3-4 days in the agropastoral livelihood zones which is longer when compared to 1-3 days normally.
- Reduced livestock watering frequencies across the livelihood zones was attributed to poor forage condition and exceedingly above average livestock trekking distances. With expected drier than usual conditions in the next month, poor pasture and fewer -surface water sources will increase livestock trekking distances leading to increased watering intervals for all livestock species in all the livelihood zones.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The figure below illustrates Livestock Body Condition Score (LCS) for camel, cattle, goats and sheep in all the livelihood zones based on the Pictoral Evaluation Tool (PET) methodology by AgriTechTalk International through FAO and NDMA.
- The figure above illustrates that 92percent of the camel posted a very poor body condition score whereas 5percent and 3percent of camel had poor and fair body condition scores correspondingly. Similarly, 98percent of cattle had very poor body condition score while a paltry 2percent of the cattle posted poor body condition score.

- Further it can be deduced that 76 percent and 23 percent of the goats posted very poor and

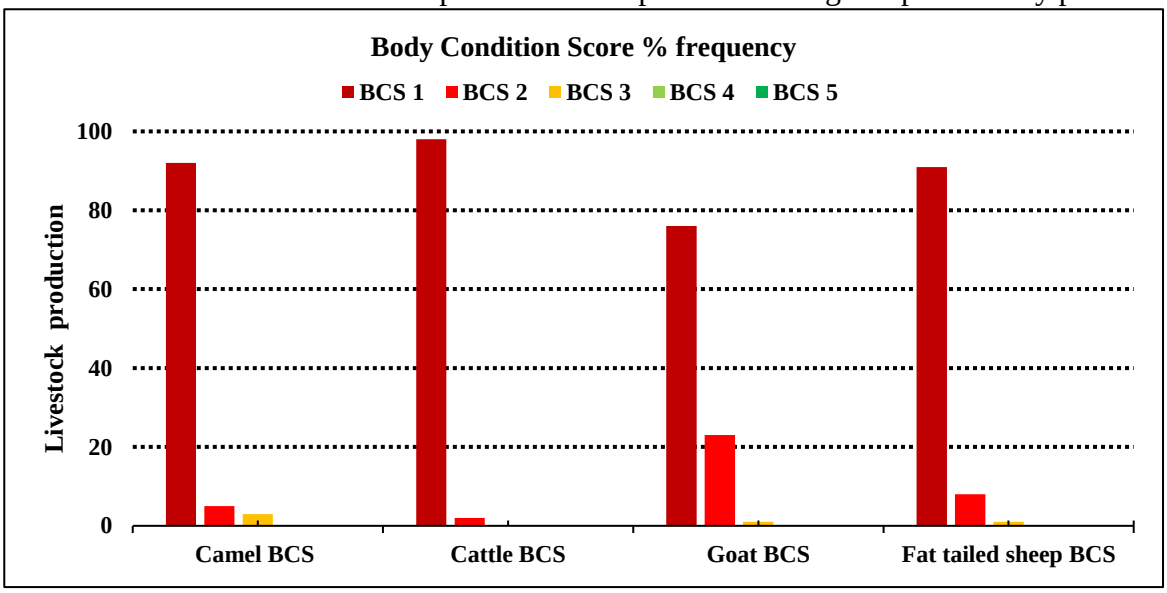


Figure 9: Livestock Body Condition Index across Marsabit County

poor body condition scores respectively whereas 91percent and 8percent of sheep recorded very poor and poor scores respectively.

BCS	Description	Colour Codes
1	Very poor BC	Maroon
2	Poor BC	Red
3	Fair BC	Orange
4	Good BC	Light green
5	Very Good BC	Green

- Most of the livestock species were adversely affected and their body conditions were mainly in the critical (thin four ribs visible) band.
- Multiple combinations of atypical poor forage, abnormal longer livestock trekking distances and reduced watering frequencies accelerated poor-emaciated body condition of all the livestock species across the livelihood zones. Poor-emaciated livestock body condition is likely to persist with persistence of warmer than usual temperatures in the next month.

3.1.2 Livestock Migration

- In the month under review, over 80-90 percent of all livestock species have abnormally migrated to the dry season grazing areas due to accelerated depletion of water sources, poor forage and cumulative seasonal rainfall deficits. There is observed migration of livestock into the agro-pastoral areas which received relatively higher amounts of rains and the forested areas of Mt. Marsabit and Sibiloi National Parks. Most of the cattle species are being transported on trucks to Isiolo and Samburu counties. Most livestock in Laisamis sub county have migrated to Samburu and Isiolo Counties. In North Horr sub-county, most livestock have migrated to Bulluk, Sabare, Sibiloi and Forole areas and others have migrated to the neighboring country of Ethiopia. In Saku, livestock from Sagante/Jaldesa ward have migrated to Waso area. In Moyale sub county, livestock from Bori, Uran and Rawana migrated to Amballo but they are now returning back to their respective villages due to depletion of pasture.
- With atypical livestock migration being witnessed in the wet season grazing areas, there is a likelihood occurrence of increased resource-based conflict in the current migratory routes.

3.1.3 Tropical Livestock Units (TLU) and Calving & Kidding Rates

- TLUs among poor income households in the pastoral and agropastoral livelihood zones is 2-3 while that of medium income household is 5-9 and 3-5 in pastoral and agropastoral areas respectively. There was observed decline in TLUs resulting from drought related mortalities, livestock disease incidences and low birth rates due to deteriorating body condition.
- The TLUs have been on a declining trend due to declining production factors including water and pasture availability resulting from effect of failure of five consecutive rainy seasons. The birth rates (kidding, lambing, calving) for all livestock species are currently very low and expected to decline into complete cessation as the dry period progresses.

3.1.4 Livestock Diseases and Mortalities

- The endemic livestock diseases reported were: PPR, CCPP, Heart water, Sheep & goats' pox and Parasites (Ticks, Helminths, Flies, Lice and Fleas). There were no reported out breaks. However, voiding red urine has been reported among all species of livestock in North Horr Sub-County with majority of the animals affected being camels.
- This is being suspected to be pyelonephritis caused by either toxaemia from high levels of salinity in water, water deprivation or lower urinary tract infection caused by Corynebacterium renale, E. Coli, staphylococcus spp. and streptococcus spp.

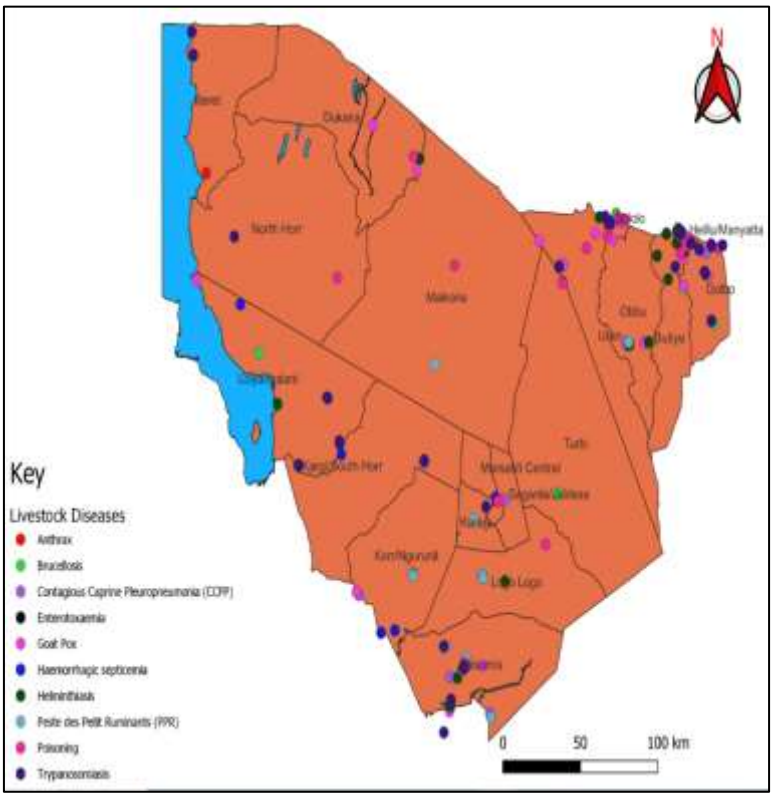


Figure 10: Spatial distribution of reported livestock diseases

- Livestock diseases and conditions such as Helminthiasis (16percent), Contagious Caprine Pleuro Pneumonia (9percent), Peste des Petits Ruminants (8percent) Poisoning (8percent) and goat pox (8percent) contributed to low productivity resulting to livestock deaths in some cases.
- Malnutrition related livestock health conditions including unthriftiness and starvation ketosis due to insufficient nutritious pasture and browse especially in the pastoral livelihood zones were reported to be on an increasing trend.

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Table 3.0: Livestock Mortalities across the County- October 2022-January 2023

SUB COUNTY	No. of Livestock Death by Species				WARD	REMARKS
	Cattle	Goats	Sheep	Camel		
North Horr	20,880 (46%)	192,200 (45%)	99,648 (48%)	54,920 (34%)	North Horr, Maikona, Turbi	Drought
Moyale	37,952 (44%)	78,236 (43%)	37,290 (46%)	19,085 (29%)	Butiye, Obbu, Uran	Drought
Saku	27,062 (42%)	48,282 (43%)	34,380 (43%)	1,176 (29%)	Karare, Sagante/Jaldesa	Drought
Laisamis	33,908 (46%)	215,452 (44%)	330,630 (48%)	17,664 (33%)	Laisamis, Loiyangalani, Korr/Ngurunit	Drought
TOTAL	**122,780**	**535,972**	**511,054**	**82,841**		

- The estimated livestock mortalities across the county due to the above causes are: Cattle 122,780, Goats 535, 972, Sheep 511,054 and Camel 82,841. The livestock deaths are unusual when compared to normal season. The areas that experienced high livestock mortalities were the pastoral zones of Laisamis and North Horr sub counties. The main causes of the livestock mortalities include starvation and dehydration resulting from depleted pastures and water shortage.

3.1.5 Milk Production

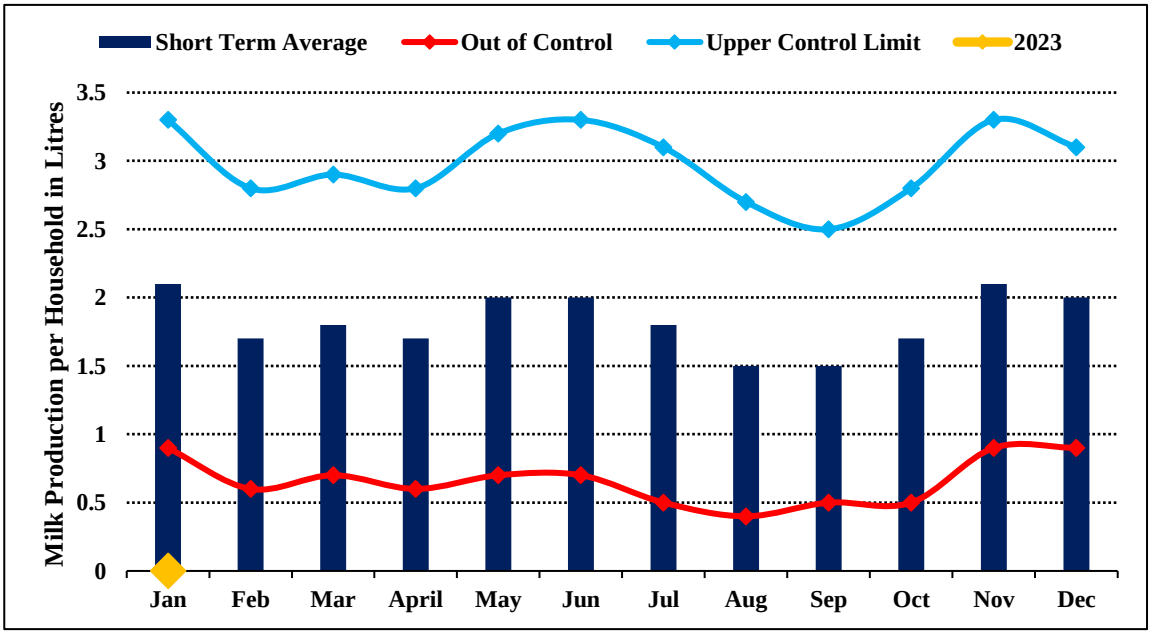

Figure 11: Milk Production at household level in Litres

- From figure 11 shown above, household milk production per day for the month under review was nil across the livelihood zones.
- No milk production in all the livelihood zones was attributed to low birth rates and high mortality of the few kids, lambs and calves born accelerating drying of the lactating dams. Most households across all the livelihood zones are relying on purchase of powdered milk and packet milk from the retail shops. Additionally, there is fresh raw milk being hawked in major trading centers reportedly being transported from Nanyuki and Meru.
- The main factors affecting milk production, consumption and prices at the household level include widespread migration of livestock, poor livestock productivity, high population of non-lactating animals and unavailability of forage and water resources.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Area Under Crop Cultivation

Rain-fed Crop Production

- No crop production was realized when compared to the LTA for all the rain-fed crops that were grown during the short rains season. The failure of the October -November -December 2022 rains led to wilting and drying up of young crops that had germinated in Saku sub-county and some parts of Moyale. In some parts of Saku Sub County such as Sagante Jaldesa and Uran and Golbo wards in Moyale Sub County, germination of planted seeds did not take place at all.
- As a result of this, no harvests of the rain-fed crops were recorded hence total crop failure. Households' food needs will occasionally be met and with limited supply, market prices will remain elevated and unaffordable, thereby prolonging households' food insecurity situation.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

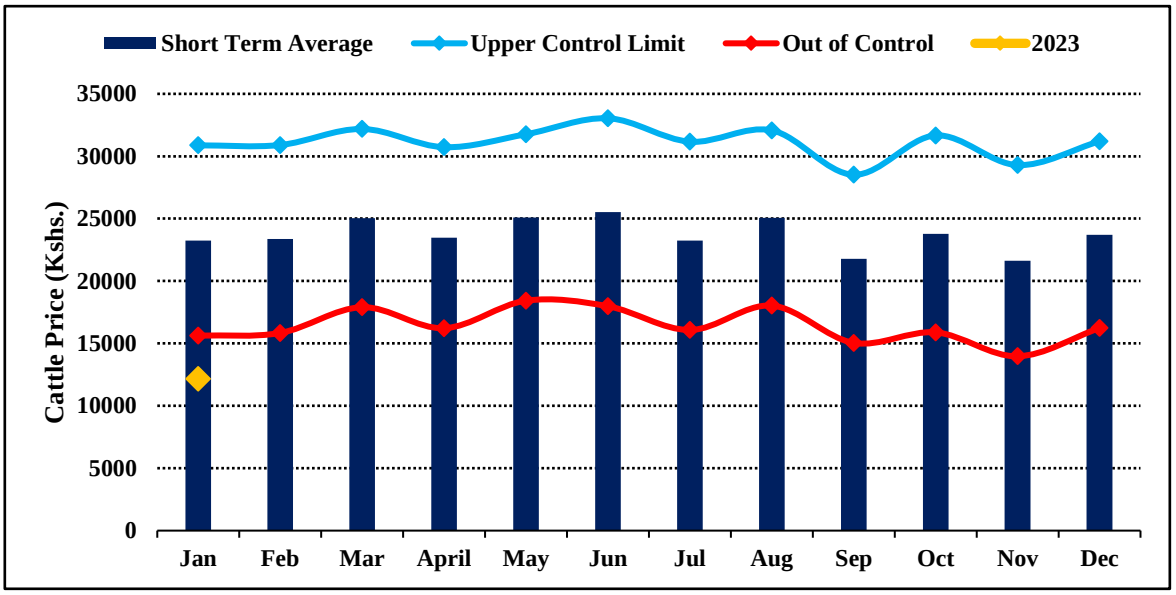

Figure 12: Cattle Prices Trends in Marsabit County

- From figure (12) shown above, cattle price in the month under review was Kshs.12,164 thus declined when compared to the preceding months price of Kshs.15,181
- Current cattle price of Kshs.12,164 is below average by 48percent and fell below the out-of-control limit price of Kshs.15,625. Poor body condition and the volatile markets operations across the livelihood zones occasioned historically low cattle prices. However, Moyale livestock market posted lower cattle price of Kshs.7,000-9,500 due to high level of distress sales. In Moyale livestock market, medium size cattle retailed at Kshs.7,000-9,500. Most of these animals are transported to Isiolo. Other than Moyale the rest of the active market reported minimal or no distress sales. Merille livestock market posted an average cattle price of Kshs.15,000.
- Moyale recorded high cattle traded volumes of 600 per month while Merille posted a dismal 44 cattle traded volumes per month occasioned by widespread migration of livestock to Samburu County.
- Cattle prices are likely to historically decline further and persist below the out-of-control limit in the next month across the livelihood zones due to poor-emaciated body conditions with progression of warmer than usual temperatures.

4.1.2 Goat Prices

- From the figure 13 shown below, goat price in the month under review is Kshs.2,700 which is below average when compared to the short-term average price of Kshs.3,711. Current goats' price of Kshs. 2,700 equates to the price outside the limit (out-of-control). Below average goat prices were occasioned by poor goat body condition in all the livelihood zones.
- Market integration was poor in the pastoral areas because of non-existence of feeder markets in North Horr sub-county due to widespread livestock migration, inelastic demand and supply that necessitated volatile trading margins. Moyale, Jirime and Merille livestock market recorded goat prices averaging between Kshs.3,500 and Kshs.4,000.

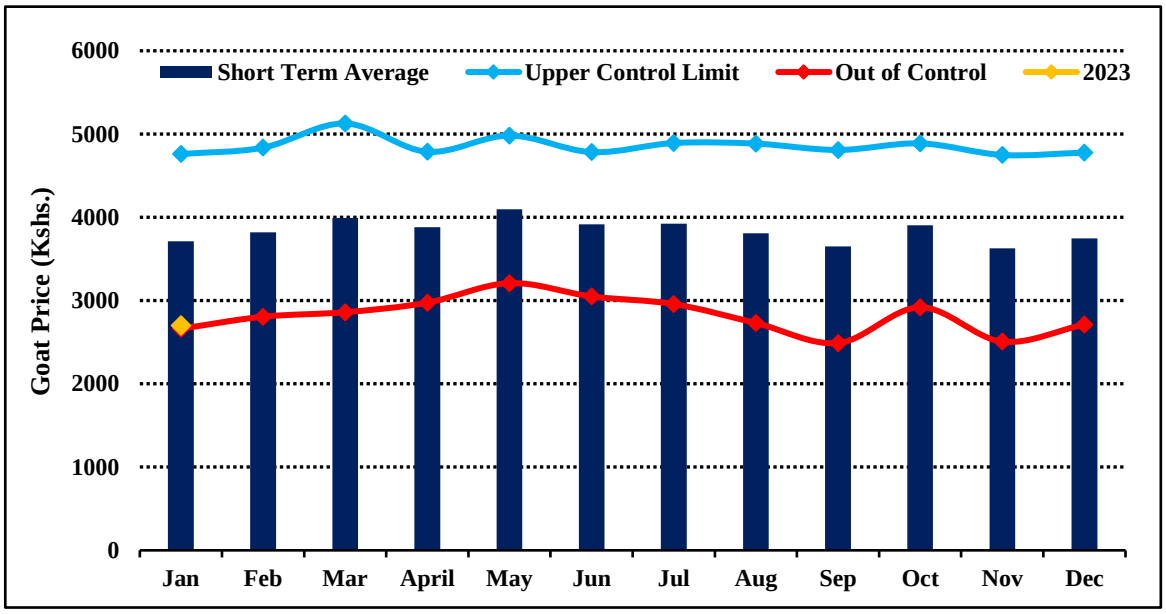

Figure 13: Goats Prices Trends in Marsabit County

- Merille livestock market posted the highest monthly traded volumes of 2,484 small stock attributed by existence of feeder markets such as Korr, Olturot, Illaut and Arge that improved supplies to the Merille market. Jirime livestock market posted increased traded volumes of 2,500 per month due to increased supplies from Kalacha, Shurr, Kambinyoka and Turbi. However, Moyale recorded low traded volumes of 1,000 small stock in the month under review attributed to reduced demand to the neighbouring Ethiopia market due to deteriorating body condition.
- With likely progression of the short dry period, goat prices are expected to decline further and persistently remain below the short-term average and out-of-control limit in the next month across the livelihood zones.

4.1.3 Sheep Prices

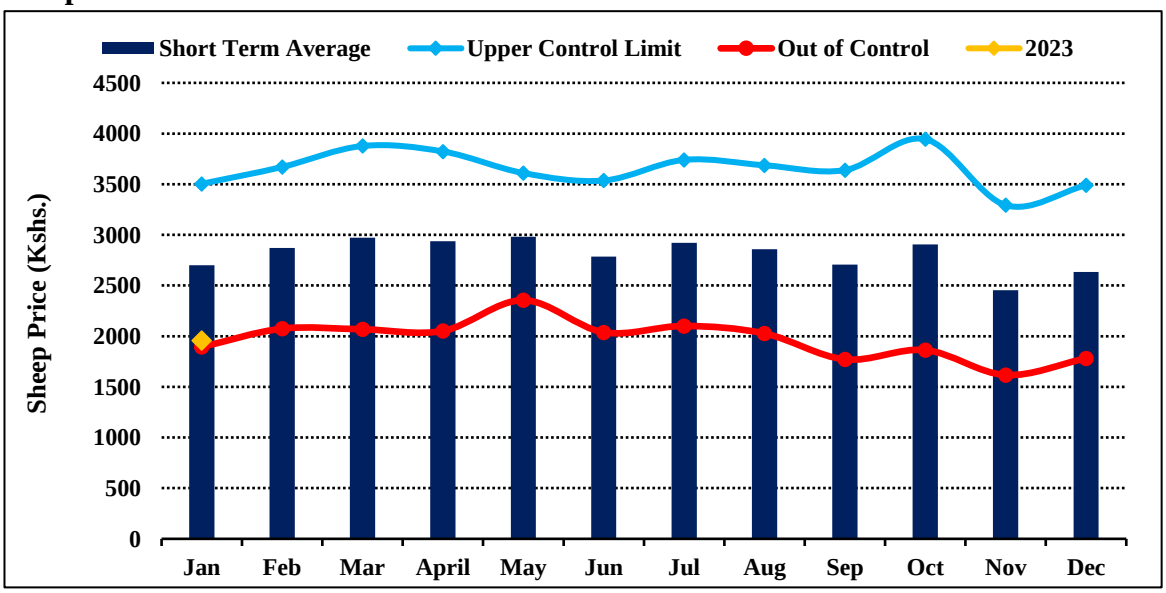

Figure 14: Sheep Prices Trends in Marsabit County

- From figure 14 shown above, sheep price for the month under review was Kshs.1,958 thus reduced when compared to the preceding month's sheep price of Kshs. 2,156 due to generally poor body condition across the livelihood zones.
- When compared to the short-term average price of Kshs. 2,699, current sheep price is below average by 27percent. Current sheep prices equate to the out-of-control limit price. Below

average sheep prices and traded volumes were recorded in the markets due to poor body conditions and weakened demand for sheep in the main terminal markets.

- With expected drier conditions in the next month, sheep prices are likely to decline further and fall below the out-of-control limit price in the next month across the livelihood zones.

4.2 CROP PRICES

4.2.1 Maize

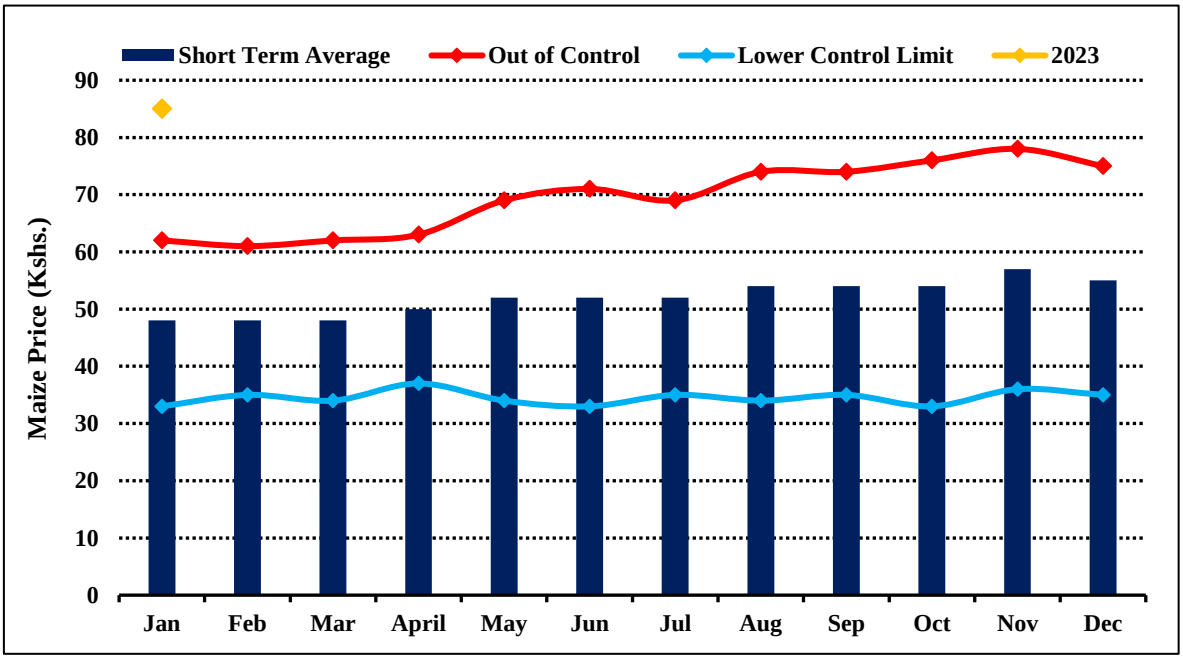

Figure 15: Maize Prices Trends in Marsabit County

- In the month under review, average maize price is Kshs. 85/kg which is 77percent above normal when compared to the five-year average price of Kshs.48/kg as indicated in figure 15 above.
- Additionally, current maize price of Kshs.85 is above the out-of-control price of Kshs.62 in the month under review. Above average maize prices were primarily driven by ongoing drought which has led to total crop failure in the agropastoral areas of Moyale and Saku sub-counties coupled with pre-existing macro-economic challenges and spill-over effects of the Ukraine-Russia crisis.
- Moyale food commodities markets posted slightly better prices averaging between Kshs.60-65/kg occasioned by supplies from the neighbouring Ethiopia market. Some commodity markets in Laisamis and North Horr sub-counties posted prices of Kshs.90-120/kg denoting 92-155percent above the short-term average.
- With significant maize price gains observed in all the monitored markets, prices are expected to trend above the year 2022 levels following total crop failure and existence of macroeconomic challenges.

4.2.2 Beans

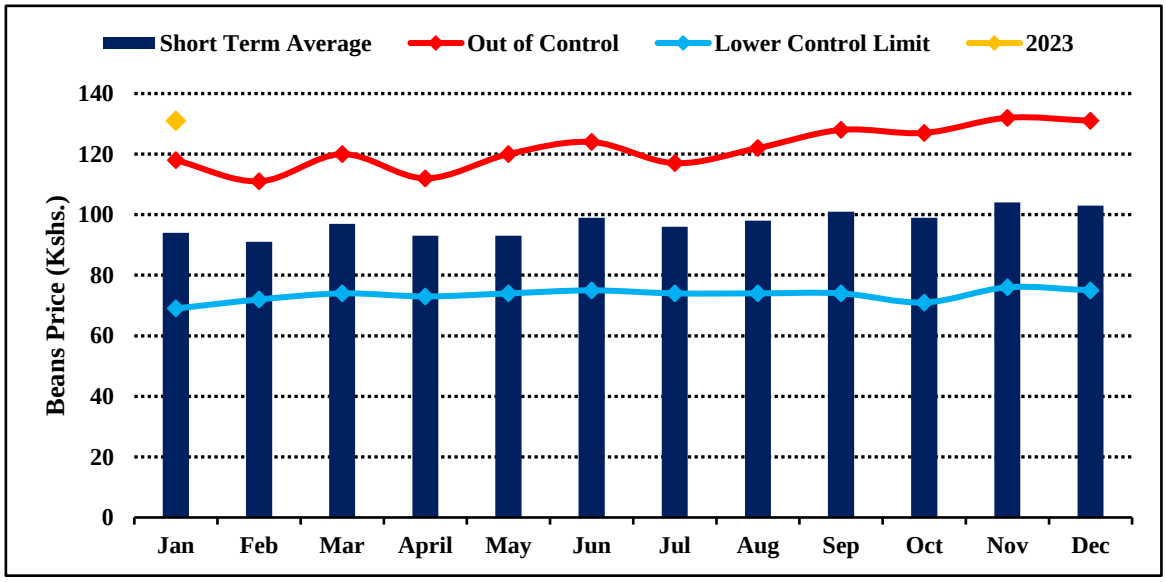

Figure 16: Beans Prices Trends in Marsabit County

- From the figure 16 shown above, beans prices traded at Kshs 131/kg in the month under review across the livelihood zones hence didn't change when compared to the previous month's beans price of Kshs.130/kg.
- Current beans prices are above the short-term average by 39percent and also above the out-of-control price limit of Kshs.118/kg. Persistent above average beans prices were recorded across the livelihood zones throughout the year.
- Moyale commodity market illustrated better beans prices averaging Kshs.100/kg driven by supplies from the neighbouring Ethiopia market. However, North Horr and Laisamis sub-counties posted surged beans prices retailing at Kshs.130-140/kg occasioned by poor access to the main food commodities markets.
- Above average beans prices are expected to persist in all the livelihood zones due to total crop failure, macroeconomic challenges and poor market integration.

4.2.3 Terms of Trade (TOT)

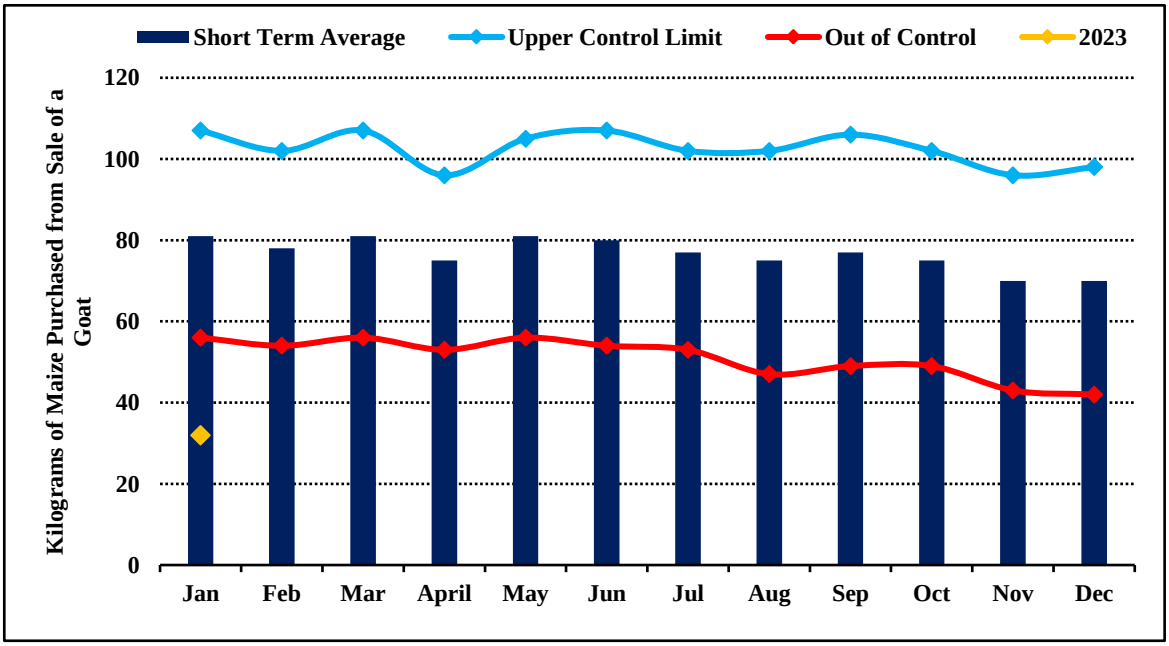

Figure 17: Current Terms of Trade versus Short Term Average

- From figure 17 shown above, terms of trade were 32 kilograms of maize in exchange for the sale of a medium sized goat which deteriorated to uncharacteristically lower levels when compared to the short-term average terms of trade of 81 across the livelihood zones.

- Terms of Trade worsened by 60percent when compared to long term average terms of trade of 62 kilograms. Terms of trade for the pastoral areas of North Horr and Laisamis sub-counties were remarkably below the short-term average attributed to poor market functions. Notably, Moyale sub-county posted better terms of trade than other sub-counties attributed to relatively stable better maize prices.
- Due to a surge in addition to uncharacteristically below average goat prices and spill-over effects of the global macroeconomic challenges, goats-to-maize ratio will likely worsen further hence reduced pastoral income constraining food access at the household level.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

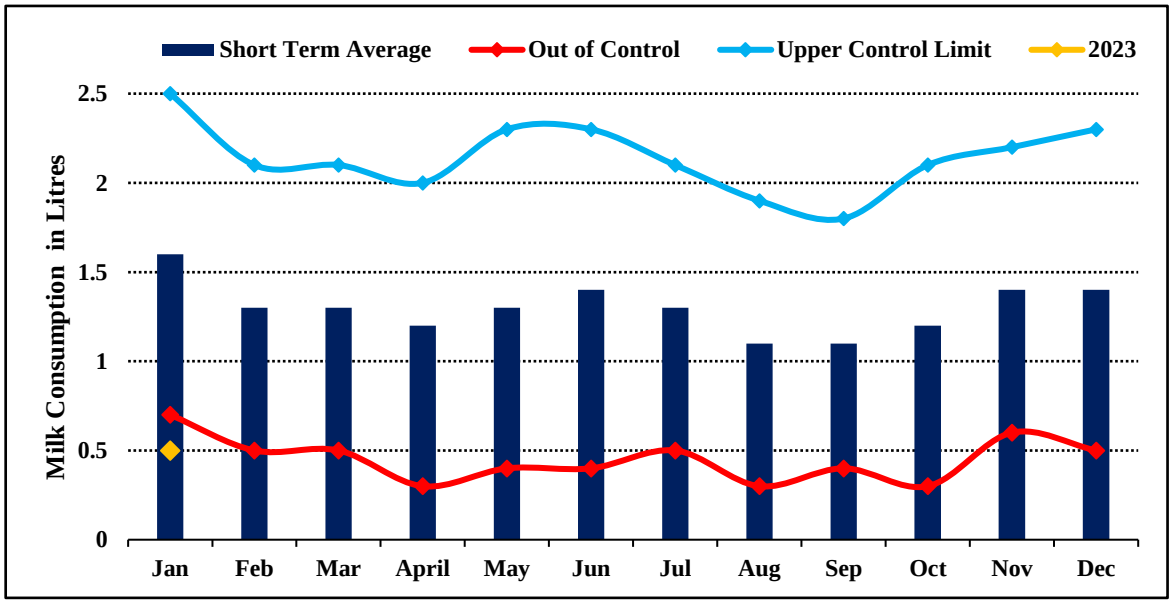

Figure 18: Milk consumption at household level in Litres

- From figure 18 shown above, household milk consumption is 0.5 litres/household/day in the month under review. When compared to the short-term average milk consumption of 1.6 litres/household/day, current milk consumption is significantly below average.
- Similarly, current milk consumption is below the out-of-control limit of 0.7 litres/household/day. Majority of households across all the livelihood zones are relying on powdered milk and packet milk from the retail shops and also fresh raw milk from Nanyuki and Meru.
- With the progression of the warmer than usual temperature and constrained household income attributed to loss of livelihood assets, milk purchase from the retail shops is expected to decline thereby further exacerbating milk consumption at the household level.

5.2 FOOD CONSUMPTION SCORE (FCS)

- The current food consumption score (FCS) across the County is 31 with 20.1percent of households having poor food consumption whereas those with borderline and acceptable food consumption were 47.8percent and 32.1percent respectively across the livelihood zones. In comparison to the previous month, improvement in household food consumption was recorded due to the ongoing food and cash interventions at the household level.

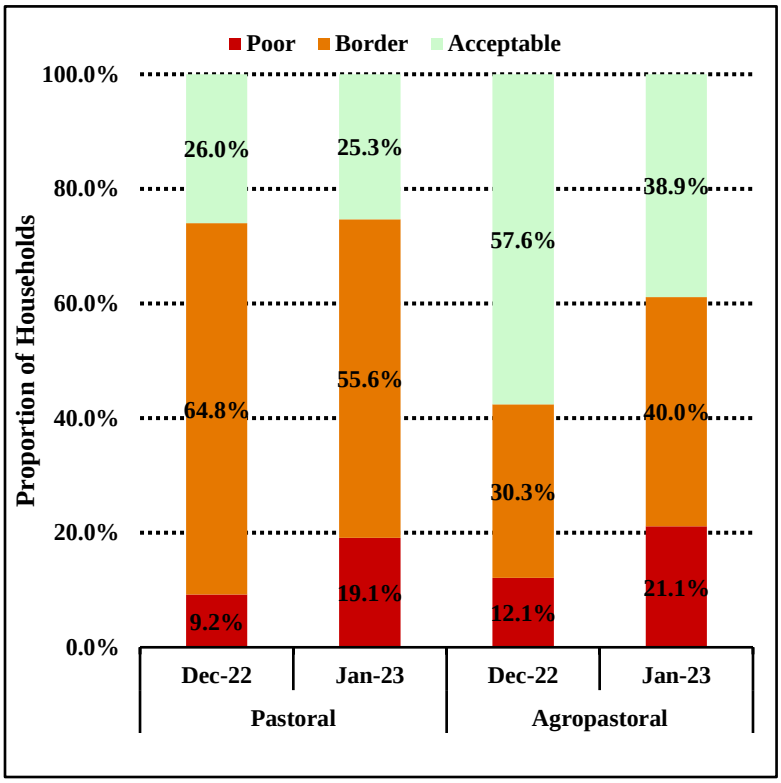

Figure 19: Food Consumption Trends in Marsabit

- Across the livelihood zones, 19.1-21.1percent of households reported an FCS indicative of Emergency (IPC Phase 4), while 40-55.6percent of the households reported food consumption score indicative of Crisis (IPC Phase 3). Crisis-Emergency food security outcomes are likely to persist due to constrained household income and increased depletion of livelihood assets as the short dry season persists.

Table 4.0: Food Consumption Score by Ward

	FCS Mean	Poor FCS	Borderline FCS	Acceptable FCS
County	**31.0**	**20.1%**	**47.8%**	**32.1%**
Golbo	32.0	10.0%	43.6%	46.4%
Karare	40.5	11.8%	44.8%	43.4%
Korr	29.6	14.5%	50.0%	35.5%
Loiyangalani	26.5	16.5%	39.6%	43.9%
Laisamis	37.4	16.0%	38.2%	45.8%
Turbi	23.6	15.5%	48.9%	35.6%
Dukana	29.8	10.0%	58.5%	31.5%
North Horr	35.5	6.6%	62.3%	31.1%
Sagante	36.5	5.8%	61.3%	32.9%
Uran	37.6	1.3%	66.6%	32.1%
Heillu Manyatta	39.5	0.5%	71.0%	28.5%

- From the table shown above, 20.1percent of households consumed staples and vegetables every day and never or very rarely are consuming protein rich food such as meat and dairy. Approximately 47.8percent of the households consumed staples and vegetables every day, accompanied by oil and pulses a few times a week while 32.1percent consumed staples and vegetables every day, regularly accompanied by oil and pulses and occasionally meat or dairy product. Due to unfavourable terms of trade, ongoing severe drought situation and expected reduction in food/cash interventions, food consumption score is likely to shift from crisis to emergency in the next month across the livelihood zones.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

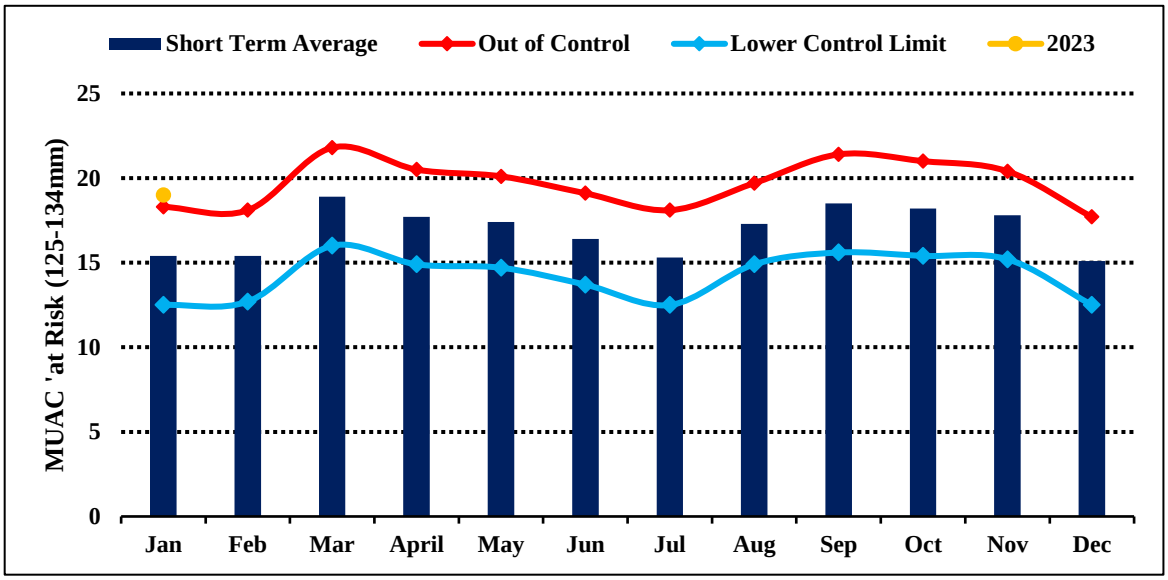

Figure 20: Proportion of Children < 5 Years at Risk of Malnutrition in Marsabit County

- Figure 20 illustrates MUAC of 19percent of children aged below 5 years are at risk of malnutrition hence a deterioration when compared to the preceding months MUAC at risk of 17.6percent. The current MUAC is significantly above the long-term average MUAC of 15.4percent and also equates to the out-of-control MUAC limit.
- The latest SMART survey conducted in January-February 2023 indicated an overall Critical nutrition situation in Marsabit County that ranged from Alert levels in Saku (8.6percent), Critical levels in Moyale (15.2percent) and Extremely Critical levels in Laisamis and North Horr sub-counties at 32.6percent and 30.0percent respectively. Above average MUAC at risk amongst the under fives was attributed to unfavourable terms of trade, poor milk consumption, poor child care practices and sanitation.

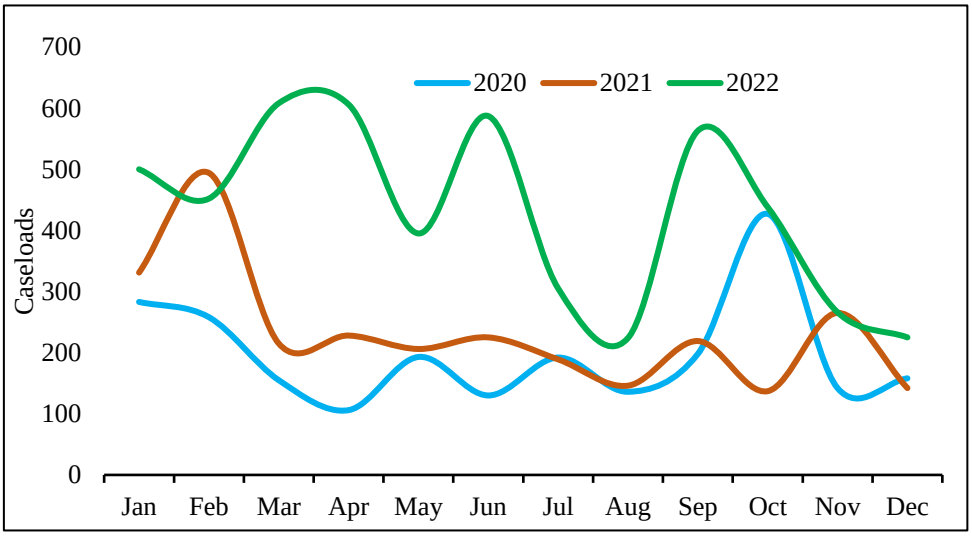

Figure 21: SAM Admission Trends (2020_2022) in Marsabit County

- A total of 5,169 severely malnourished children 6-59 months were reached in 2022 out of projected total and target caseload of 10,141 and 7,606 respectively. A notable increase in admissions by 84.1percent from July to December 2022 compared to the same period in 2021mainly attributed to the food security situation and enhanced case finding and treatment. A total of 18,507 moderately malnourished children 6-59 months were reached in 2022 out of projected total and target caseload of 34,082 and 25,562 respectively. A notable increase in admissions by 91.1percent from July to December 2022 compared to the same period in 2021mainly attributed to the food security situation and enhanced case finding and treatment.

5.4 COPING STRATEGIES

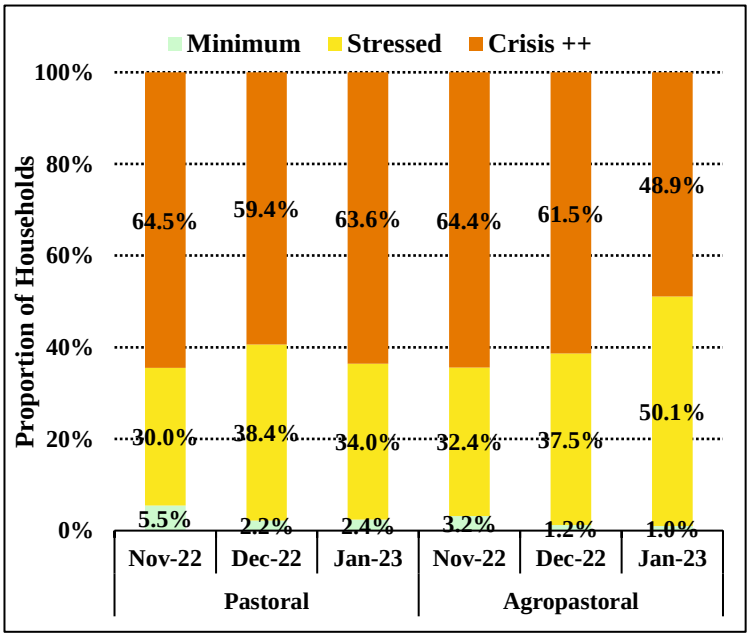

Figure 22: Consumption Based Coping Strategies

- (Figure 22) illustrates that majority of households employed frequent reduced food consumption based coping strategies that were severe. It was deduced that 34percent and 63.6percent of households in the pastoral livelihood zone applied stressed and crisis coping strategies respectively when they lacked food or money to purchase food. Additionally, 50.1percent and 48.9 percent of households in the agropastoral livelihood zone applied stressed and crisis reduced consumption based coping mechanisms respectively.
- Majority of households applied consumption-coping strategies indicative of Crisis (IPC Phase 3) or worse to address food consumption deficits at the household level in all the livelihood zones. Households are likely to employ more severe reduced coping mechanisms to address large food consumption gaps in all the livelihood zones.

Table 5.0: Consumption Based Coping Strategy Index by Wards

Consumption based coping strategy index(rCSI)		
Sub-county	**Ward**	**rCSI**
Saku	Sagante	21.0
Saku	Karare	9.2
Laisamis	Korr	22.0
Laisamis	Loiyangalani	23.9
Laisamis	Laisamis	16.5
North Horr	Turbi	25.4
North Horr	North Horr	12.4
North Horr	Dukana	34.6
Moyale	Uran	21.5
Moyale	Golbo	22.5
Moyale	Heillu Manyatta	12.5

- From table 5 shown above, households in Karare, Heillu Manyatta and Laisamis wards applied stressed food consumption-based coping mechanisms whereas those in Sagante, Golbo, Loiyangalani, Turbi, Korr, Dukana and Uran wards applied crisis consumption-based coping strategies.
- Notable reduced consumption based coping strategies applied by the households were reduction in frequency of food consumption, restriction of food access to adults for children consumption and borrowing food.

5.5 Livelihood Coping

- Figure 23 depicts 20.5percent and 26.6percent of households didn't apply any of the livelihood coping mechanisms when they lacked food or money to buy food in the agropastoral and pastoral livelihood zones respectively. A total 49.6percent and 55.6percent of the households in the agropastoral and pastoral livelihood zones respectively employed stressed coping mechanisms (majorly borrowed money and sold more animals). Equally, 19.9percent and 20.5percent of households in the agropastoral and pastoral livelihood zones applied crisis livelihood coping mechanisms (majorly reduced health and veterinary expenses) with a paltry 3.3-4percent of households in all the livelihood zones applying livelihood coping strategies indicative of Emergency (IPC Phase 4) mostly begging to access food or money to buy food. With a deteriorating food security status, households are likely to employ crisis livelihood mechanisms more frequently to address food deficits across the livelihood zones.

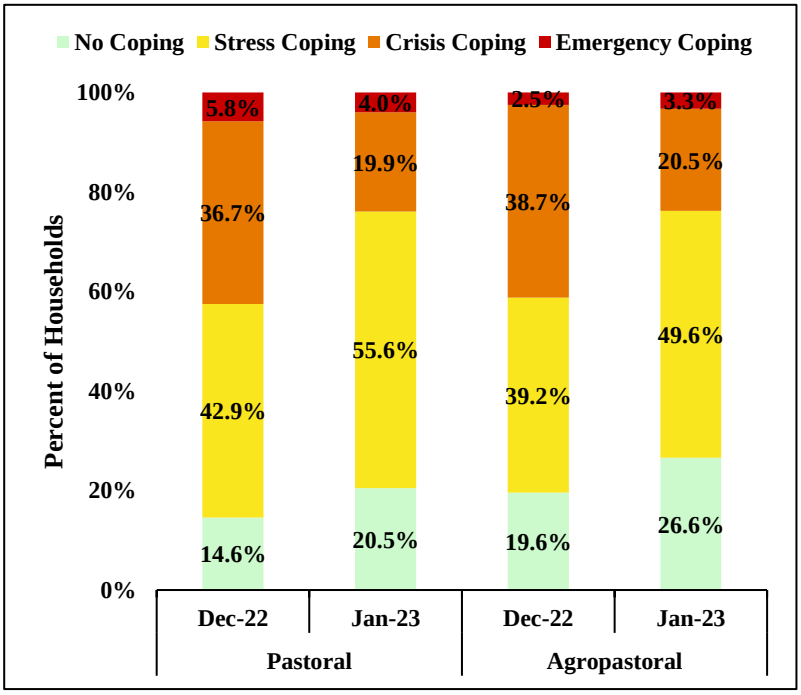

Figure 23: Livelihood Coping across the livelihood zones

6.0 FOOD SECURITY PROGNOSIS

- Unprecedented fifth consecutive rainfall failure and warmer than usual temperatures have accelerated depletion of rangeland and water resources. As a result, livestock that have migrated into Samburu and Isiolo Counties and along the Kenyan border with Ethiopia are unlikely to migrate back into the wet-season grazing areas and internal livestock movements in search of pastures and water are expected to remain unusually high.
- Household income from livestock will likely be below average due to poor body conditions and conception rates. Due to the failure of the short rains, available metabolizable energy required for reproduction was too low resulting in low birth rates for all livestock species compared to that of a normal season. Majority of sheep and goats are not expected to conceive at their first trimester of gestation for lambing/ kidding by the month of April. The new born animals are unlikely to survive due to interrupted lactation and nursing due to migration of the dams in search of pasture and water. Herders are likely to sacrifice new born animals by slaughtering right at birth to salvage the dams and increase their chances of survival.
- No crop production expected compared to the long-term average for all the rain-fed crops that were grown during the short rains season. Therefore, households' food needs will not be met and with limited supply, market prices will remain elevated and unaffordable, thereby prolonging households' food insecurity situation.
- Household reliance on market purchases will remain high, but the purchasing capacities of poor households will be limited by above-average staple food prices and below-average

household incomes. As a result, a significant proportion of poor households will likely face large food consumption gaps and engage in consumption- and livelihood based-coping strategies indicative of Crisis (IPC Phase 3) or worse, such as reducing healthcare and veterinary expenses and withdrawing children from school, while the most affected households will likely employ livelihood coping strategies indicative of Emergency (IPC Phase 4), such as begging.

- With total crop failure in the agropastoral livelihood zone of Saku and Moyale sub-counties, poor terms of trade and zero milk consumption, food consumption score is expected to deteriorate further in the next month but likely to stagnate in the emergency phase across the livelihood zones. Extremely Critical GAM≥ 30 percent rates are expected to persist in North Horr and Laisamis sub-counties while Moyale sub-county is projected to remain in the Critical phase. Consequently, Emergency (IPC Phase 4) outcomes are likely to persist, while a small proportion of poor households in the pastoral livelihood zone will likely face (IPC Phase 5) outcomes.

ANNEX 1: Ongoing Drought Response Interventions

Ongoing Drought Response Interventions Across Marsabit County		
Sector	**Intervention**	**Number of Households Targeted by Ward in Marsabit County**
Cash Transfer	USAID Nawiri supported a total of 3,300 households with cash transfer Kshs.6,000 across the County. Additionally, 1500 households have been enrolled in Adapted Nutrition Friendly Graduation Model and are receiving monthly consumption cash worth Kshs.5,000 per household in addition to other graduation packages.	Dukana=348, Golbo=235, Illeret=642 Karare=93, Korr/Ngurnit=400 Loglogo=149, Loiyangalani=400 Maikona=394, Sagante Jaldesa=207 Turbi Bubisa=267, Uran=165
	CITAM supported 1,500 vulnerable households with a cash transfer of Kshs.9,000 per household per month.	Sagante Jaldesa and Marsabit Central wards.
	FAO through Malteser International supported vulnerable households with a cash transfer equivalent to 50 US Dollars per household.	Illeret=1,000
	CARITAS supported a total of 648 vulnerable households with a cash transfer of Kshs.7250/household	Maikona=215 Turbi/Bubisa=308 Korr=125
	PACIDA through funds from START-NETWORK /WHH supported 1060 vulnerable households with Kshs.9,020 monthly.	Maikona=530 Kargi/South Horr=530
	PACIDA is supporting 1749 vulnerable households with Kshs.8,956 monthly.	North Horr=60 Maikona- 120 Turbi/Bubisa=120 Loglogo=60 Laisamis=120 Korr/Ngurnit=60
	SND through Plan International Kenya supported 500 vulnerable households with a cash transfer of Kshs.6.714 per household per month.	Dukana=500
	Welthungerhilfe supported 600 vulnerable households with cash transfers of Kshs.14,303 per household per month.	Laisamis sub-counties
	Welthungerhilfe supported 500 households with cash transfers of Kshs. 8,300 totalling to Kshs. 4,150,000	North Horr=500
	FH-K supported 94 caregivers of children under 5 years who are severely and moderately malnourished.	Sololo ward

	World Food Programme through the Lisha Jamii cash transfer targeted 5,978 households with a monthly stipend of Kshs.6,500 per month.	Turbi/Bubisa=641, Dukana=420 Laisamis=683, Korr/Ngurnit=524 Kargi/South Horr=500, Golbo=258 Obbu=384, Karare=427 Sagante Jaldesa=435
	AMREF targeted 200 most vulnerable households will be paid unconditional direct cash transfer of Kshs. 6,000 per household.	North Horr=140 Dukana=60
	Dorcas Aid International supported vulnerable household with cash transfer of Kshs. 8,956 per household.	Golbo=211
	World Vision Loiyangalani through ADH targeted 1,961 vulnerable households within Laisamis and Moyale sub-counties respectively.	Loiyangalani= 683 Kargi/South Horr=682 Sololo=596
	Child Fund Implemented a cash transfer initiative targeting 500 families in Saku and Maikona with each family receiving Kshs.6,084.	Sagante Jaldesa=250 Maikona=250
	Kenya Red Cross Society is supporting 1,800 vulnerable households with Kshs.5,767 per household per month.	Kargi/South Horr=800 Obbu=500 Karare=500
	Kenya Red Cross Society with support from Norwegian Red Cross plan implemented a Cash for Health (C4H) project aimed at improving access and utilization of health services. Those Vulnerable Household with Pregnant & Lactating Woman, Under-fives with Acute Malnutrition and Elder were targeted and registered for the services in the 3 Wards. Each household will receive a transfer value of Kshs. 4000 per month for a period of 6 months.	Dukana=1150 Korr-Ngurnit=127 Obbu=56
Food Aid	County Government of Marsabit distributed 20,000 bags of rice and 3,360 cartons of vegetable oil (40,320 litres) to all wards. Each ward received 1,000 bags of rice and 168 cartons of vegetable oil.	All wards
	PACIDA distributed food to vulnerable households each household receiving 10kgs of beans, 10kgs of maize, 2 litres of vegetable oil, salt and 4kgs of sugar and 1 piece of innerwear.	Dukana=177 Maikona=273 Illeret=800
Food Aid (General Food Distribution).	WFP/USAID through SND dispatched a total of 330.143 Metric Tonnes of assorted food stuff to North Horr sub-county to support 5,517 households as part of drought response intervention. Monthly ration/household are 56.75kg Maize, 8.1kg Beans & 4.5 litres Veg Oil).	Illeret= 1,758 (121.871 Metric Tonnes) Dukana=828 (33.688 Metric Tonnes) North Horr=1,414 (98.978 Metric Tonnes) Maikona=300 (20.751 Metric Tonnes) Turbi Bubisa=1,201 (54.921 Metric Tonnes).
Sustainable Food Systems Programme	WFP/USAID through SND dispatched a total of 635.206 Metric Tonnes of assorted food stuff in 15 Wards across the county to support 9,168 households involved in sustainable food systems programme. Monthly ration/household are 56.75kg Maize, 8.1kg Beans & 4.5 litres Veg Oil).	51 sites in 15 wards- Loiyangalani, Kargi/ South Horr, Korr/Ngurnit, Loglogo, Laisamis, Heillu Manyatta, Golbo, Butiye, Obbu, Sololo, Uran, Maikona, North Horr, Sagante, Karare Wards
Food Aid	Church World Service (CWS) with life-saving food assistance to 8,000 most food insecure households in Laisamis (each household received 50 kgs of maize flour, 7kgs of beans, 3 litres of vegetable oil and half kg of cooking oil), North Horr and Saku sub-counties (each household received 50 kgs of maize flour, 10kgs of	Laisamis=1,529 Loglogo=582 Korr/Ngurnit=1,889 Maikona=2,505 Turbi/Bubisa=1,495 Kargi/South Horr=200

	beans, 3 litres of vegetable oil, half kg of cooking oil and 5kgs of CSB).	Sagante/Jaldesa=800
	Kenya Red Cross Society 1,480 vulnerable households with food. (Each household received 24kg maize flour, 5kg of beans, 1kg of cooking oil and 1kg of salt).	Uran=370 North Horr=370 Loiyangalani=370 Korr/Ngurnit=370
	Kenya Dryland Education Fund distributed food to 2,451 vulnerable households.	Laisamis sub-county.
Water	NDMA supported water trucking in areas facing acute water shortage. A total of 64 trips were covered	Moyale, North Horr, Saku and Laisamis
	NDMA water bowser- 8,000 litres. Drawing water point at Loglogo with a turnaround of only 2 trips in a day attributed to longer distances and queuing at the water source.	Laisamis, Korr, Kambinye, Karare
	Kenya Wildlife Service supported water trucking to a tune of 1.8m (Quantity of 150*12,000)	Marsabit Central
	UNICEF/Finn Church Aid rehabilitated and repaired 22 strategic boreholes.	Maikona, Turbi/Bubisa and Illeret wards
	Concern World Wide supported borehole rapid response team with logistical support (Fuel and DSA) and fast-moving spare parts.	Countywide
		Countywide
	PACIDA to support water trucking to 5 primary schools (3 trips per month of 10,000ltrs water bowsers for 5 schools for 2 months).	Countywide
	Malteser international through PACIDA conducted water trucking covering 72 trips (10,000litres per trip) to Horonder, Mudhe, Burgabo, Toricha, Wara, Iyole, Hurri Hills and Bori villages.	Turbi and Maikona
	SND supported water trucking to 435 households. A total of 5,250 litres of diesel was supplied to six strategic boreholes. Also supporting solarization of three boreholes (Rawana, Itir and Funaqumbi).	Karare and Sagante/Jaldesa wards.
	USAID Nawiri to support water trucking in North Horr sub-county.	North-Horr (Nyaber, Gas), Maikona (Yaa Gara) and Turbi (Qatamur).
	USAID Nawiri to support rehabilitation of strategic boreholes across the County.	Malabot borehole, Lapituk borehole, Dambala Fachana borehole and Badanrero.
Livestock	USAID Nawiri to distribute 225MTs/4,500 bags of livestock feeds supplements. Each household has been allocated 4bags each 50kg.	North-Horr=537, Uran=140, Turbi=219, Dukana=180, Maikona=330, Sagante/Jaldesa=105 Loiyangalani=660, Korr/Ngurnit=330, Kargi/South Horr=240, Golbo =308, Karare=115
	Animal Offtake program supported by Kenya Red Cross Society and Kenya Meat Commission. A total of 700 cattle was allocated for Marsabit County. One cattle equate to 5 small stock and goes for Kshs. 15,000. North Horr SC – 200 Cattle, Saku SC – 100 Cattle, Laisamis SC- 200 Cattle and Moyale SC – 200 Cattle. A total of 348 cattle and 1,309 small stocks were slaughtered during the response and 10,196 households received meat.	North Horr, Dukana, Maikona, Sagante Jaldesa, Karare wards in Saku Sub County, Korr-Ngurnit, Loiyangalani, Obbu, Uran and Golbo wards.

Health and Nutrition	Concern World Wide Supported Integrated Health and Nutrition outreaches in North Horr and Laisamis sub-counties.	15 sites in Dukana, 13 sites in Illeret wards, 5 sites in Merille and 5 sites in Namarei area) for 2 cycles each month.
	Concern World Wide provided monthly CHVs stipends to 369 CHVs – KES 2,000, 40 CHAs with 5000 per month to support in conducting Active case findings.	Countywide
	WFP/SND dispatched supplementary feeding program totalling 81.735MTs of CSB++ & 58.395Mts across 96 facilities. Targeting 3088 male under-fives, 3269 female under-fives and 2746 PLW.	Countywide
	Blanket Supplementary Feeding Programme (BSFP)-North Horr sub county targeting 29,000 PLW and under-fives. WFP and MOH plans to increase distribution sites and also increase the rations from 100g/person/day to between 150-200g/person/day in the 2nd cycle.	All wards in North Horr sub-county
	UNICEF/KRCS USAID provided Ready to use therapeutic feeds for Management of Severe Acute Malnutrition (RUTF, F100, F75) targeting 985 Severely Malnourished children <5yrs at a total cost of Kshs.7,185,000	Health facilities across the County.
	Integrated Medical Outreaches by UNICEF through KRCS supported bi-monthly integrated medical outreaches in 35 Sites in the entire County. For under-fives- 240 were admitted for SAM and 995 for MAM.	Countywide
	Integrated outreaches in 163 sites (Monthly) & 150 sites Bimonthly out of the 226 mapped sites.	8 outreaches in Saku, 14 Moyale, 68 Laisamis, and 61 North Horr supported bi-monthly cumulating to 150 outreaches
	UNICEF/Concern Worldwide supported Nutrition Improvement Through Cash & Health Education. Month Nutrition Counselling Visits in 65 community Units (1229 CHVs).	Saku, Moyale and Laisamis

ANNEX 2: Recommended Drought Response Interventions

Food Security Sector			
Intervention	**Objective**	**Target**	**Cost**
Up-scale relief food distribution and supplies to 309,000 food insecure people	To provide relief food to targeted population	55% of the total population	800M
Livestock Sector			
Emergency livestock slaughter off-take	-Provide relief meat and/or cash to benefit the community -To salvage the value of the animals	Cattle 3,000 Sheep 30,000 Goats 15,000	250M
Distribution of supplementary livestock feeds	Reduce livestock mortalities as a result of starvation	Cattle 15,000 Goats 80,000 Sheep 65,000	85M
Provision of clinical veterinary services to the affected livestock population.	-To minimize/reduce mortality and protect core breeding herd -To improve animal health	Affected core breeding herd	20M

Water Sector			
Water provision to community and institutions	To provide clean, safe drinking water to community and institutions during drought emergencies	-10,000 HH,15 Schools and 15 Health centres	5,000,000
	To provide fast moving spare parts for strategic boreholes during drought emergencies.	15 strategic boreholes in North Horr, Laisamis, Moyale and Saku sub-counties	2,000,000
	To provide fuel subsidy to strategic boreholes where each borehole to receive	41 strategic boreholes in North Horr, Laisamis, Moyale and Saku sub-counties	12,000,000
Boreholes breakdown response support	To enhance borehole rapid response during drought cycle	20 boreholes in North Horr, Laisamis	2,000,000
Health and Nutrition Sector			
High Impact Nutrition Interventions	-Reduce vulnerability of children under the age of five and pregnant and lactating women. Increase survival rate Prevent deterioration of nutrition status of target population Increase early detection and referrals of malnutrition cases.	100%	20,000,000
Mass screening for all children < 5 years and PLW	-To enhance coverage for nutrition emergency services and prevent further deterioration of the nutrition status of Children & women	>80%	10,000,000
Blanket Supplementary Feeding	To prevent deterioration of nutrition status	`100%	148,418,100
Provision of an integrated package within the health and nutrition outreaches including MIYCN counselling, micro nutrient supplementation (VAS, IFAS), hygiene and Health promotion	To increase coverage by reaching all the target groups with health and nutrition services	100%	78,000,000
Enhance Sub County and County emergency response integrated coordination mechanism	To facilitate the appropriate and efficient delivery of nutrition sensitive and specific services	100%	2,500,000
Education Sector			
Provision of lunch to low-cost	-To enhance enrolment, attendance, retention and transition in schools.	1,800	12,755,900

boarding primary and secondary schools in hotspot areas	-To enhance syllabus coverage and performance.		
Peace and Security Sector			
Intensify peace building efforts in conflict points using trusted mediators	To forestall present, past & future conflicts through involvement of all players in peace building.	Conflict hotspots areas	5,000,000