National Drought Management Authority
MARSABIT COUNTY
DROUGHT EARLY WARNING BULLETIN FOR SEPTEMBER 2021

A Vision 2030 Flagship Project

DROUGHT EW PHASE: ALARM

Drought Situation & EW Phase Classification

Biophysical Indicators

Rainfall: In the month under review, off-season rains were received in few pockets across the County in 1-2 rainy days. Probabilities of forecasted standard precipitation index ranged between 25-30 percent which is above the usual chance of 16 percent.

Vegetation condition: 3-months Vegetation Condition Index for the month under review was 36.38 (normal greenness) across the county.

Socio-Economic Indicators (Impact Indicators)

Production indicators: Livestock body condition was fair-poor in all the livelihood zones. Milk production was significantly below the short term average. Livestock migrated to the dry season grazing areas. Livestock deaths due to drought especially amongst small stock and cattle were recorded in few hotspots areas. Livestock disease incidences increased in all the species. Livestock mortality cases was at 8 percent.

Access indicators: Household and livestock water distances remarkably increased across the County and were above normal. Milk consumption was below the short-term average and terms of trade declined and was below normal especially in the pastoral livelihood zone. Maize prices were above average while goat prices were below normal.

Utilization indicators. Household food consumption score shifted to the borderline food consumption category while households applied frequent and severe coping mechanisms to cope with existing short term food consumption gaps at the household level. Trends in SFP admission increased (wasting) while there was a slight decrease in OTP admissions across the County. Admissions are generally on an increasing trend.

Early Warning (EW) Phase Classification

Livelihood Zone	Phase	Trend
Agro-pastoral	Alarm	Stable
Pastoral All species	Alarm	Worsening
Fisher folk/Casual labour/Petty Trading	Alarm	Worsening
County	**Alarm**	**Worsening**
Biophysical Indicators	**Value**	**Normal Range/Value**
Rainfall (% of Normal)	38	80 -120
VCI-3Month (County)	36.38	>35
Forecast SPI	< -0.98	-0.98
Forecast soil moisture	0.2	0.28-0.4
Production indicators	**Value**	**Normal**
Livestock Body Condition	Fair-Poor	Good-Fair
Milk Production	0.75	>1.6 Litres
Livestock Migration Pattern	Unusual	Normal
Livestock deaths (from drought)	Deaths	No death
Access Indicators	**Value**	**Normal**
Terms of Trade (ToT)	60	>78
Milk Consumption	0.75	>1.6 Litres
Return distance to water	9.5	0.0-5.9Km
Utilization indicators	**Value**	**Normal**
Nutrition Status (malnourished)	12.41	0.0-8.69
Coping Strategy Index	18.5	<18
Food Consumption	34.8	>35

▪ Short rains harvests ▪ Short dry spell ▪ Reduced milk yields ▪ Increased HH Food Stocks ▪ Land preparation	▪ Planting/Weeding ▪ Long rains ▪ High Calving Rate ▪ Milk Yields Increase	▪ Long rains harvests ▪ A long dry spell ▪ Land preparation ▪ Increased HH Food Stocks ▪ Kidding (Sept)	▪ Short rains ▪ Planting/weeding

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1.0 CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

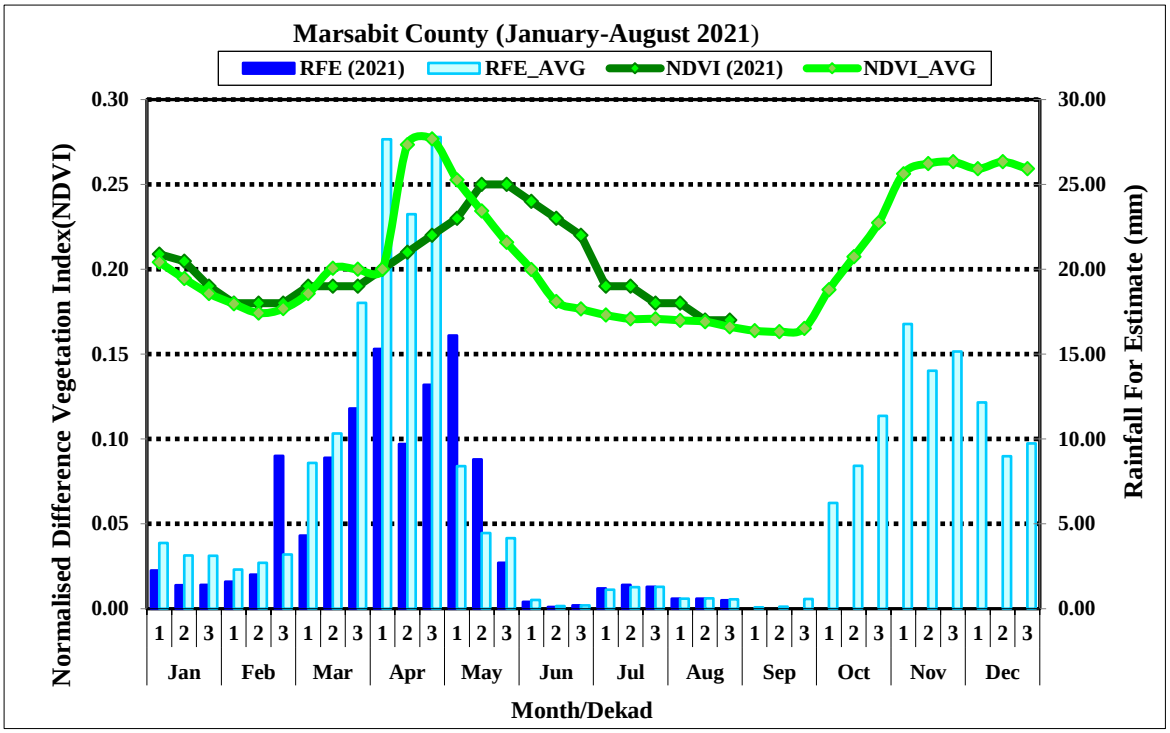


Figure 1: Dekadal Rainfall (mm) and NDVI values compared to the Long Term Average

Source: WFP-VAM, CHIRPS/MODIS

- From the figure 1 shown above, dekadal rainfall for estimate (RFE) amounts for the first, second and third dekads were normal when compared to their respective long-term dekadal rainfall for estimate (RFE) averages.
- Normalized Difference Vegetation Index (NDVI) for the first and second dekads were slightly above average when compared to their corresponding long term dekadal NDVI values. However, the third dekadal NDVI value was normal.

1.2 CUMULATIVE RAINFALL

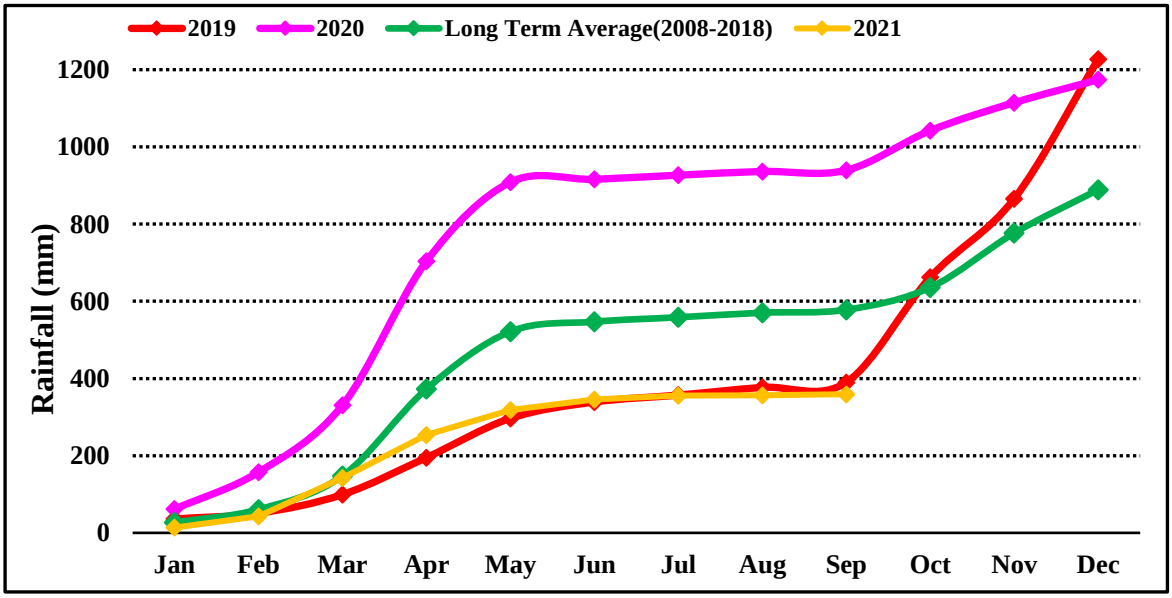


Figure 2: Cumulative Rainfall Performance (mm)

- From the figure (2) shown above, seasonal cumulative rains are significantly below the long-term cumulative rainfall amounts with a paltry 38percent of the normal rains received. It can

be deduced that the 2019 long rains failed and was considerably below the long term average while 2020 long rains were at an all-time high when compared to the long term average.

- Off-season rains were received in some pockets across the County. The areas that received rains in North Horr sub counties were Bubisa, Segel, Diid- Galgalu, Buluk, Qonye, Kubi Adi, Burro areas, Elgufu, ChariAshe and parts of Gas whereas in Laisamis Sub-county (El-Molo, Pallo, Serentome, Nayanalim and Moite in Loiyangalani ward, Burro, Kortiboorana, Haliguutha, Hafare in Korr-Ngurnit ward and Merille in Laisamis ward. Moyale Township received 11.7mm of rainfall in 3 days.
- The year 2021 is expected to continue to be a drier than usual year. Observations of rainfall for the last two consecutive seasons reveal that Marsabit County is facing rainfall deficits in 2021 and this is forecasted to persist until end of the year. Past observed deficits, coupled with forecast indicate moderate to severe drought conditions in Marsabit County. Based on IGAD-ICPAC forecast, the start of the season is expected to be delayed by up to 2 weeks, and there is a lower than usual chance of exceeding 200 and 300 mm in the next rainy season.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- Current vegetation condition index is 36.38 thus exhibited insignificant change when compared to the previous month's vegetation condition index of 38.82. The 3-months vegetation condition index remained in the normal vegetation condition band. With expected persistence of the forecasted drier than usual conditions, the 3-months vegetation condition index will reduce and possibly shift to the moderate vegetation deficit in the month of October.

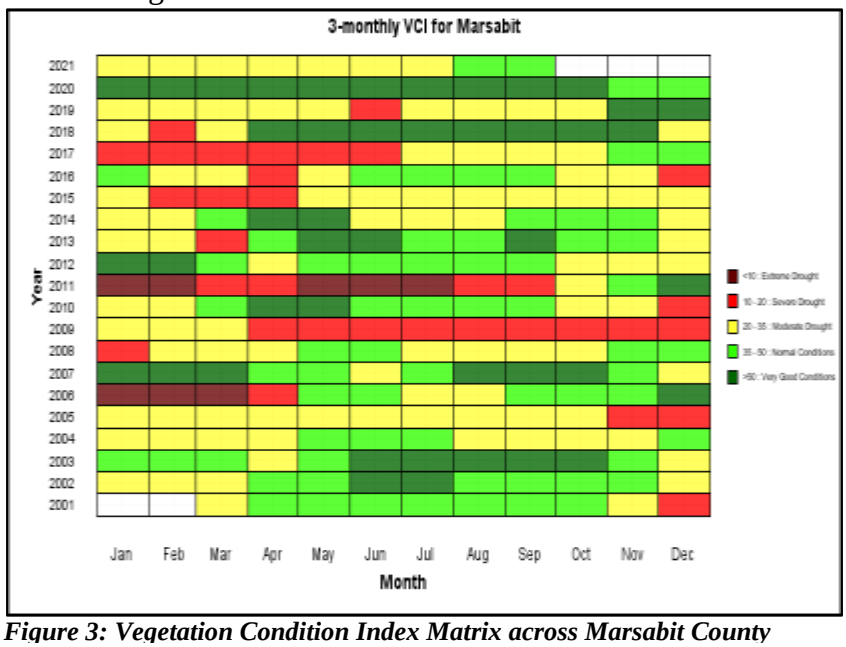


Figure 3: Vegetation Condition Index Matrix across Marsabit County

- When compared based on the Sub-counties; Saku, Moyale and North Sub-counties had 3-months vegetation condition index of 48.17, 36.59 and 37.98 respectively thus stagnated in the normal vegetation greenness band with Moyale Sub-county depicting an improvement from moderate vegetation deficit in the previous month to normal vegetation greenness in the month under review. However, Laisamis Sub-county posted VCI values of 32.29 thus remained in the moderate vegetation deficit band attributed to extreme drier than usual conditions than the other Sub-counties.

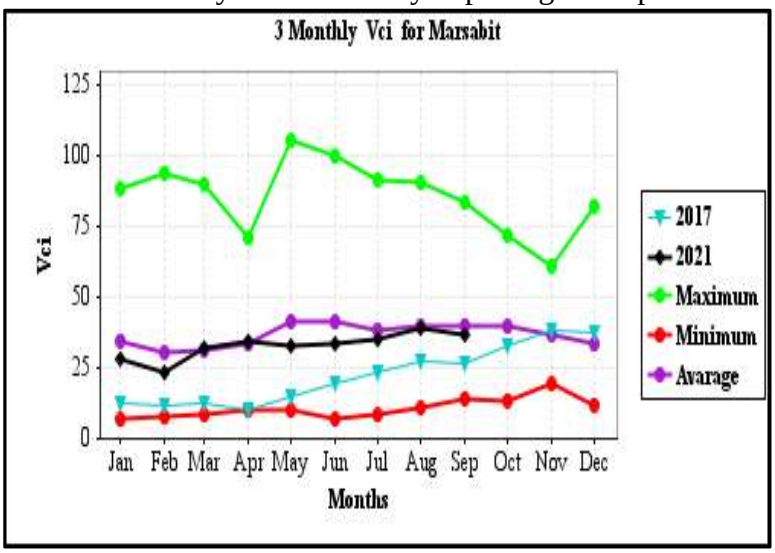


Figure 4: Vegetation Condition Index Trends

- Figure (4) shown above compares September 2021 vegetation condition index to September long term average, historical maximum and minimum vegetation condition index values. The current vegetation condition index equates to the long term average attributed to failure of two consecutive seasons. With the persistence of drier than usual conditions, vegetation condition index will decline and fall below the long term average in October.

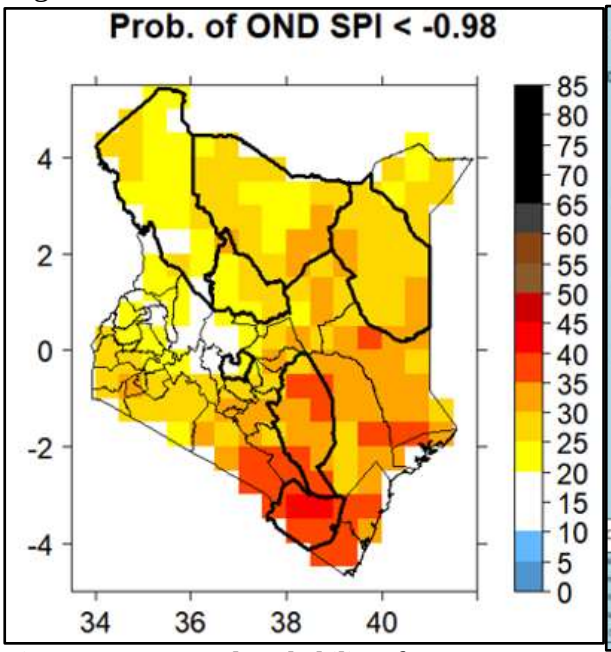


Figure 5: Forecasted Probability of SPI < -0.98

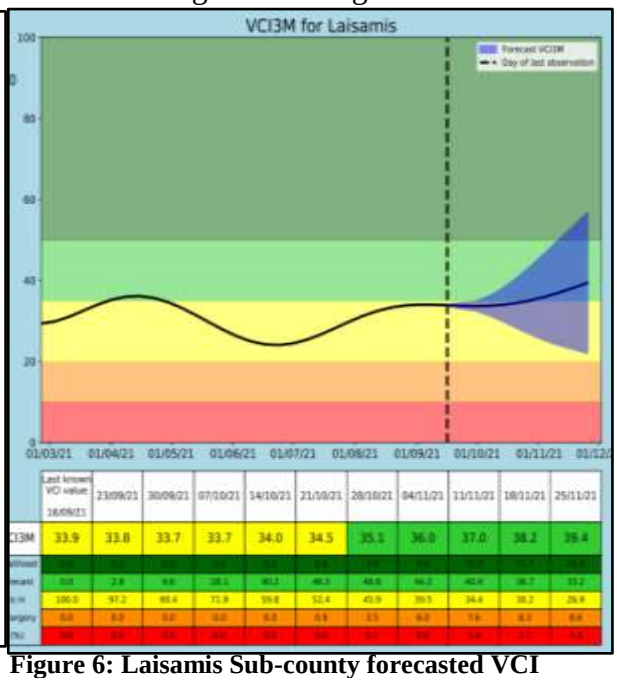
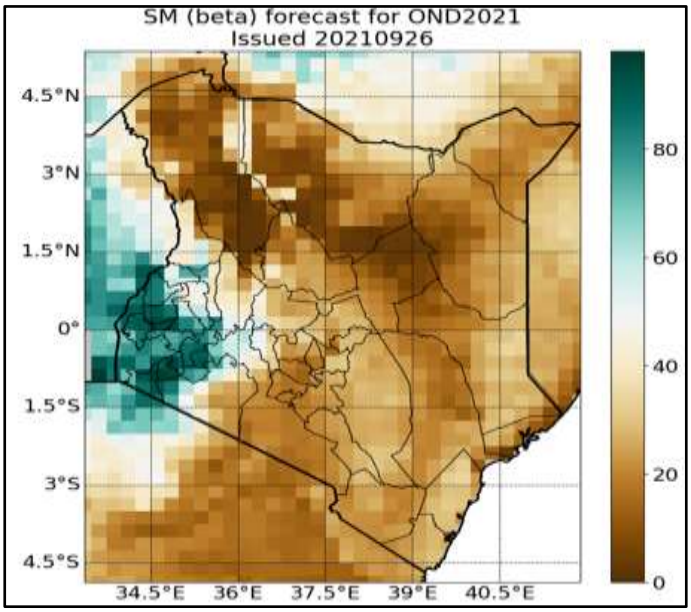


Figure 6: Laisamis Sub-county forecasted VCI

- Figure (5) shown above illustrates forecasted probabilities of standard precipitation index (SPI) < -0.98 which is enhanced above the baseline of 16 percent. In Marsabit County, probabilities range between 25-30 percent which is about the average chance of 16 percent.
- Laisamis Sub-county forecasted VCI indicates a likelihood deterioration of vegetation condition due to continued drier than normal conditions.



(Figure 7) exhibits forecasted soil moisture that indicates a possibility of deterioration during the long dry spell period occasioned by failure of the long rains and high evapotranspiration rate. Drier than usual conditions will worsen the soil moisture quotient across the County. There is increased tendency that soil moisture will be in the lower tercile category attributable to high tendency of below normal soil moisture quotient in the forecasted period.

Figure 7: Probability of lower tercile soil moisture

- Figure 8 shows TAMSAT-ALERT soil moisture time series for Marsabit County. The black lines show the progression of soil moisture in 2021 (5th-95th percentile). The dashed vertical lines show the start (26th September) and end (19th December) of the long dry spell and OND period. The forecasted OND indicates failure of the season and progression of the long dry spell thus expected soil moisture deficit across the County.

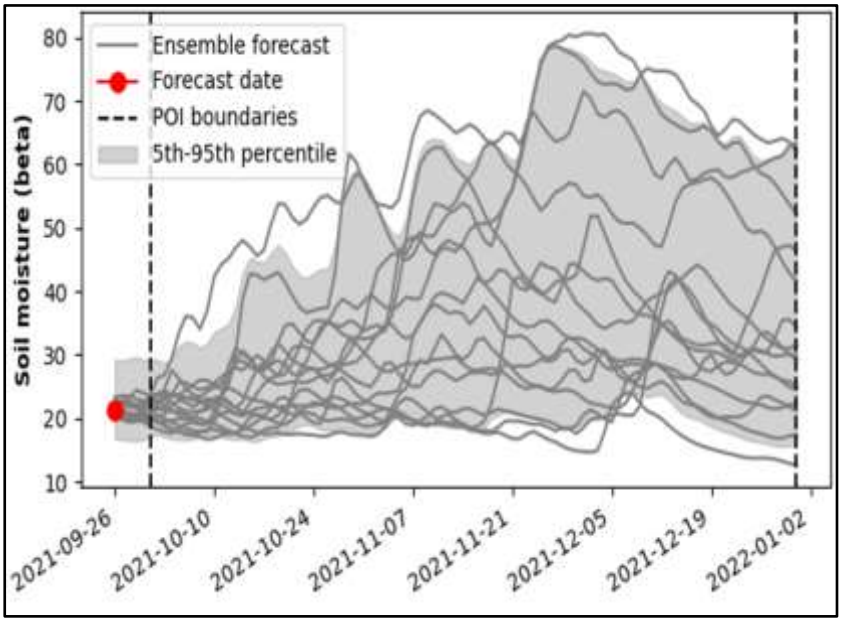


Figure 8: TAMSAT-ALERT soil moisture for Marsabit County

2.1.2 Pasture

- Pasture condition in pastoral livelihood zone is poor compared to fair at this time of the year attributable to consecutive failure of two rainy seasons. However, agropastoral areas of Moyale Sub-county had fair-poor pasture while Saku Sub-county posted poor pasture.
- In the pastoral livelihood zone where pasture is available, it is expected to last 2 weeks compared to one and half months normally. In the agropastoral areas where pasture is available especially Moyale Sub-county, pasture is likely to last for 1 month compared to two months normally.
- Pasture is available in isolated areas of Laisamis Sub-county (Kargi and Gudas), North Horr Sub-county (Shankar, Matakorma, Balesaru, Sabare, Yibo, Garwole, Araftis and Hurri Hills).
- Insecurity along the border of Elledimtu in Moyale Sub-County, North Horr Sub-County (Chari Ashe, Buluk, Darade, Segel, Shura and Burro), Laisamis Sub-County (Arapal and Soriadi), parts of Saku Sub-County (Badassa and Kubiqallo) hindered access of pasture.

- With expected progression of the long dry spell, available pasture is expected to last two weeks in the pastoral livelihood zone of North Horr and Laisamis Sub-Counties while one month in the agro-pastoral areas of Moyale Sub-county.

2.1.3 Browse

- Browse condition is poor in the pastoral livelihood zone while fair-poor in the agro-pastoral livelihood zone.
- Available browse will last one month when compared to the normal of 2 months across the livelihood zones with exception of Moyale Sub-county where browse might coincide with the onset of the next rainy season.
- Limited or unavailability of conserved hay across the livelihood zones resulted to poor quality conserved forage thereby limiting utilization.
- Variations in pasture and browse conditions across the livelihood zones was mainly occasioned by intense temporal variations of temperature and livestock migration in the month under review. Notable emergence of herbaceous vegetation was witnessed in some parts of North Horr, Laisamis, Saku and Moyale Sub-Counties. Quality and quantity of browse is fair in all the livelihood zones and is below normal.

2.2 WATER RESOURCE

2.2.1 Sources

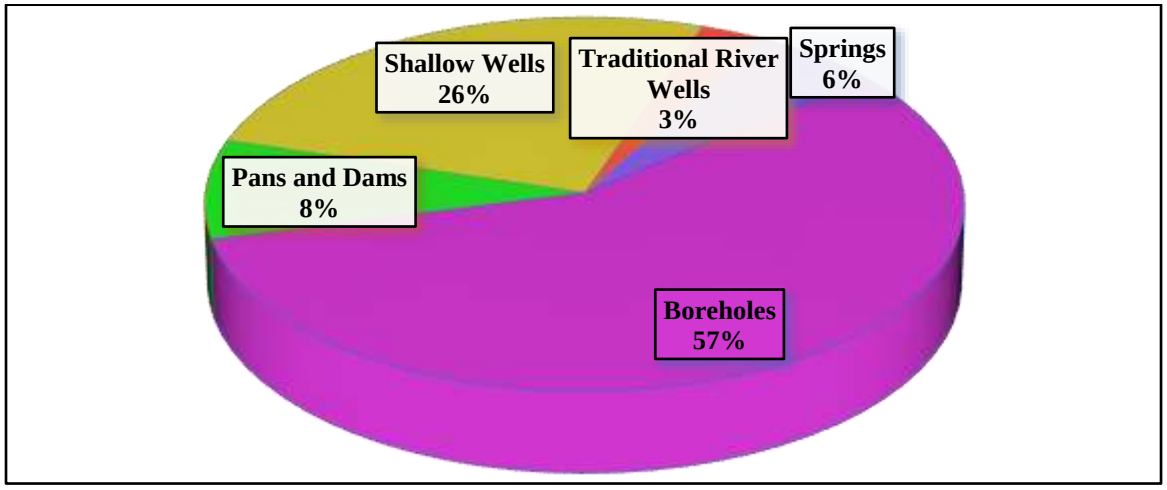


Figure 9.0: Main Sources of Water across the livelihood zones

- From figure 9 shown above, borehole is the main water source applied by majority of the communities in all the livelihood zones as illustrated by a response rate of 57 percent. Other water sources employed by the communities in the month under review are shallow wells, water pans, springs and traditional river wells at 26 percent, 8 percent, 6 percent and 3 percent respectively.
- Approximately 98 percent of all surface water sources are depleted in North Horr, Laisamis and Saku Sub-Counties while 10 percent of sub-surface water sources are recharged in Moyale Sub-County.
- As the long dry spell progresses coupled with intense livestock migration, recharge levels of sub-surface water sources are likely to reduce further across the livelihood zones.

Table 1.0: Areas with acute water shortage that require water trucking

Areas that need Water trucking	Sub County
Turbi ward (Burgabo, Tigo, Mudhe, Demo), Maikona ward (Toricha, Thushe, Hurri –Hills, Yaa Garra, Daqane, Yaa Mangutho, Yaa Algana), Dukana ward (Arkor, Yaa Odhola, Diid Gola, Marime, Kubi Adhi), North Horr ward (Chari Ashe, Konon Gos).	North Horr
Korr/Ngurunit ward (Lapendera, Lekuchula, Ballah, Korr), Kargi/South Horr ward (Kargi, Civicon and Kambinye).	Laisamis
Obbu, Butiye and Township wards	Moyale
Sagante Jaldesa, parts of Marsabit Central and Karare wards.	Saku

Boreholes that have currently broke down and require urgent fast moving spare parts		
S/N	**Name of Borehole**	**Fast moving spare parts required**
1.	Gangeisa	4kws motor
2.	Dololo Dokatu	7.5 kws motor
3.	Dirib Gombo	5.5 kws motor
4.	Dukana	New genset of 30KVA
5.	Sori Adhi	New genset of 20KVA
6.	Ambalo	New genset of 30KVA
7.	Kupiqalo 1	New genset of 30KVA
8.	Lafein	5.5 KWS Motor

Number of people and livestock in need of water trucking support			
S/N	**Sub-County**	**No. of households**	**No. of Livestock**
1.	Saku	11,000	6,000
2.	Moyale	8,000	3,000
3.	North Horr	10,000	12,000
4.	Laisamis	10,000	13,000
Total		**39,000**	34,000

2.2.2 Household Water Access and Utilization

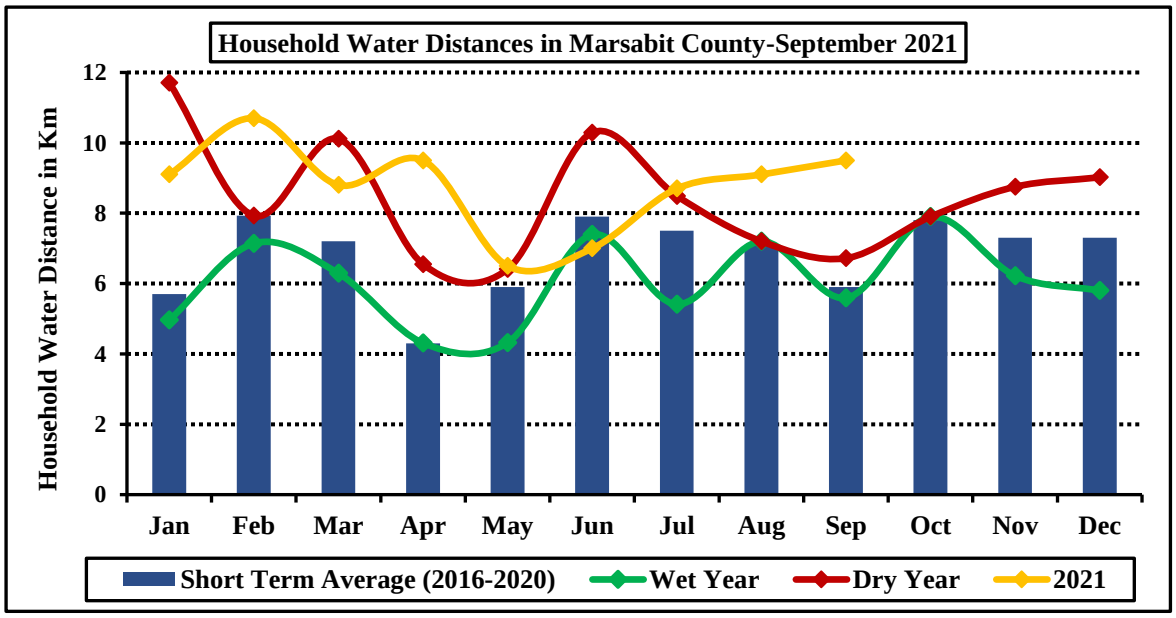


Figure 10: Current household return water distances compared to the Short Term Average distances (Km)

- From (Figure 10) shown above, return household water distances to the main water sources was 9.5km in the month under review which indicates an increase when compared to the previous month's household water distance of 9.1km in all the livelihood zones. The current household water distance of 9.5km is above the short term average household water distance of 5.9km by 61 percent.
- Current household water distances are above dry year and wet year water distances. Household waiting time at the water source across the livelihood zones increased due to increased depletion of the sub-surface water sources, low pumping hours and overuse of boreholes at water sources. Waiting time ranged between 3-4 hours against the normal of 60 minutes in the agro-pastoral livelihood zone while ranged between 4-5 hours against the normal of 2 hours in the pastoral livelihood zone.
- Water consumption per household per day was 7 litres in agro-pastoral and 8 litres in pastoral livelihood zone compared to the normal 15-20 litres per person per day. The cost of water ranged between Ksh.2-5 in urban areas and Kshs.20/jerrican from water vendors. Due to the continued severe drought, levels of sub-surface water sources have considerably declined thus increasing pressure and waiting time at water sources in most parts of the County.
- With expected persistence of drier than usual conditions, household water distances will likely increase further thus decline of water consumption levels across the livelihood zones.

2.2.3 Livestock Access

- From (Figure 11) shown below, return livestock trekking distance from grazing areas to water points is 26.5km in all the livelihood zones hence depicts an increase when compared to the preceding month's grazing distance of 24.6km.
- When compared to the short term average livestock trekking distance of 17.6km, livestock trekking distance is above normal by 51 percent when compared to the short term average livestock trekking distance of 20.5km. Likewise, the current livestock trekking distances are above the dry and wet years' water distances.
- In the agro-pastoral livelihood zone, livestock trekking distances ranged from 15-20km whereas in the pastoral areas of Laisamis and North Horr Sub-Counties, livestock trekking distances were 25-30km in the month under review. Exceptional longer trekking distances above 40km were exhibited in North Horr Sub-County (Toricha, Mataburi, Yaa-Gara, Konon-Gos, Dakane, Kalesa, Diid Gola,Kubiadhi, Marime, Chari Ashe and Qatamur) and Laisamis Sub-County (Moite, Soriadi, Hafare, Buuro, Civicon and Sarima).
- Watering intervals for cattle is 2 days in the agro-pastoral livelihood zone while 3-4 days in the pastoral livelihood zone compared to the normal watering interval of 1-2 days. Camels watering frequency is 10-14 days in the agro-pastoral livelihood zone which is normal while in the pastoral livelihood zone, camels watering frequency is 15-20 days against the normal of 10 days. In the pastoral livelihood zone, small stock watering frequency is 5-6 days while 3-4 days in the agro-pastoral livelihood zone compared to the normal of 2 days.
- Exceptionally longer livestock watering frequencies were reported in parts of Maikona, Turbi/Bubisa, Maikona, North Horr and Dukana wards in North Horr Sub-county and Laisamis, Korr/Ngurunit, Kargi/South Horr and Loiyangalani wards in Laisamis Sub-county.

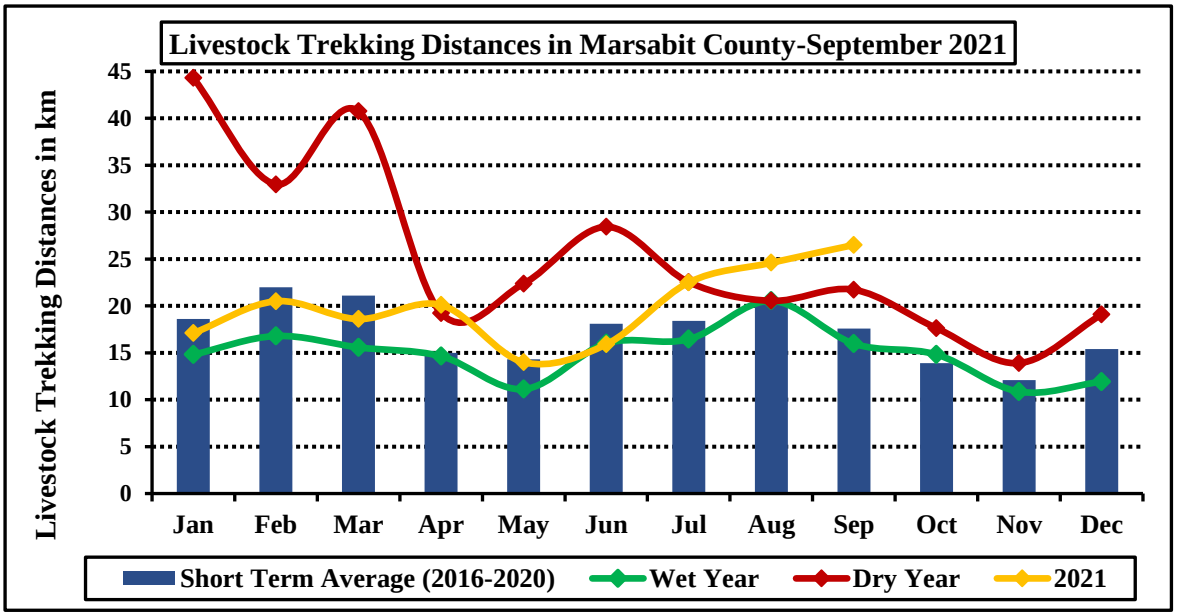


Figure 11: Current return livestock trekking distances compared to the Short Term Average distances (Km)

- The cost of water is between Kshs. 10 -20 for camel, Kshs. 5-10 for cattle and Kshs.2-5 for shoats while a 20-liter jerry can at water sources is Kshs.10-20 but sold by water vendors at Kshs.30-50 in most areas.
- As the long dry spell continues, watering frequencies are expected to reduce further for all the livestock species across the livelihood zones.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Livestock body condition was generally fair across all the livelihood zones in the county compared to good at this time of the year. However, livestock body condition is poor for the majority of lactating herds, calves and kids while fair for breeding animals across the livelihood zone but on a deteriorating trend.
- Due to depleted pasture in most parts of the County resulting to poor body condition of animals, some of the livestock keepers in the agro-pastoral areas of Saku have resorted to purchasing hay for their livestock while those in the pastoral areas of Laisamis and North Horr sub-counties are buying maize and sorghum as alternative feeds.
- With rapid deceleration of rangeland and increased distances of forage to water resources, the livestock body condition is likely to deteriorate further in the next 1 month.

3.1.2 Livestock Migration

- In the month under review, most of the livestock migrated to the dry season grazing areas due to failure of the long rains in North Horr and Laisamis Sub-counties.
- In North Horr Sub-County, livestock in Dukana ward are concentrated along River Lag Balal, Konye, Balesaru, Diid Gola, Dosolle, Qarari, Garwole and Mata-lamana. In Maikona ward, livestock are concentrated around Warra, Hurri Hills, Aldero, Toricha and Burro.
- In North Horr ward, livestock have moved towards Konon-Gos, Dosole, Elbesso, Qorqa, Uranura, Kuro and Matho area.
- In Laisamis Sub County, livestock from Loiyangalani ward are concentrated in Komote, Pallo, Moite and Dakanti, Gatab, Civikon and Oltorot. In Laisamis and Loglogo wards, livestock are generally around river Malgis, Kolboga, Lontolio, Merille and Nairibi while

others have moved out to areas of Ririma in Kargi ward. Livestock in Korr-Ngurnit and Kargi wards are majorly around Ririma, Elem, Falam, Buuro, Yell, Irrir and Ngurnit.

- In Moyale Sub-County, livestock from Amballo and Walda have migrated to areas of Banale, Ellebor and Elledimtu.
- Livestock in the agro-pastoral areas of Saku Sub County are concentrated around Jaldesa and Kubiqallo areas. With expected progression of the long dry spell, livestock migration is likely to intensify across the livelihood zones.

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

- In the agro-pastoral livelihood zone, poor income households had 1-2 tropical livestock units compared to 3-5 normally while the middle income households had 6-8 compared to 7-10 normally. In the pastoral livelihood zone, poor income households had 2-8 TLUs compared to 6-10 normally while the middle income households had 6-15 compared to 16-20 normally.
- TLUs declined across the livelihood zones and household categories. In agropastoral and pastoral livelihood zones, the TLUs in poor income households declined by 63 and 38 percent respectively compared to the normal. In pastoral and agropastoral livelihood zones in the medium income households, TLUs declined too by 42 and 18 percent respectively compared to the normal. The decline in TLUs was attributed to deteriorating body condition, limited access and increased trekking distances to forage and water resources.

3.1.4 Livestock Diseases and Mortalities

- Livestock diseases incidences is on an increasing trend across the livelihood zones. Amongst the small stocks the most common diseases reported are sheep and goat pox, CCPP and tick infestation.

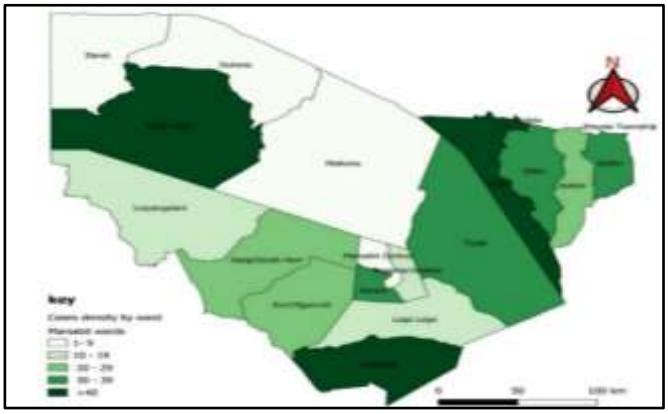


Figure 12: Geospatial Density of Cases by Ward

- Mass livestock deaths were reported in Balesa attributed to nitrate poisoning. Pneumonia in camel calves was reported in the pastoral areas which presented signs of whitish, mucoid nasal discharge, cough, foaming at the mouth and resistance to movement. Other species of livestock found at the water source, especially camels were highly infested with flies (engorged ticks-rephicephalus). Livestock mortalities especially amongst shoats were reported in Shegel as a result of hypothermia.
- The current livestock mortality was slightly above normal mainly attributed to disease incidences in Laisamis and North Horr Sub-counties whereas other parts of the county reported minimal livestock mortalities.

Table 2.0: Measure of Disease Severity by Livestock Species

Species	Morbidity (%)	Mortality (%)	Case fatality (%)
Camel	9.5	2.2	22.8
Cattle	7.1	1.4	19.1
Goats	11.0	2.0	18.3
Sheep	8.3	1.3	15.8
Shoats	8.6	1.2	14.1

3.1.5 Milk Production

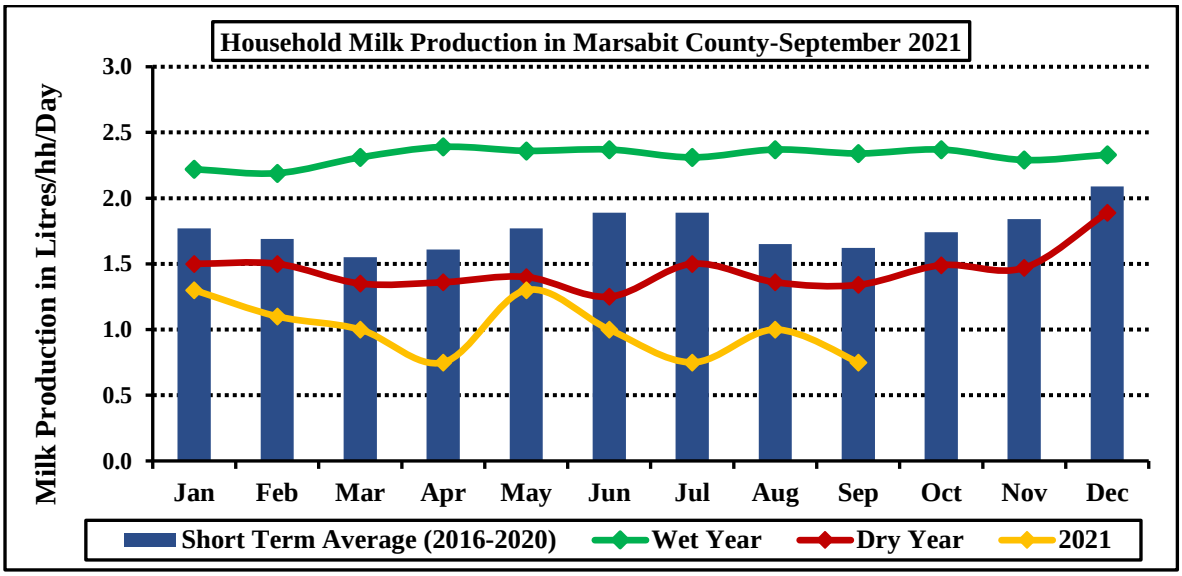


Figure 13: Milk production per household per day in litres across the livelihood zones

- From figure 13 shown above, household milk production per day for the month under review was 0.75 litres/household/day across the livelihood zones hence indicative of a decline when compared to the previous month's milk production of one litre/household/day. Reduction in milk production was attributed to mass livestock migration to the dry season grazing areas.
- Current milk production of 0.75 litres is below the short term average milk production of 1.6 litres by 53 percent and remarkably lower than milk production in wet and dry years.
- Below normal milk production was attributed to consecutive failure of two seasons and decelerated livestock rangeland. Milk production is expected to gradually decline further in the next one month as severe drought condition intensify.
- Milk retailed at an average of Kshs.80-120 per litre across the livelihood zones compared to Kshs.75-90 normally which is 20-25 percent above normal.

4.0 MARKET PERFORMANCE

4.1 LIVESTOCK MARKETING

4.1.1 Cattle Prices

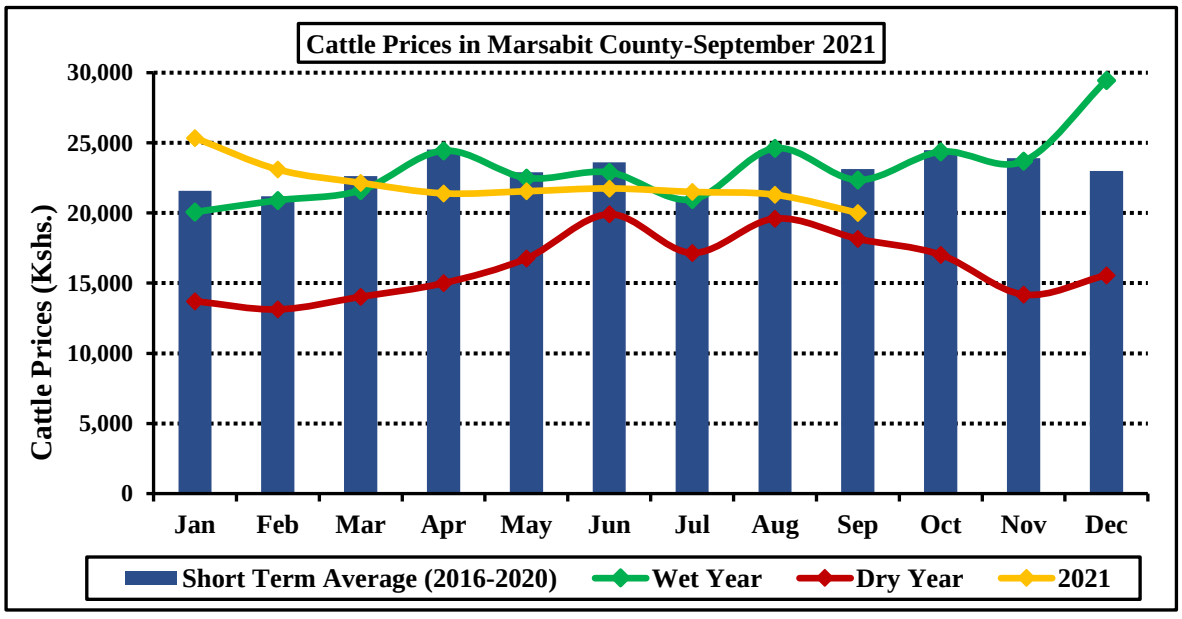


Figure 14: Cattle Prices Trends in Marsabit County

- From the figure (14) shown above, cattle price for the month under review was Kshs. 20,005 hence gradually declined when compared to the preceding months' cattle price of Kshs. 21,300.
- When compared to similar periods, current cattle price of Kshs 20,005 is below the wet and normal years' prices by 11 percent and 14 percent respectively while slightly above the dry year prices.
- Below normal cattle prices were occasioned by deteriorating cattle body condition across the livelihood zones. In Merille livestock market, the price of medium size cattle averaged at Kshs. 18,000 hence an illustration of a decline when compared to the normal price of Kshs. 25,000 while Moyale livestock market exhibited slightly better cattle prices averaging Kshs. 25,500.
- With expected persistence of drier than usual conditions, cattle prices are likely to gradually decline further in the next one month especially in the pastoral livelihood zone of North Horr and Laisamis Sub-counties.

4.1.2 Goat Prices

- The current average goat price is Kshs. 3,105 thus below normal by 23 percent when compared to the short term average price of Kshs. 4,010 as illustrated in figure 16 below.
- Below normal goat prices were attributed to deteroriating goat body condition and increased supply in the terminal markets. Likewise, goat prices are below the dry year goat prices.
- Distortions of the supply chains mainly from the feeder markets to the terminal markets was occasioned by weakened livestock body condition and isolated cases of insecurity in Laisamis and Saku Sub-Counties.
- Moyale livestock market recorded favourable prices of Kshs. 4,000-4,500 while in Merille livestock market, the price of medium size goat ranged between Kshs. 2,200-3,000.
- Traded market volumes for goats slightly declined due to slight reduction of goats (slight deterioration in body condition) from the neighbouring Ethiopia market.

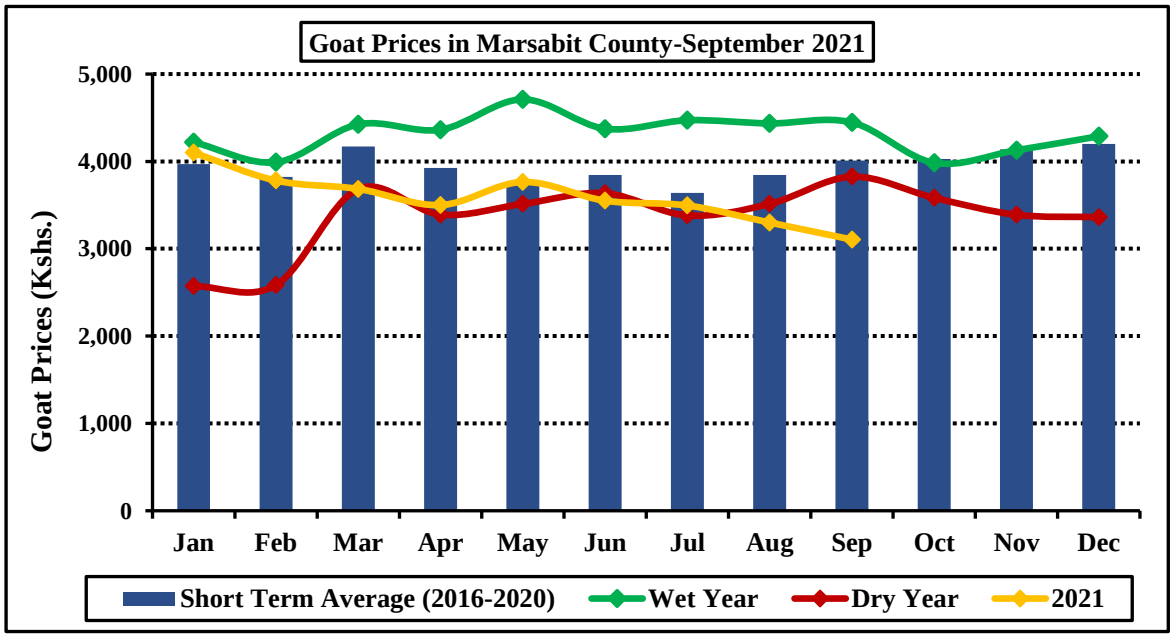


Figure 15: Goat Prices Trends in Marsabit County

- Approximately, 80 percent of the livestock markets were operational with exception of Jirime market in Saku Sub-county that remained closed due to insecurity while Dabel and Sololo

markets in Moyale Sub-County were not functional due to weakened demand and abysmal market integration.

- Goat's prices are expected to decline further in the month of October due to progression of the severe drought, inadequate traders and decelerated price margins in the pastoral areas of North Horr and Laisamis Sub-Counties.

4.1.3 Sheep Prices

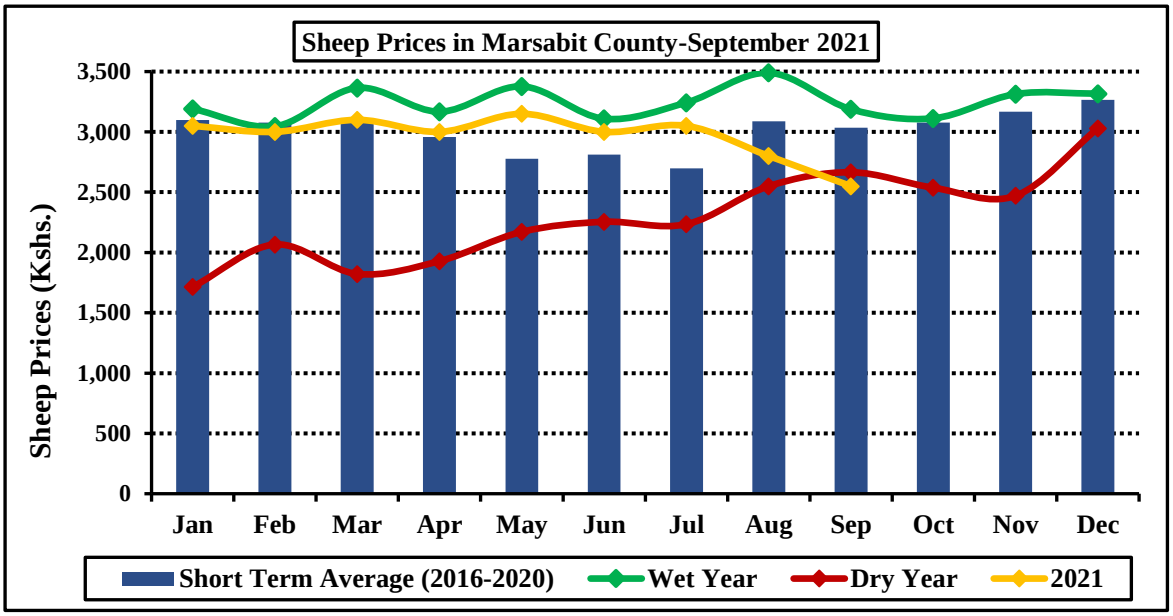


Figure 16: Sheep Prices Trends in Marsabit County

- From the figure 16 shown above, sheep price for the month under review was Kshs. 2,550 hence reduced when compared to the previous month's sheep price of Kshs. 2,800.
- When compared to the short-term average price of Kshs. 3,034, current sheep price is below normal by 16 percent. Similarly, the current goat prices are below the dry and wet years' average prices.
- Traded volumes for sheep was 35-40 daily in Moyale livestock market hence significant decline attributed to reduction in demand of sheep from the external markets.
- Inter-market trading margins between the terminal livestock and feeder markets features the need of improving market integration especially in the pastoral livelihood zone.
- Sheep prices are likely to decline further in the next one month especially in the pastoral livelihood zone due to the ongoing severe drought situation.

4.2 CROP PRICES

4.2.1 Maize

- The current average maize price is Kshs. 52/kg, which is above normal when compared to the short-term average price of Kshs. 45/kg as exhibited in figure 17 below due to slightly below average supplies from the main external markets to the commodity markets especially in North Horr and Laisamis Sub-counties. Increased inflationary tendencies and total crop failure in Saku Sub-county gradually increased the maize prices in all livelihood zones.
- Moyale Sub-County recorded favourable prices averaging at Kshs.30/kg attributed to cross border supplies from Ethiopia. Similarly, Saku Sub-County exhibited stable maize price at Ksh.40/kg attributed to supplies from the external commodity markets of Meru and Nyahururu.

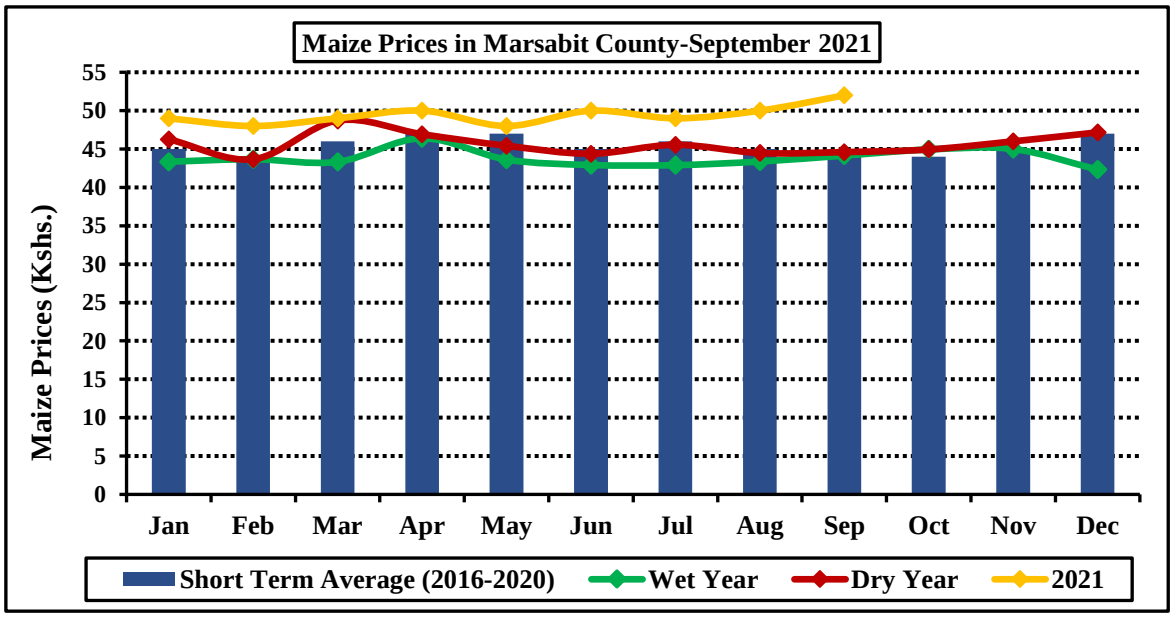


Figure 17: Maize Prices Trends in Marsabit County

- Most of the commodity markets in North Horr and Laisamis Sub-County recorded maize prices of Kshs.55-60/kg denoting 20 percent above the short term average as a result of poor market integration.
- Notable high maize prices were exhibited along the fishing livelihood zone with prices averaging at Kshs. 80/kg due to poor access to the main commodity markets.
- Poor market integration and weakened demand in the pastoral areas will likely further distort supplies in the local commodity markets hence expected gradual increase in maize prices.

4.2.2 Beans

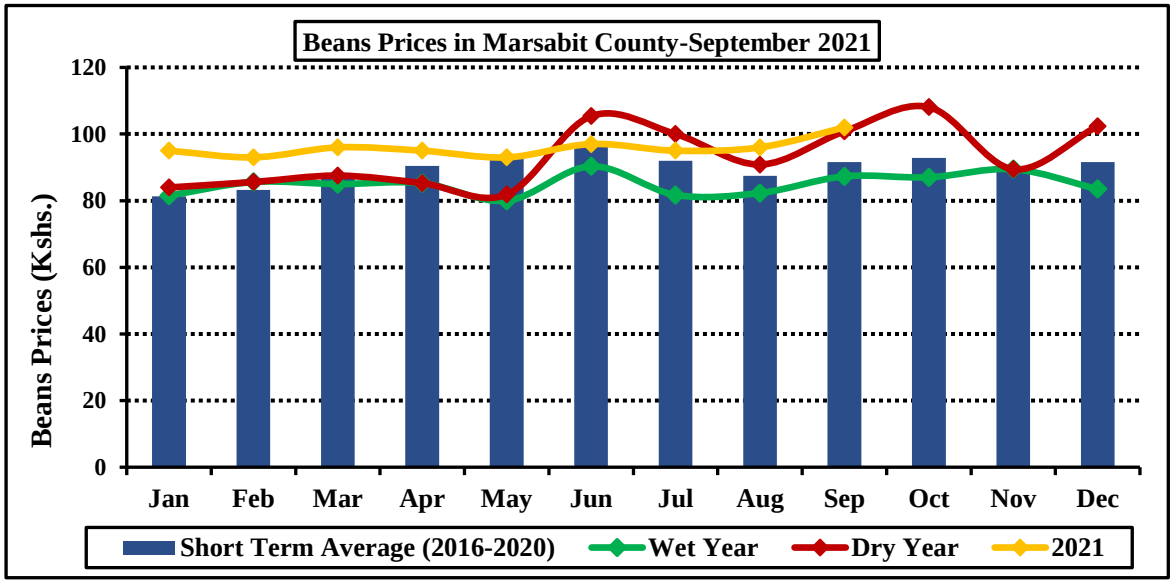


Figure 18: Beans Prices Trends in Marsabit County

- From the figure 18 shown above, beans prices retailed at Kshs 102/kg in the month under review across the livelihood zones hence increased when compared to the preceding month's beans price of Kshs.96/kg. Current maize prices equate to the dry years' prices.
- Moyale commodity market posted favourable beans prices averaging at Kshs 65-70/kg. Favourable beans prices in Moyale commodity market was attributed to improved supplies from the neighbouring Ethiopia market.

- However, North Horr and Laisamis Sub-counties illustrated high beans prices of Kshs 100-120/kg attributed to volatile price margins coupled with poor access to the markets.

4.2.3 Terms of Trade (TOT)

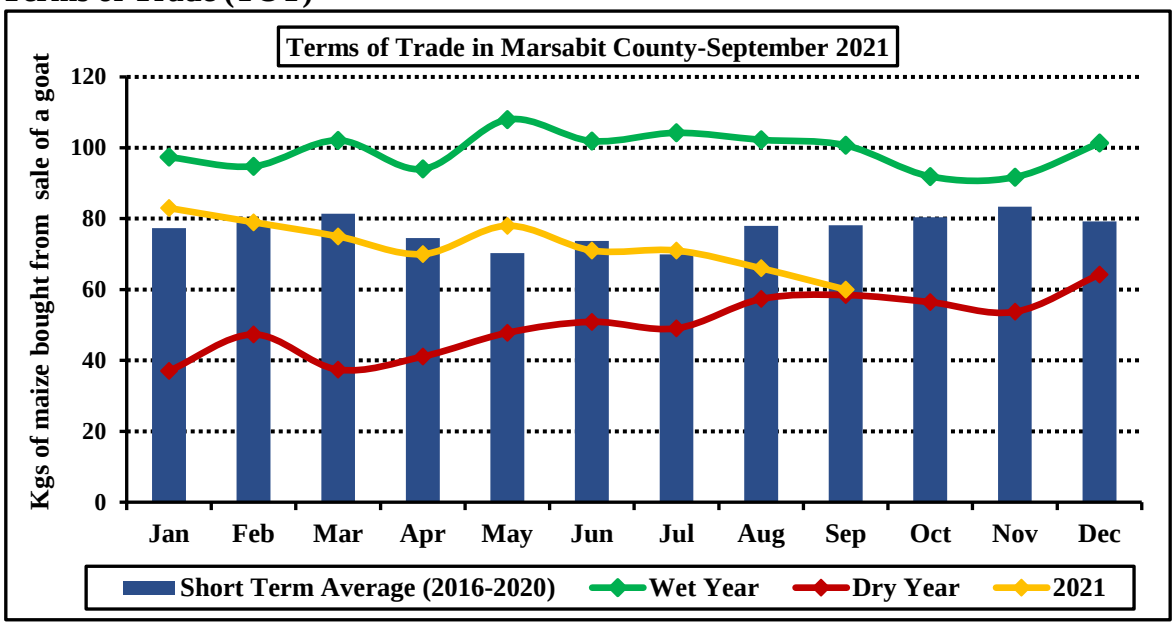


Figure 19: Current Terms of Trade versus Short Term Average

- The current terms of trade are 60 kilograms in exchange for the sale of a goat in the month under review and exhibited a reduction when compared to the previous months' term of trade of 66 kilograms. Deteriorating terms of trade was attributed to below normal goats' prices and above average maize prices.
- However, Moyale Sub-County exhibited favourable terms of trade than other Sub-Counties attributed to slightly better goats' and maize prices. Terms of trade for North Horr and Laisamis Sub-Counties were considerably below the short term average mainly due to high maize prices and abysmal market systems.
- With expected simultaneous increase and decrease in maize and goats' prices respectively, terms of trade are likely to deteriorate further in the next one month and fall below the long term average.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

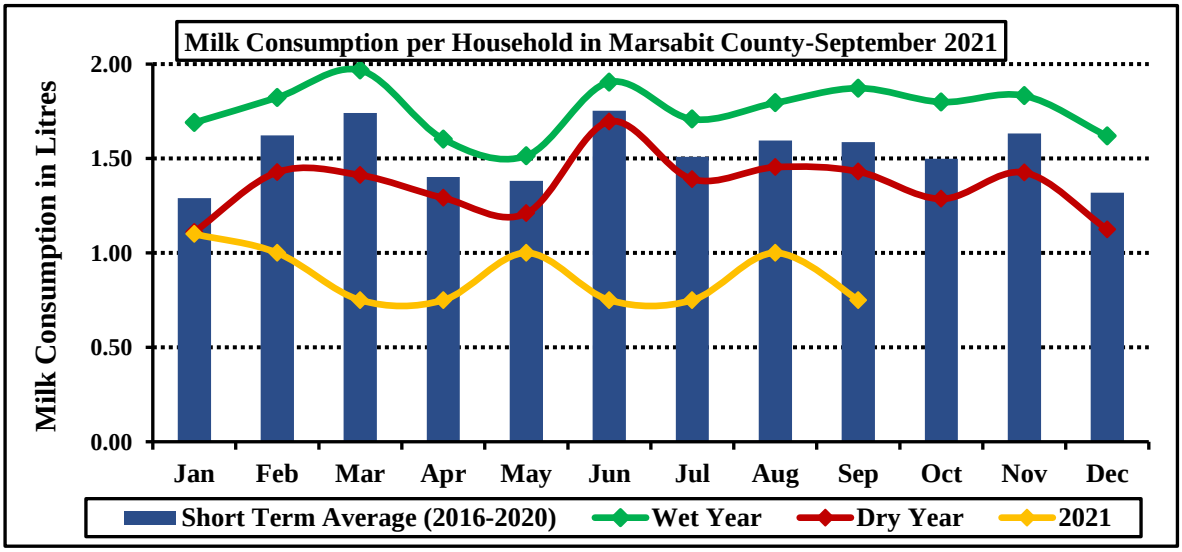


Figure 20: Milk consumption at household level in Litres

- From the figure 20 shown above, household milk consumption is 0.75 litres/household/day in the month under review thus an increase when compared to the preceding months' milk consumption of one litre/household/day.
- Reduced milk consumption across the livelihood zones was attributed to mass livestock migration to the dry season grazing areas as the existing rangeland has been significantly decelerated due to the ongoing severe drought situation.
- When compared to the short-term average milk consumption of 1.6litres/household/day, current milk consumption is significantly below average attributed to below average milk production.
- Similarly, current milk consumption is below the dry and wet years' household milk consumption. As the impacts of severe drought continues to be felt, milk consumption is likely to decline further in the next one month to an all-time low.

5.2 FOOD CONSUMPTION SCORE (FCS)

- The current food consumption score (FCS) across the County is 34.8 with 6.25 percent of households having poor food consumption while those with borderline and acceptable consumption were 46.05 percent and 47.70 percent respectively across the livelihood zones. In comparison to the previous month, deterioration in the food consumption categories was recorded and shifted to the borderline food consumption band.
- In the agro-pastoral livelihood zone, proportion of households that had poor food consumption score was 5.6 percent while those with borderline and acceptable food consumption scores were 45.5 percent and 48.9 percent respectively. Likewise, proportion of households in the pastoral livelihood zone that had poor, borderline and acceptable food consumption scores were 6.9 percent, 46.6 percent and 46.5 percent respectively. With progression of the severe drought, food consumption score is expected to remain in the borderline food consumption category.

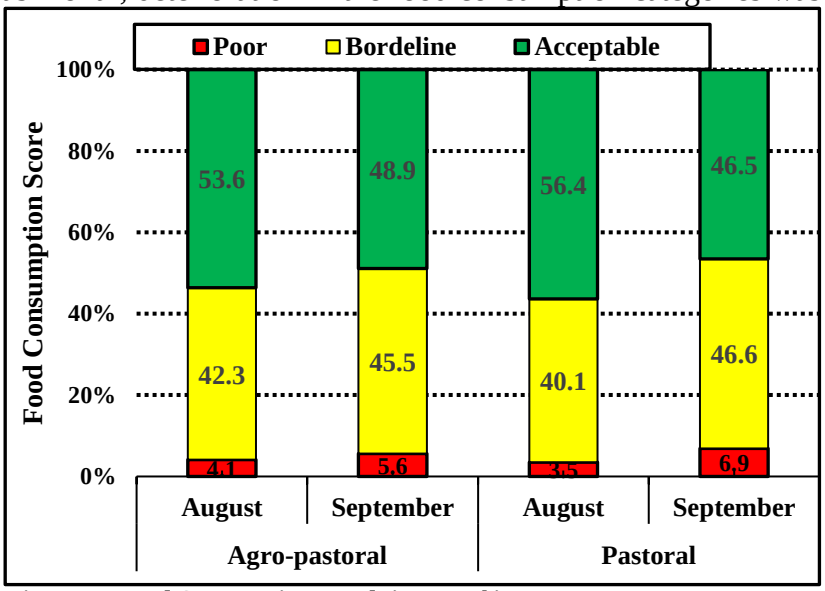


Figure 21: Food Consumption Trends in Marsabit

Table 3.0: Food Consumption Score by Ward

	FCS Mean	Poor FCS	Borderline FCS	Acceptable FCS
County	**34.8**	**6.25%**	**46.05%**	**47.70%**
Golbo	36.8	6.50%	42.70%	50.80%
Karare	39.3	1.50%	42.50%	56.00%
Korr	28.6	7.90%	70.80%	21.30%
Loiyangalani	27.5	11.30%	70.50%	18.20%

Laisamis	36.6	5.60%	36.30%	58.10%
Turbi	35.9	8.10%	39.10%	52.80%
North Horr	34.8	7.50%	43.50%	49.00%
Dukana	32.4	6.50%	66.00%	27.50%
Sagante	25.5	8.00%	61.50%	30.50%
Uran	42.5	2.90%	19.00%	78.10%
Kinisa	42.9	3.50%	14.50%	82.00%

- From the table shown above, 6.25 percent of households consumed staples and vegetables every day and never or very rarely are consuming protein rich food such as meat and dairy. Approximately 46.05 percent of the households consumed staples and vegetables every day, accompanied by oil and pulses a few times a week while 47.7 percent consumed staples and vegetables every day, regularly accompanied by oil and pulses and occasionally meat or dairy product.
- Most of the wards fell in the acceptable food consumption band with exception of Korr, Loiyangalani, Dukana, Sagante and North Horr wards that were in the borderline food consumption bands.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

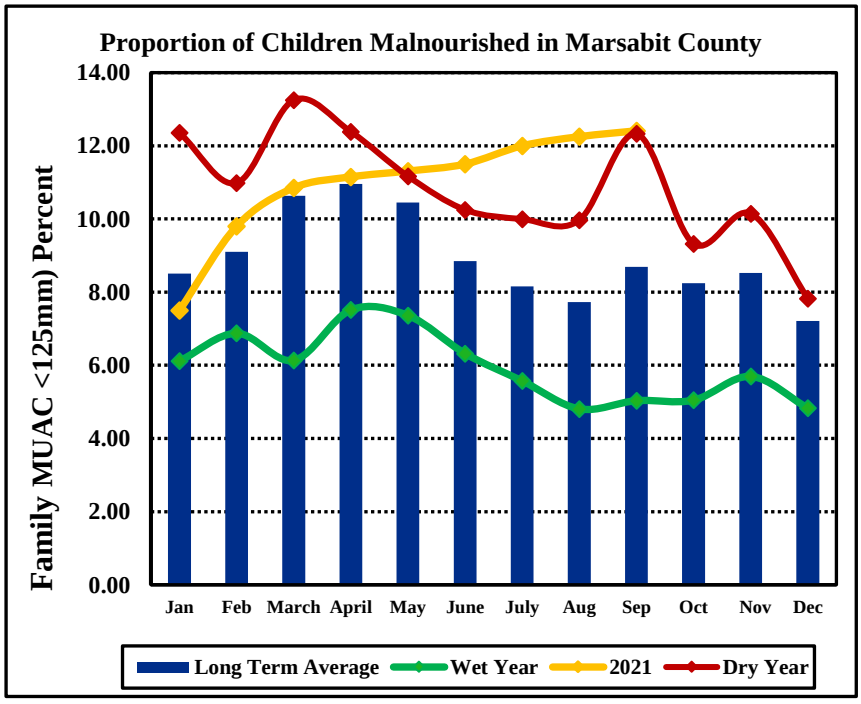


Figure 22: Proportion of Children < 5 Years Malnourished in Marsabit

- Figure 22 illustrates MUAC of 12.41 percent of children who are moderately and severely malnourished which is above the long term average MUAC of 8.69 percent and significantly above the wet year MUAC of 5.03 percent The recorded SAM rate in North Horr and Laisamis was 5.3 and 4.3 percent compared to 3.1 and 6.4 percent in a similar period in 2019 with a deteriorating trend. Trends in SFP admission increased while there was a slight decrease in OTP admissions across the County as compared to the previous month. The rise in SFP admission points to an increase in wasting due to the worsening food security situation compounded by poor access to health services as households move in search of pasture for their livestock. However, compared to the same periods last year, this year recorded higher admissions attributed to the ongoing severe drought.

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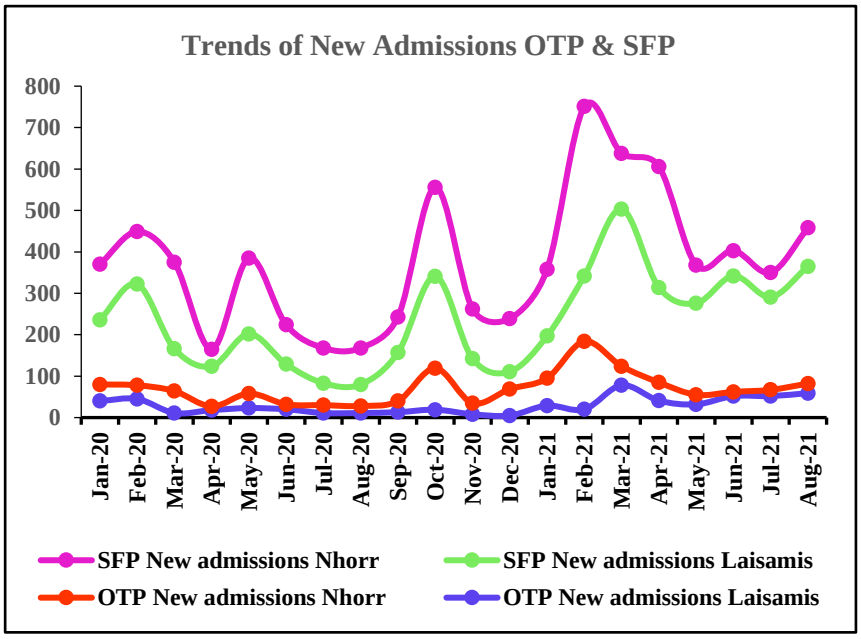

Figure 23: Admissions Trends in Laisamis and North Horr Sub-counties

Trends in SFP and OTP admissions in North Horr and Laisamis showed a steady rise in August. The cases are expected to continue with progression of severe drought which will result to surge in morbidities and malnutrition. The program will begin mass screening and outreaches in all facilities designated as 1st priority in Laisamis and North Horr.

5.4 COPING STRATEGIES

- From the (Figure 24) shown, the current reduced consumption based coping strategy index (rCSI) for the households is 18.5. When compared to similar period last year (rCSI) of 15.6, it's an indicative of significant increase in adoption of coping mechanisms. Consumption based coping strategy index deteriorated from stressed (January) to Crisis in February, March, April, May, June, July, August and September with rCSI of 19.6, 20.5, 19.7, 19.9, 18.04, 18.6, 18.32 and 18.5 respectively. Generally, households applied recurrent and severe mechanisms to cope with short term food consumption gaps at the household level.

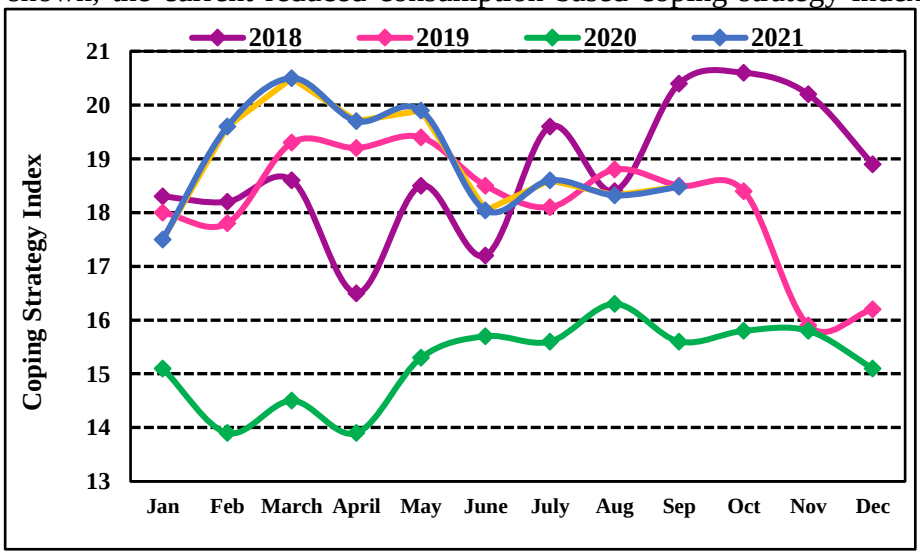

Figure 24: Coping Strategy Trends across the County

Table 5.0: Consumption Based Coping Strategy Index by Wards

Consumption based coping strategy index(rCSI)		
Sub-county	**Ward**	**rCSI**
Saku	Sagante	23.6
Saku	Karare	10.5
Laisamis	Korr	18.9
Laisamis	Loiyangalani	30.5
Laisamis	Laisamis	15.6

North Horr	North Horr	25.5
North Horr	Turbi	23.5
North Horr	Dukana	19.8
Moyale	Uran	11.5
Moyale	Golbo	18.4
Moyale	Heillu Manyatta	10.5

- From table shown above, households in Loiyangalani, North Horr, Sagante, Korr, Dukana and Golbo applied crisis consumption based coping strategies whereas those in Uran, Karare, Uran and Laisamis wards employed stressed consumption based coping mechanisms.
- Generally, 2.5 percent, 53.6 percent and 43.9 percent of the households adopted reduced consumption based coping strategies that were minimal, stressed and crisis respectively. Notable reduced consumption based coping strategies employed by the households were reduction in frequency of food consumption, reduced portion size of meals and reliance on less preferred food in all the livelihood zones.

6.0 EMERGING ISSUES

- The county reported 203 new cases of Covid-19 within the reporting month. The cumulative number of Covid-19 cases for the county as at 26th September 2021 was 732. The total number of deaths reported since the beginning of the outbreak is 8, case fatality rate (CFR) is 1.02%. Of the 732 confirmed cases, a total of 716 Cases are local transmission. As of 26th September 2021, a total of 2,625 received Covid-19 first dose vaccination, health care workers (404), Security officers (637), Teachers (432), other (914) and above 58 cohorts (238). A total of (854) received the Second dose, Health care workers (195), Security officers (195), Teachers (82), other (266) and above 58 (116).
- Resource based conflict in Chari Ashe, Arapal and Shurr reported during the month. Ethnic conflict in Saku sub county during the month hindering grazing of livestock in major rangeland.

7.0 CURRENT INTERVENTION MEASURES

7.1 Food Aid

- County Government of Marsabit procured relief food for vulnerable households: 2032 bags of 50kgs beans,1000 bags of maize,6996 bags of rice and 1480 cartons of oil to be distributed across all the sub counties.
- USAID/WFP through SND distributed food rations to 9,168 households across the County under the Sustainable Food System Programme which comprised of 458.4Mts of sorghum, 100.848Mts of pulses and 33.686Mts of vegetable oil.
- Kenya Red Cross Society distributed assorted food items to Laisamis Sub-county (900 households), Moyale Sub-county (503 households) and Saku Sub-county (1,726 households) with each household receiving 20kg of rice, 10kg of sugar, 10kg of flour, 5 litres of vegetable oil, 10kg of maize, 5kg of beans and 1kg of salt.
- Child fund Kenya supported 200 HHs in Sagante/Jaldesa and Karare ward with 64 bags of 25kgs rice, 32 bags of 50kgs of maize,20 bags of 50kgs of beans and 17 cartons of 1 litre each.

7.2 Non Food Aid

- Unconditional Cash transfer to HSNP II beneficiaries through National Drought Management Authority targeting 20,452 households received Kshs.5, 400 each totalling to Kshs. 110,446,200.

- National Drought Management Authority supported water trucking across the County and provision of fuel subsidy worth 24,000 litres of diesel to 14 strategic drought fall back boreholes. NDMA supported borehole rapid response team (BRRT) and paid allowances to turn boys, drivers and officers during water trucking.
- National Drought Management Authority supported livestock core herds with nutritive livestock feeds (drought pellets) worth 10080 bags of 50kg.
- County Government of Marsabit supported water trucking to few far flung areas and institutions in Moyale, Saku and Laisamis Sub-counties.
- County Government of Marsabit and Concern World Wide supported Borehole Rapid Response Team(BRRT) during borehole emergency breakdowns.
- County Government of Marsabit repaired water bowsers to enhance water trucking.
- USAID Nawiri in collaboration with CARITAS supported cash transfer at Kshs.5000 per month for 4 months ending in September 2021 targeting 1300 households– Loglogo ward 149 HH, Turbi-267 HH, Dukana-348 HH, Illeret -142 HH and Maikona -394 HH. Rehabilitation of boreholes -procurement of 3 new Gen sets for strategic bore holes
- USAID Nawiri in collaboration with CARITAS provided fuel subsidy to strategic boreholes worth 7500 litres of diesel. Distributed hay /fodder distribution to 600 households and drought tolerant seeds to 325 households in Saku sub county. Supported mass screening North Horr /Laisamis sub county.
- CARITAS is currently supporting 1000 households in Moyale Sub-county with one off cash transfer of Kshs.15, 000 (covering three months through FAO support).
- PACIDA procured livestock feeds for distribution (800 bags of drought pellets) and currently supporting water trucking to areas facing acute water shortage.
- PACIDA supported borehole rapid response team, repair of Elhadi and Forolle boreholes by providing submersible motors and draw pipes.
- World Vision Kenya supported 5 schools in Golbo with 10,000 litres of plastic water tanks. Also supported 600 households in Loiyangalani and 600 households in Golbo with cash transfer of Kshs. 3,000.
- FAO will support 3,000HH for the OND season with assorted inputs (6000 Kg of cowpeas, 8000 Kg of beans, 5000 Kg of maize, 1600 of 25kg of kales, 1600 of 25kg of Ethiopian kales).
- Integrated outreach services in 42, 14 and 5 sites in North Horr, Laisamis and Saku respectively. (34.6% coverage) by CWW, KRCS, CCM, THS and NAWIRI.
- Integrated management of acute malnutrition in all 82 health facilities supported by UNICEF, WFP, MOH, SND and NAWIRI.
- KRCS through the support of UNICEF is implementing Rapid Life-saving Health Emergency Response to drought, floods and associated diseases outbreaks and effects of COVID-19 in Laisamis and North/Horr Sub Counties to ensure continuity of health services to drought affected communities and those living far from static facilities through integrated outreach services, coordination and monitoring of the response interventions and awareness creation for all emergency affected communities (children and pregnant women) for increased access to emergency life-saving health interventions.
- Welthungerhilfe supported rehabilitation of 6 boreholes in Laisamis (Laga Feregi, Ulauli, Laisamis borehole-2) and Moyale (Odda) and Turbi (Dosawachu, Burgabo) Sub-Counties with a cost of Kshs. 4,822,876.36 as part of covid-19 recovery initiative.

- SND engaged youths in Songa and Badasa locations in Saku sub-county on the importance of peaceful coexistence and shunning of harmful traditional practices like cattle rusting which more often triggers interethnic conflicts.
- SIF is undertaking water trucking targeting 450 households in Sagante and Karare wards.
- FH-K supported water trucking in schools and communities where a total of 105 trips was covered.
- Child Sponsorship (CSP)- distribution of relief supports with food items to 70 households in Dogogicha and Gufu Ali in Saku and distributed of 1604 school uniforms to vulnerable children,
- ERIKS Children Projects in partnership with ERIKSJALPHEN supported CRC training in Segel, Kubi Qallo, Daaba pry and Qicha/Qiltipe Sololo, completion of Kubi Qallo Classroom and near completion of Teachers Quarter in Segel.
- FBA (Focus Base Action) Pilots- training of Lead farmers for fodder production and purchased 3000 bales of Grass for groups in Segel for drought mitigation efforts. Supported 15 farmers to cultivate 26 acres of Land
- Concern World Wide supported update of IMAM Surge data and identification of seasonal patterns in consultation with health facility staff, CHVs/CHAs, and communities -during the reported month, the team was able to follow up on the ongoing IMAM pilot for the three components in North Horr and Laisamis.
- Concern World Wide supported roof water catchment for 4 institutions (Mudhe and Burgabo ECD; Burgabo and Tigo dispensaries). Installation of 2KM and 3KM water pipeline in Sakadara and Elhadi communities respectively. Rehabilitation of 3KM pipeline for Kargi community to enhance continuous water access.
- Concern World Wide provided water storage tanks in communities in Korr-Ngurunit, Logologo, Sololo, Obbu and Uran to enhance storage of trucked water and reduce frequency of water source visits
- Concern World Wide supported supervision at health facility (ensure adapted IMAM Surge is set up- facility level and community levels. In North Horr Sub County, technical monitoring was conducted in 10 health facilities namely; Hurri hills, Forolle, Elhadi, Balesa Bubisa, Turbi, Burgabo Gus, Hurri Hills and Elgade.
- Concern World Wide provided fast moving spare parts (10 motors of various sizes). Concern World Wide purchased and delivered to the Department consignment of fast moving spare parts, mainly motors of various ratings.

8.0 **FOOD SECURITY PROGNOSIS**

- Based on IGAD-ICPAC forecast, the start of the season is expected to be delayed by up to 2 weeks, and there is a lower than usual chance of exceeding 200 and 300 mm in the next rainy season hence indicative of moderate to severe drought conditions in Marsabit County.
- The 3-months vegetation condition index remained in the normal vegetation condition band. With expected persistence of the forecasted drier than usual conditions, the 3-months vegetation condition index will reduce and possibly shift to the moderate vegetation deficit in the month of October.
- Forecasted soil moisture that indicates a possibility of deterioration during the long dry spell period occasioned by failure of the long rains and high evapotranspiration rate. Drier than usual conditions will worsen the soil moisture quotient across the County.

- Approximately 98 percent of all surface water sources are depleted in North Horr, Laisamis and Saku Sub-Counties while 10 percent of sub-surface water sources are recharged in Moyale Sub-County. As the long dry spell progresses coupled with intense livestock migration, recharge levels of sub-surface water sources are likely to reduce further across the livelihood zones.
- Household water distance of 9.5km is above the short term average household water distance by 61 percent whereas livestock trekking distance of 26.5Km is above normal by 51 percent. As the severe drought situation progresses, watering frequencies are expected to reduce further for all the livestock species across the livelihood zones and households water distances likely to increase to an all-time high.
- Milk production and consumption are significantly below the long term average attributed to mass migration of 90 percent livestock herds to the dry season grazing areas and expected to decline further with the progression of drought.
- Terms of trade for North Horr and Laisamis Sub-Counties were considerably below the short term average mainly due to high maize prices and abysmal market systems. With expected simultaneous increase and decrease in maize and goats' prices respectively, terms of trade are likely to deteriorate further in the next one month and fall below the long term average.
- Food consumption score shifted to the borderline band while households adopted crisis coping strategies to cope with short term food consumption gaps. 2.5 percent, 53.6 percent and 43.9 percent of the households adopted reduced consumption based coping strategies that were minimal, stressed and crisis respectively.
- Trends in SFP and OTP admissions in both North Horr and Laisamis showed a steady rise. The admissions are expected to increase further as the severe drought situation progresses which will certainly result to surge in morbidities and malnutrition.

9.0 RECOMMENDATIONS

- Immediate food assistance to the most vulnerable populace in Marsabit County
- Scale up active case finding in all 85 functional community units covering 176 sites in North Horr, Laisamis, Moyale & Saku Sub-counties.
- Reprioritization of integrated outreach support based on community based surveillance finding to ensure all the hot spot areas are supported to enhance access to emergency nutrition services with continued surveillance through IMAM surge monitoring and support.
- Up-scaling of various safety nets programmes across the County.
- Water trucking to address the immediate water needs for both human and livestock in the water scarce areas and provision of fuel subsidy to strategic boreholes.
- Repair of strategic boreholes, servicing of gensets and rehabilitation of grounded water bowzers for timely drought response.
- Stock piling of vaccines, strategic vaccination and enhanced livestock disease surveillance.
- Enhanced disease surveillance and monitoring to effectively treat livestock and reduce losses.
- Activation of satellite livestock markets and commercial destocking to salvage pastoralists against imminent losses due to severe drought. Provision of livestock feeds and supplements to vulnerable households.

- Sustained and enhanced peace dialogue meetings in conflict hotspots areas.