

A Vision 2030 Flagship Project



National Drought Management Authority SAMBURU COUNTY

DROUGHT EARLY WARNING BULLETIN FOR JANUARY 2021

JANUARY 2021 EW PHASE

Drought Status: **NORMAL**



Shughuli za kawaida

Early Warning Phase Classification

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

Drought Situation & EW Phase Classification

Biophysical Indicators

- The county has predominantly remained sun and dry during the month of January 2021. Forage condition and water resources are on down decline trends.
- Majority of open surface water sources have dried up in pastoral areas with few holding around 10 percent of their capacity while in Agro pastoral livelihood open sources are holding about 40 percent full.

Socio Economic Indicators Details

- Livestock body condition was good to fair however with deteriorating trends. Households and livestock trekking distances increased. Majority of cattle across the livelihood zones have moved to dry grazing season areas.
- Decline was recorded in milk production and consumption at household.
- Livestock market prices have remained above average for all livestock species in the sampled markets.
- Maize/posho prices remained within the long-term average.
- Maize to goat ratio has significantly remained above the long-term average supporting access to income and food access.
- Severely malnourished children stand at 0.2 percent and moderately at 26.7 percent as measured by family Mid Upper Arm Circumference (MUAC).

Biophysical Indicators	Value	Normal range/Value	
VCI-3month (County)	45.54	35-50	
VCI-3month (Samburu east)	39.04		
Production indicators	Value	Normal ranges	
Livestock Migration Pattern	Intra & inter Migration	No Migration	
Livestock Body Conditions	Moderate to Good smooth appearance	Good Smooth appearance	
Milk Production (Litres/Household/day)	1.7	>1.42	
Livestock deaths due to drought	No death.	No death	
Access Indicators	Value	Normal ranges	
Terms of Trade (TOT)	71.5	>59.67	
Milk Consumption (Litres/Household/day)	1.2	>1.21	
Return distance (km)	Household	6	<5.0
	Livestock	11.2	<11.43
Utilization indicators	Value	Normal ranges	
MUAC (%) Severely Malnourished	0.2	2.1	
FCS (%)	Poor	5.0	0 - 21
	Borderline	32.3	21.5 - 35
	Acceptable	62.7	>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

Generally dry weather conditions were experienced throughout the month across the county. Notably, daytime (maximum) temperatures increase and night-time (minimum) temperatures decreased across the livelihood zones. The county typically experiences a dry spell in the month of January to March across the livelihood zones.

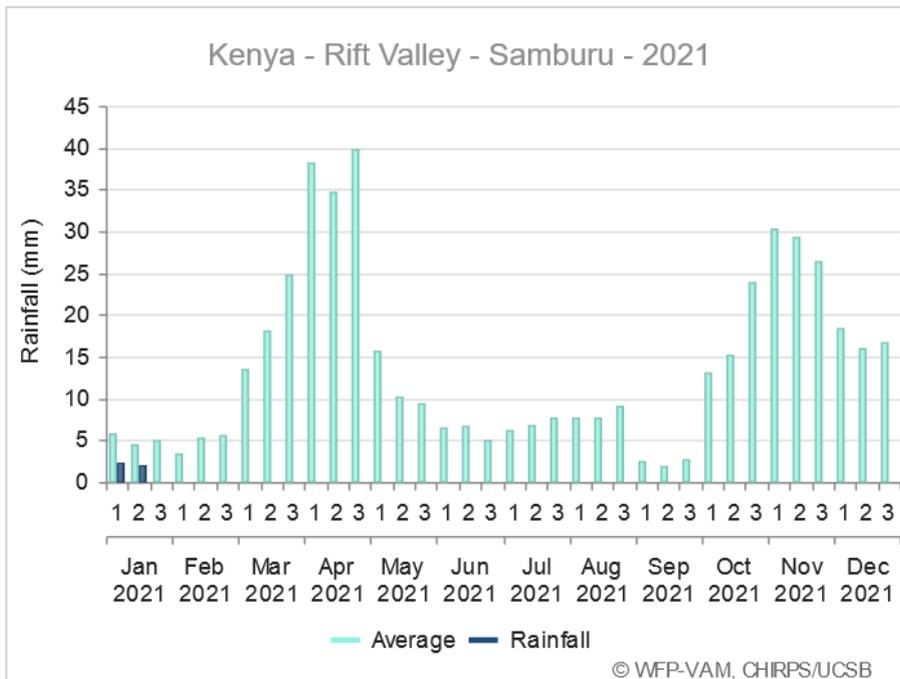


Figure 1: Rainfall Estimates (RFE) Trends

1.2 Amount of Rainfall and Spatial Distribution

Satellite based data from Climate Hazards Group InfraRed Precipitation with Station data (CHIRPS), indicates that county received drizzling which were 61 percent and 57 percent below the long-term average (Figure 1).

Temporal distribution was poor and spatial distribution was uneven across the livelihood zones.

1.3 Other Shocks and Hazards

1.3.1 COVID-19 Pandemic

- The corona virus continued to be reported in the county with a total cumulative positive case of about 188 as at end of January 2021. The county also reported two (2) deaths related to COVID-19 complications as per the county department of health briefs.

1.3.2 Locust Invasion

- Second wave of desert locust continued to be reported in hotspot areas of Ngutuk Engiron, Lerata, Sereolipi, Sarara, Kiltamany, Opiroi, Seren, Tuum, Raraiti and Latakweny. The locust had insignificant impact on the rangeland resources such as pasture, browse and crops.
- FAO and other partners have been putting control measures through intense aerial and ground control operations to reduce the current swarms so that the scale of the upcoming breeding may be lower.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 Vegetation Condition

2.1.1 Vegetation Condition Index (3 month-VCI)

- The forage condition has been on deteriorating trends as a result of currently prevailing dry weather conditions across the county. The vegetation condition is projected to decline further in the next month as livestock congregate in the dry season grazing areas. This is likely to lead to depletion of available pastures and water resources.
- Frequent and intensity of grazing in some grazing fields have led to rangeland degradation thus occasioning increased growth of invasive alien plants.
- According to satellite data as at January 2021 showed vegetation greenness above normal as measured by VCI. The above vegetation greenness was driven by above average long rains that supported good rangeland regeneration. The VCI also indicates that in Samburu East, the vegetation greenness is below the long-term average in the month of January 2021 (Figure 2).

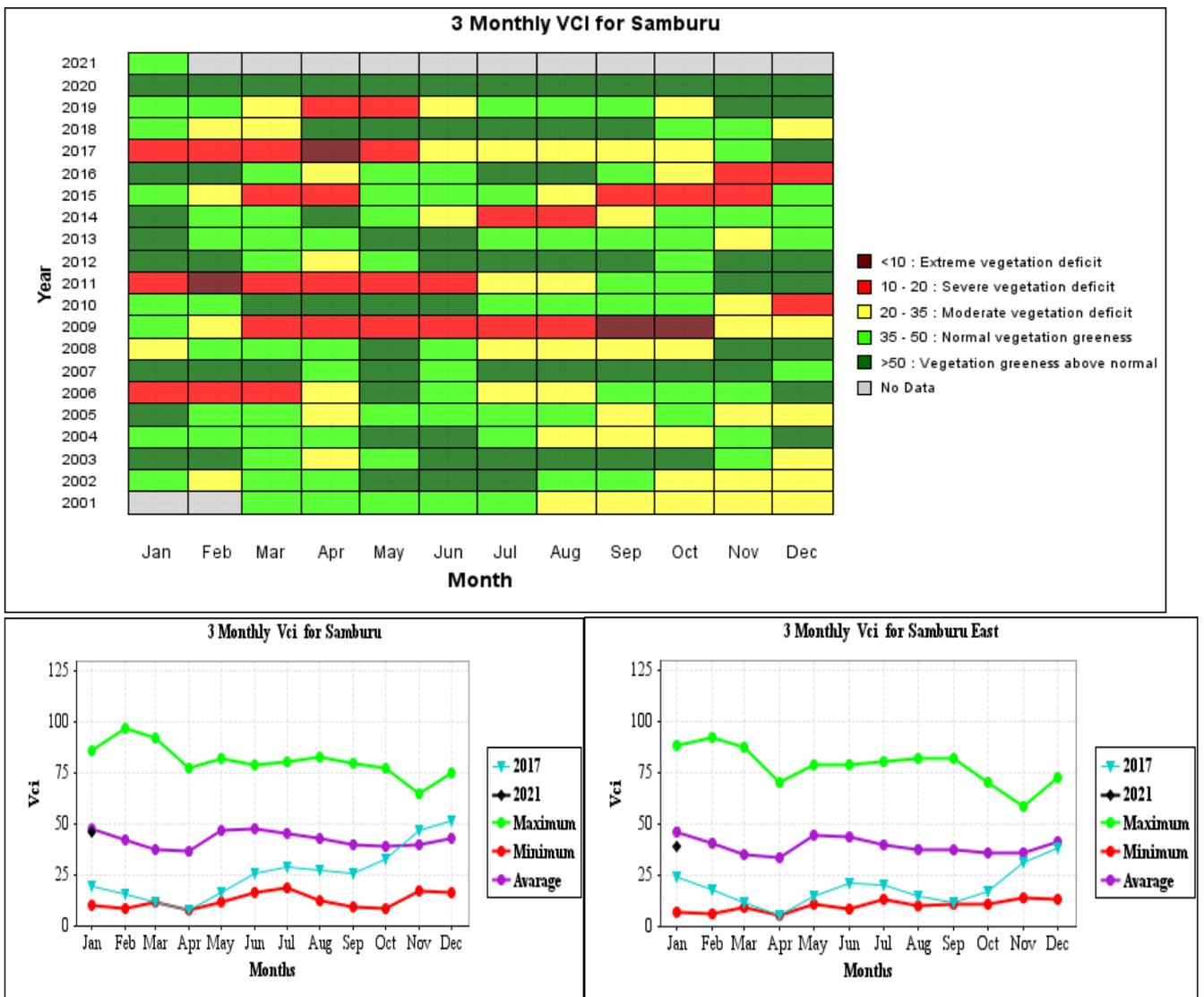


Figure 2: VCI Trends for Samburu County
(Source: Boku University)

2.1.2 Forecast for Vegetation Condition (3 month-VCI)

According to ASTROCAST satellite imagery, the vegetation condition is project to deteriorate across all the livelihood zones through end of February 2021. The VCI index is forecasted to deteriorate to 30.6, 45.8 and 52.9 in Samburu East, North and West sub counties respectively from 39.04, 49.01 and 60.26 respectively. The projected likelihood of vegetation deterioration is associated to ongoing dry spell season expected to continue till the onset of the 2021 long rains season. The dry spell is likely to induce further soil moisture shortage in the root zone.

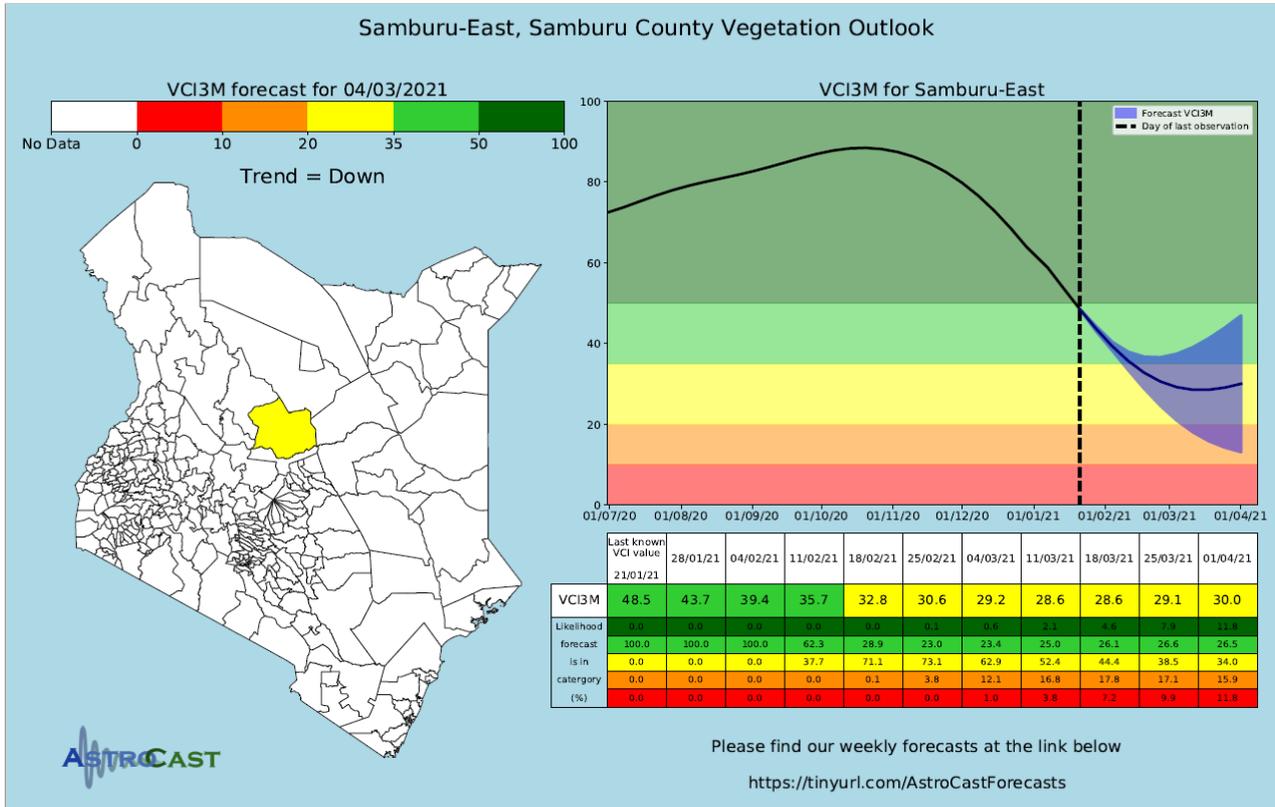


Figure 3: VCI Forecast Outlook for Samburu East Sub-county

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

Pasture has deteriorated in the pastoral livelihood zone and is in poor condition which is normal at this time of the year and is projected to last for about a month apart from insecurity prone areas of Samburu

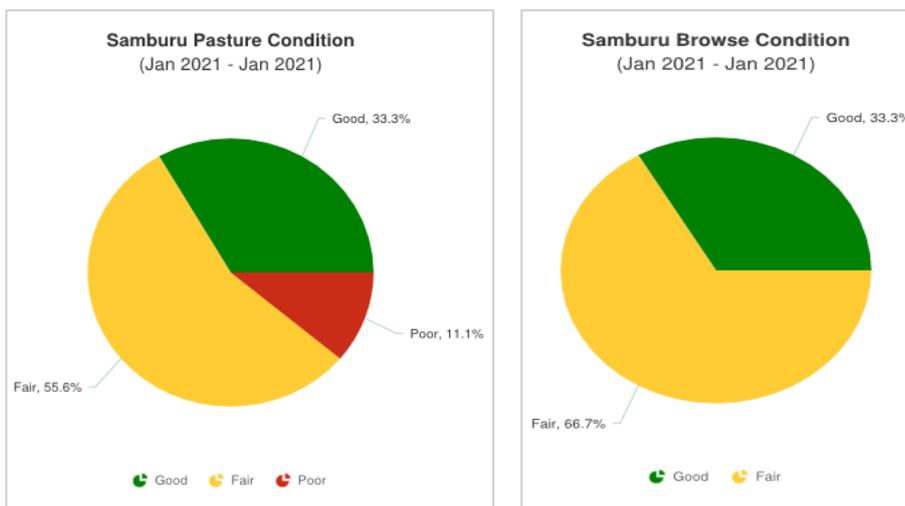


Figure 4: Pasture and Browse Condition

North where condition is varying between good to fair. Conflict has been a major impediment to access the dry season areas in Samburu north. In the Agro-pastoral zone, the situation is poor however it is fair in Kirisia hills. Dry and sunny weather conditions coupled with south-easterly winds have occasioned wilting of pasture and browse across the livelihood zones.

Farmers who conserved small plots are harvesting hay especially in Loosuk and

Baawa areas. The livestock feeds situation is below normal and is projected to last for about 1 month. Some amount of crop residue especially maize stover and wheat hay will be available to livestock after harvesting of the crop.

Browse situation in pastoral livelihood zone is fair but below normal and is projected to last for 2 months, whereas in the normal state it would have taken up to 5 months. In the Agro-pastoral livelihood zone its good (normal) in the Kirisia hills and may last the next 3 months. Interviewed community key informants indicated that a proportion of 33.3 percent responded pasture and browse is good. A portion of about 11.1 percent reported that pasture condition is poor (Figure 4).

2.2. Water Resource

2.2.1 Sources

Hand dung well, boreholes pans and dams were the main used water sources by livestock and households. Majority of households approximately 56.6 percent relied on wells for water used for domestic and livestock. Boreholes, pans and dams were used by about 10.5 percent and 23.7 percent of the households respectively. Surface sources in Agro pastoral livelihood zone are holding about 50 percent of their capacity whereas those in pastoral currently hold about 10 percent of their capacity due to inadequate rainfall during the short rains, high temperatures that increased evaporation, seepage due to high soil porosity and breaching caused by flooding during the long rains. The current water sources used both by livestock and household are normal at this time of the year.

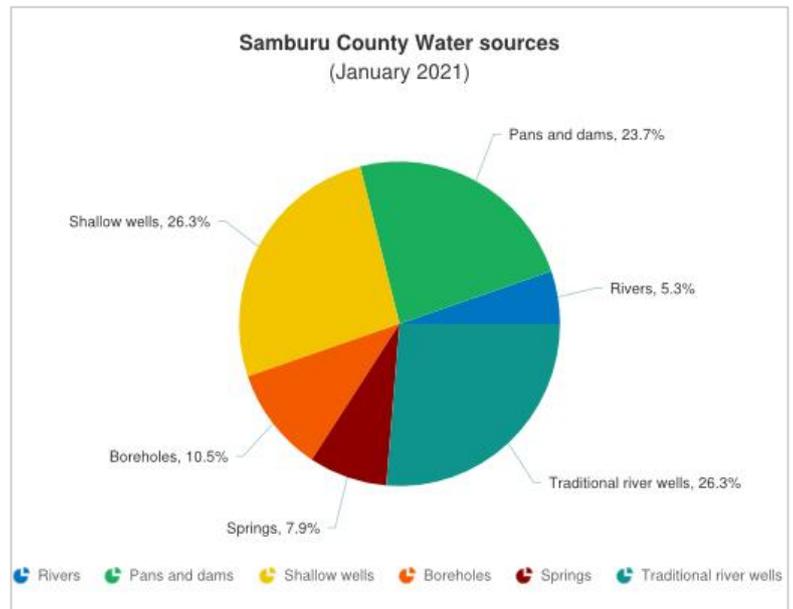


Figure 5: Frequently used Water Sources

Several boreholes such as Loibor Ngare, Lorian, Nkopeliani, Loosuk, Garma, Ngamata, Lchoro Lelerai, Lesuwua, Lolmolog, Lailela, Nachola, Tankar, Lenkusaka, Ntepes, Nkutuk Elmuget, Louwa, and Lemolog are not operational due to breakages, abandoned due to high fluoride and inaccessibility due to insecurity (Kawop). Households do store drinking water in closed 20 litres jerrican. Households in urban centres are using water treatment chemical and other boil drinking. Household water consumption was averaging between 5 – 12 litres per person per day in Agro pastoral livelihood zone and 4 – 8 litres per person per day in Pastoral livelihood zone. The cost of water in pastoral livelihood zone was Ksh 5-10 per 20 litre jerrican while in Agro pastoral was Ksh 2-5 per 20 litre jerrican which is normal. In urban centres of Maralal, Wamba, Kisima and Archers, vendors are supplying water at a cost of Ksh 10 – 20 per 20 litres jerrican inclusive of vendors transportation cost while in Baragoi, a 20 litre jerrican is going for up to Ksh 40.

2.2.2 Household Access and Utilization

- The household's distances have been on upward trends since December 2020 due to drying of wells and other open surface water sources in pastoral livelihood zone. During the month of January 2021, household trekking return distances increased to 6 km from 4.4. km recorded in last month.
- The longest trekked distances in search of water were reported in Wamba west and Waso wards with households trekking between 9 – 11.3 km to nearby water points.
- The current average return trekking distance was comparable to the 2018-2020 long-term average at similar period of the year in spite of the increase in trekking distances (Figure 6).

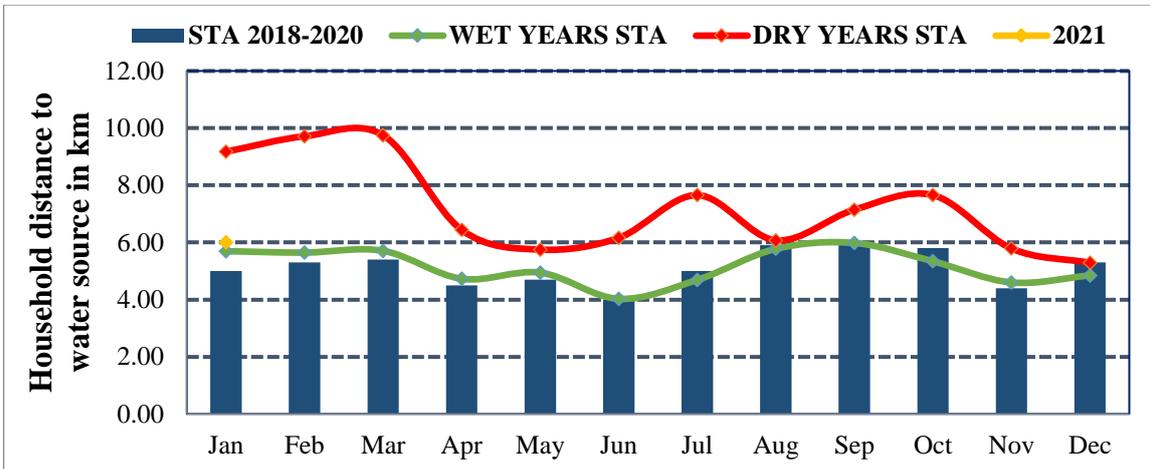


Figure 6: Average Distance Travelled by Households in Search of Water

2.2.3 Livestock Access (Grazing Distances to Water Points)

- Worsening in forage condition and drying up of surface water points has occasioned livestock to walk long distances in search of pasture and water and others migrating to conflict prone areas.
- The current livestock trekked distance increased by about 47 percent to 11.2 km from last month average distance of 7.6 km recorded in December 2020. The current return average distance is within the 2018-2020 average at the same time of the year (Figure 7).

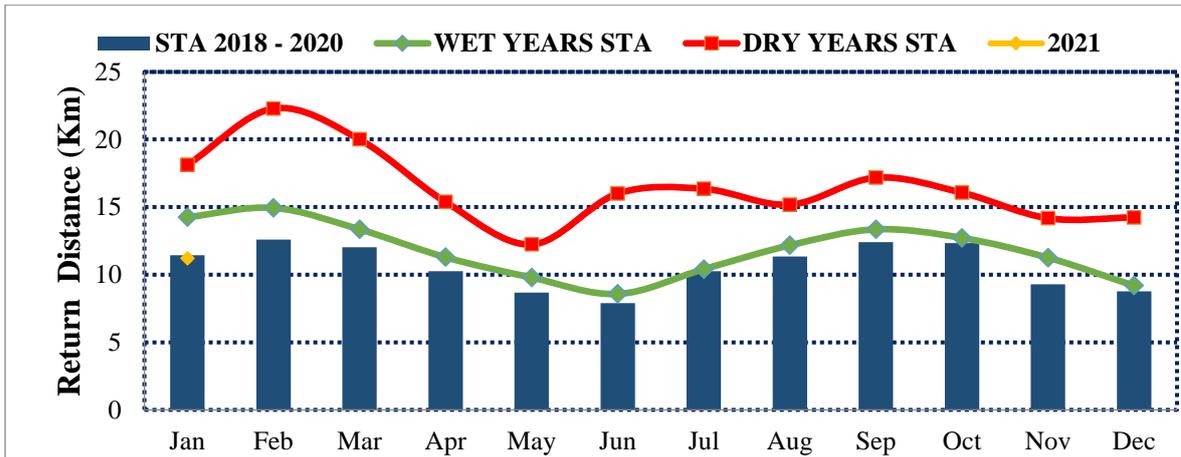


Figure 7: Distance Travelled from Grazing Areas to Water Points

3.0 PRODUCTION INDICATORS

3.1 Livestock Production

3.1.1 Livestock Body Condition

- Declining forage and water resources resulting in increase in trekking distances are driving declines in livestock productivity. Livestock body condition for all species have remained good to fair. The body condition has been sustained by available pastures and browse in the dry season grazing areas. Pastures and water are diminishing due to influx of cattle to dry grazing areas in search of forage as the dry spell persist.

3.1.2 Livestock Diseases and Deaths

- The department of livestock and Veterinary has confirmed an outbreak of New Castle disease in poultry across the county which resulted in high poultry mortalities.
- Community members continued to reported clinical signs of Foot and Mouth Disease (FMD) across the livelihood zones. The county department has collected the samples in Suguta ward to confirm the infection and the antigen strain type detection. Endemic diseases such as contagious caprine pleuropneumonia (CCPP), Enterotoxaemia, Sheep and goat Pox were reported across the livelihood zones. No unusual occurrence of livestock mortalities reported across the livelihood zones.

3.1.3 Milk Production

- The current household milk production slightly decreased to 1.7 litres per household per day from 2 litres recorded in last month. The production decrease can be linked to cattle migrations to dry season grazing areas coupled with decline in livestock body condition.
- The ongoing migration of livestock to dry season grazing zones is most likely to drive reduction in milk availability at the household level for the next two months.

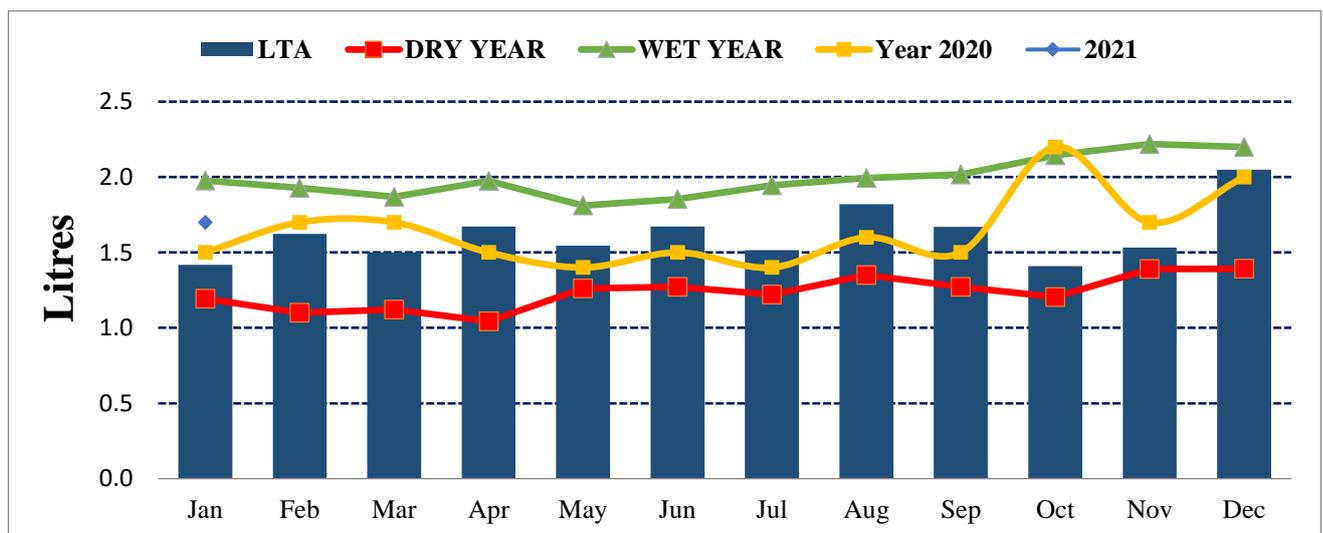


Figure 8: Trends in Milk Production per Household

3.2 Rain Fed Crop Production

3.2.1 Stage and Condition of Food Crops

- The October to December 2020 shorts rains crops have wilted and community reported almost total maize and beans failure along the lowlands of Agro pastoral livelihood zone.
- Crops planted in the 33-acre Lulu irrigation farm have reached maturity stage however diseases such as head smut were noticed.

3.2.2 Harvest of Crop

- Few farmers in Baawa had insignificant yields of beans which were below the normal expected harvests.

4.0 MARKET PERFORMANCE

4.1 Livestock Prices

4.1.1 Cattle Prices

- Main markets within the county are operational and well stationed with normal volumes of livestock and staples. The current average price was Ksh 20,533 which was eight percent above the 2018 – 2020 average price. The prices have remained stable attributed to good to fair body conditions driving better prices at the market.
- Terminal market of Lolkuniani has maintain high prices for cattle averaging at Ksh 26,000 for a medium size bull. Low prices of about Ksh 16,100 was reported in LPus which is mainly a small stock market.
- The current average cattle prices are stable and within the normal average ranges at the time of the year (Figure 9).

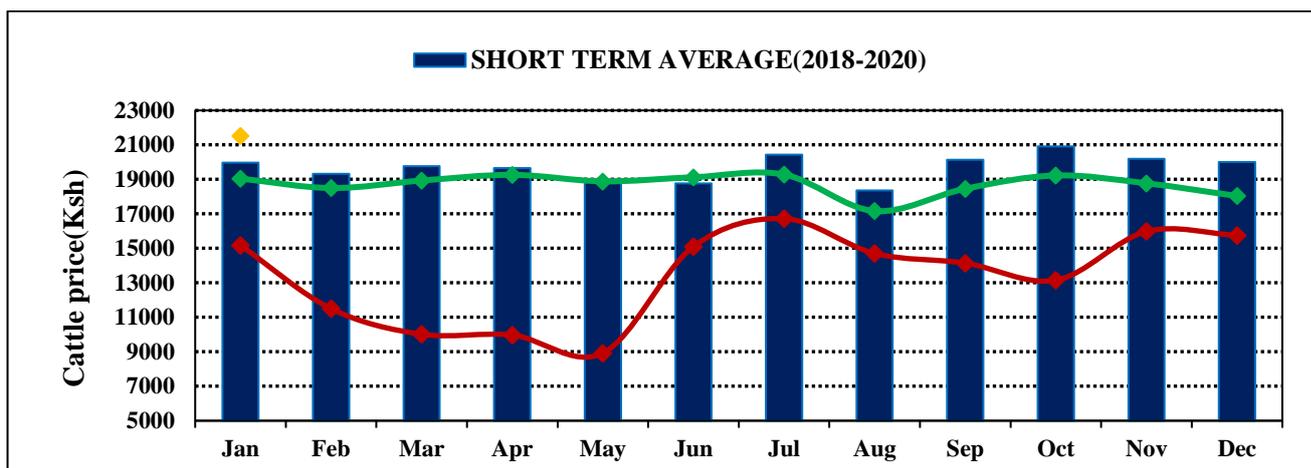


Figure 9: Cattle Selling Price Trends at Market Level

4.1.2 Goat Prices

- The current selling average price a medium size goat was Ksh 3,338 which was stable compared to last month average price of Ksh 3,241. However, the current price has remained above 2018-2020 long term average by 17 percent at similar period of the year (Figure 10).
- Goat price have been above the long term due to good body conditions as a result of favourable weather conditions driving favourable rangeland condition.
- High prices were reported in Lolkuniani market with an average of Ksh 4,725 and low prices recorded in Illaut market at Ksh 2,000.

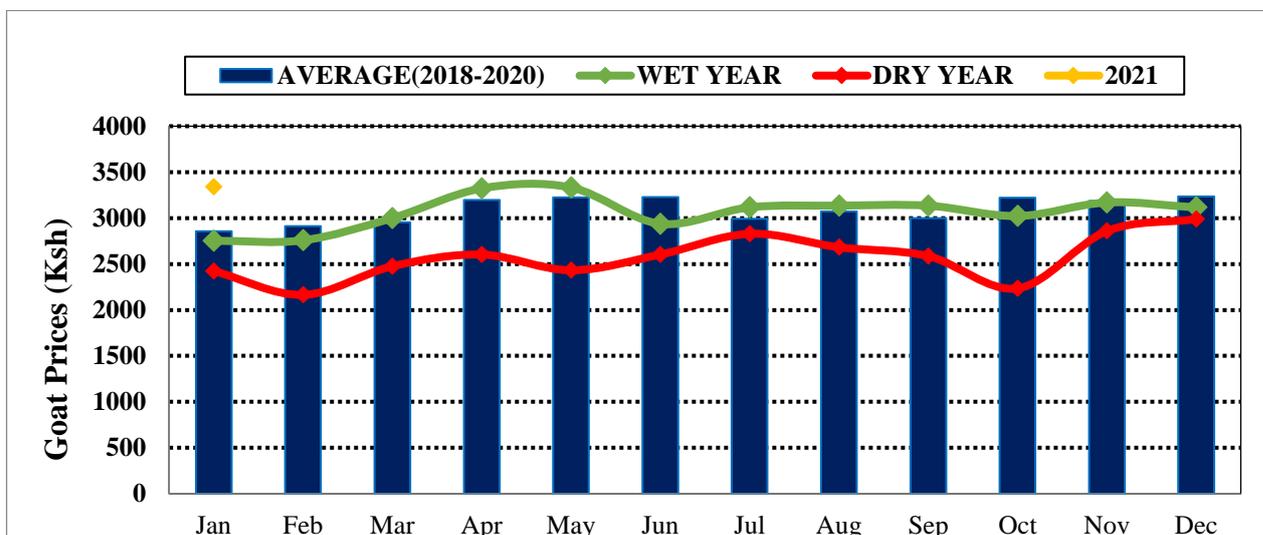


Figure 10: Goats' Selling Price Trends at market Level

4.1.3 Sheep Prices

- The current average selling price for a medium sized sheep slight decrease by seven percent to Ksh 2,730 from Ksh 2,944 recorded in the month of December 2020. The decrease can be linked to deterioration in sheep body condition resulting from reduction in vegetation cover and drying up water sources.
- According to community key informants, the high average price for a sheep was recorded in Lpus and Lolkuniani markets at Ksh 3,200 and Ksh 3,217 respectively. Illaut and Archers post markets recorded low prices averaging at Ksh 2,000 and Ksh 2,500 respectively for a mature sheep.
- Sheep current average price despite the decrease has remained above the 2018-2020 short term average by 10 percent at the same time of the year (Figure 11).

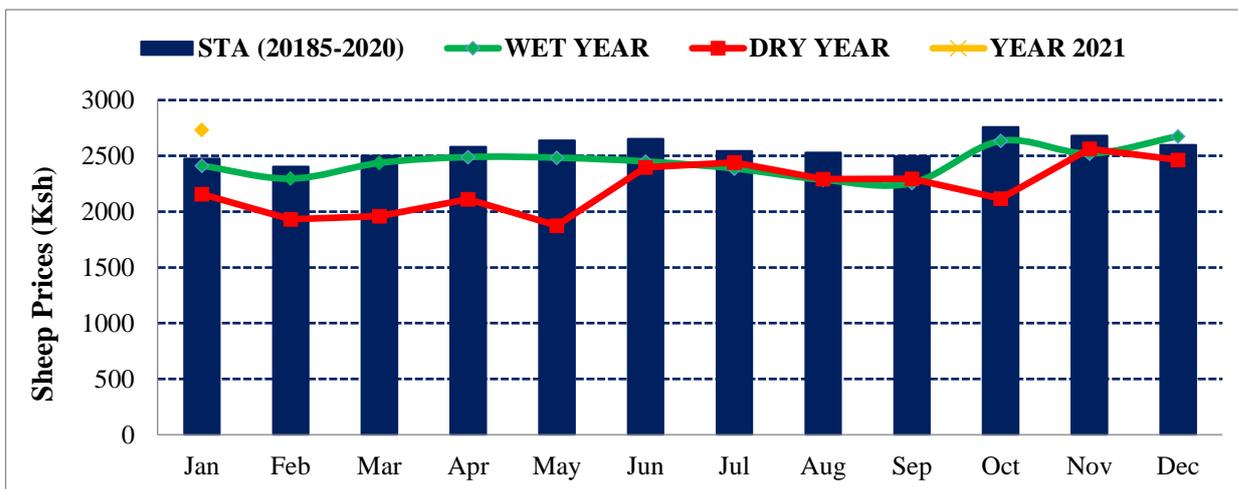


Figure 11: Sheep Selling Price Trends at Market Level

4.2 Crop Prices

4.2.1 Posho (Maize)

- Maize prices have maintained seasonally stable trend attributed to availability of cereals in the markets driven by local harvests from the long rains harvest coupled with imports by traders from Meru, Nakuru and Uasin Gishu counties.
- The current average price per kilogram was Ksh 46.7 compared to an average price of Ksh 47.1 per kilogram recorded in last month.

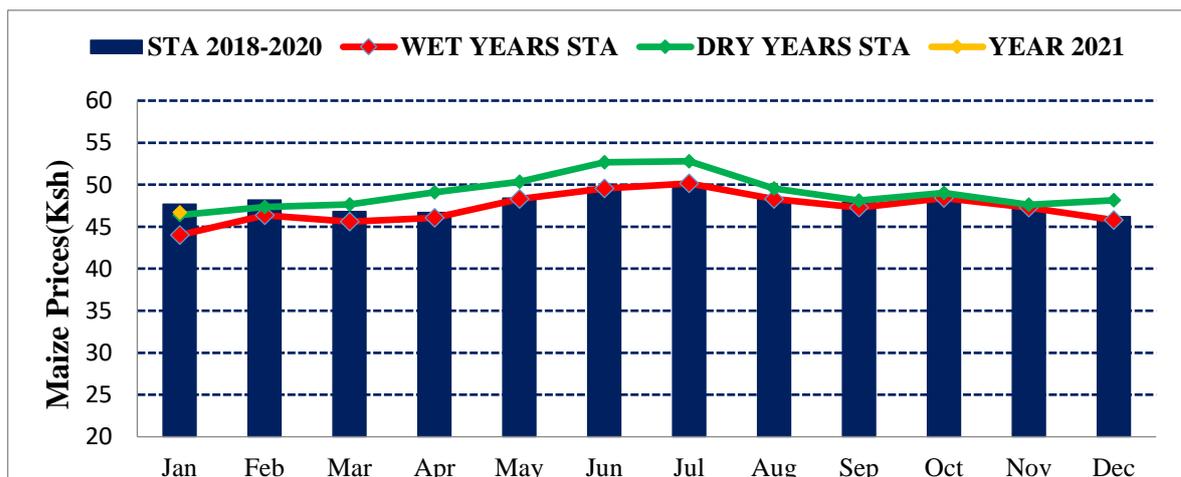


Figure 12: Maize Meal Price Trends

4.3 Terms of Trade (TOT)

- The terms of trade have been favourable to households supporting better income access hence better access to staples in the market. Currently, households are able to buy 71.5 kilograms of maize by selling one medium size goat which is comparable to last month average of 68.9 kilogram fetched

from proceeds of one goat.

- High goat to maize ratio was recorded in Agro pastoral livelihood zone with households exchanging one goat for 84.3 kilograms. Better terms of trade in Agro pastoral livelihood zone can be attributed to availability of maize thus low maize prices. Households in Pastoral livelihood zone were able to fetch 67.1 kilograms from income got from selling one mature goat.
- The current goat to maize ratio was above the 2018 -2020 short-term average by 20 percent at the same period of the year (Figure 13).

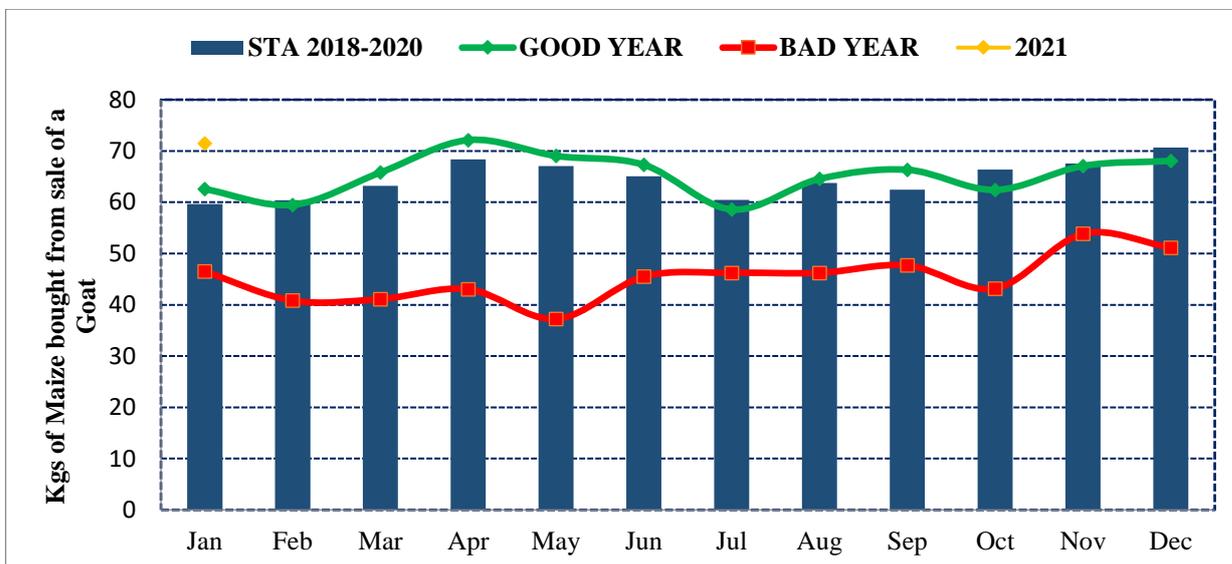


Figure 13: Trends in Terms of Trade (TOT)

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

- Household consumption like production decrease attributed to migrations of cattle in search of forage and water. Current average household consumption was 1.2 litres per household per day compared 1.4 litres recorded in last month.
- Much of the milk produced is consumed at household level except farmers hawking milk in urban centres retailing at between Ksh 60 – 70 per litre. In the localized areas of pastoral livelihood zone, camel milk is sold at around Ksh 90 – 100 per litre.
- The current milk consumption patterns are stable compared to same time last year and within the long-term average at similar period of the year (Figure 14).

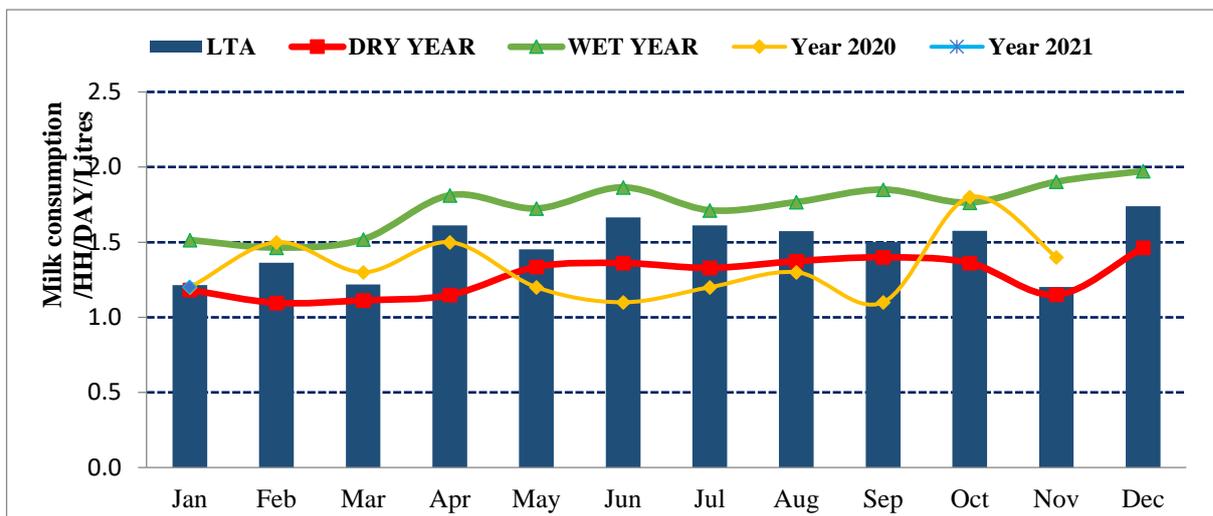


Figure 14: Trends in Milk Consumption per Household

5.2 Food Consumption Score (FCS)

- The availability and access of diverse food groups at household and market level has supported stable food consumption patterns for majority of households. Generally, a large proportion of households of about 62.7 percent had acceptable food consumption. This implies assumption that household are consuming staples and vegetables complimented by consumption of oils and pulses.
- In pastoral livelihood zone, 6.1 percent of households had poor food consumption indicating consumption of staples and vegetables only daily in a week.

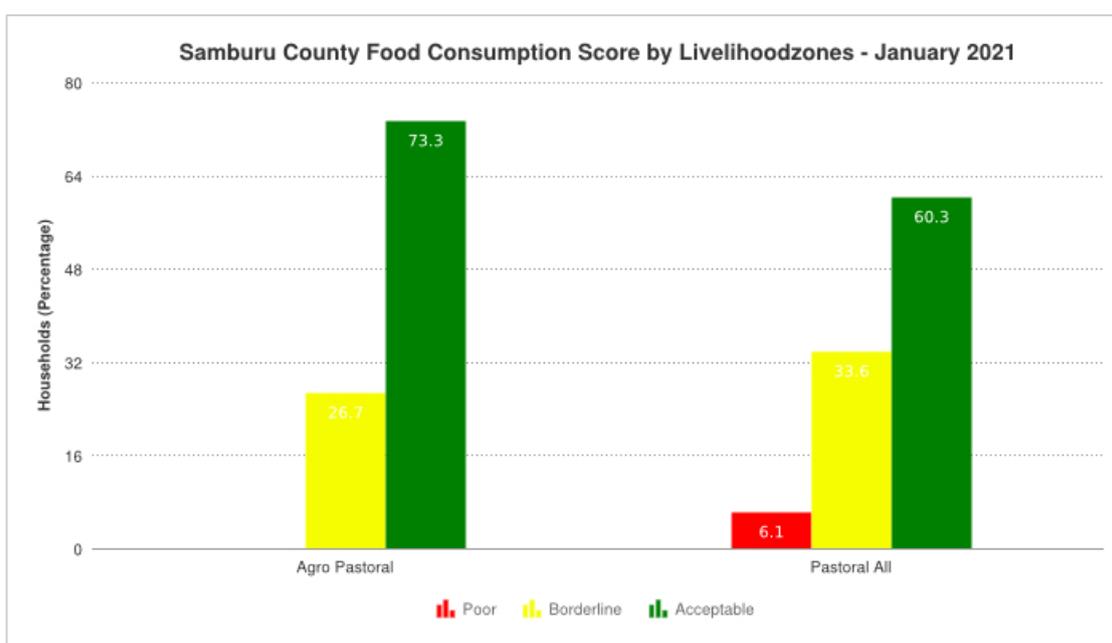


Figure 15: FCS Per Livelihood zone

5.3 Health and Nutrition Status

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

- The malnutrition rates were almost comparable to that of last month. The proportion of sampled children under five categorised as severely malnourished stands at 0.2 percent and moderately malnourished was 26.7 percent as per Family MUAC measurements.
- The high malnutrition rates are possibly influenced by poor child maternal care practices coupled with poor health care seeking behaviour attributed to fear of COVID 19.

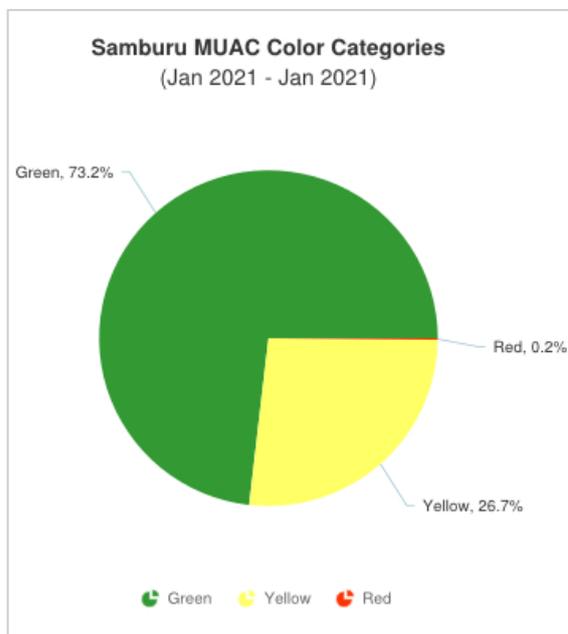


Figure 16: Nutritional Status (Family MUAC) for Children Under Five

5.3.2 Health

- According to community reports, children suffered with malaria like chills and breathing difficulties. Out of the sampled children, five percent reported having fever with chills like malaria and four percent suffered fever with breathing difficulties.

5.4 Reduced Coping Strategies Index (rCSI)

- During the month under review, the household's food related mean coping index was 10.57 which was comparable to 10.94 recorded in last month. Households reported frequently employing the following which include relied on less preferred and/or less expensive food and reduced the portion of meals taken in a day and borrow from the neighbours.

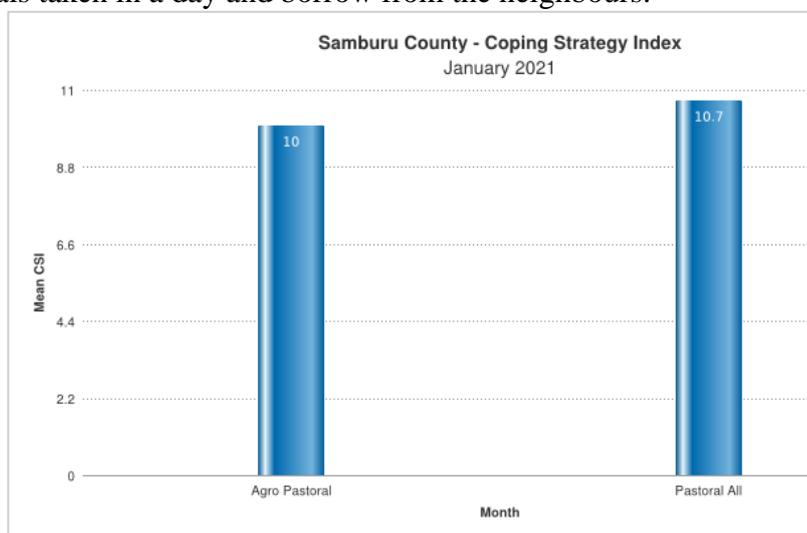


Figure 17: rCSI per Livelihood Zone

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Non-Food On-going Interventions

Table 1: Non-food On-going Interventions

SECTOR	INTERVENTION	IMPLEMENTERS
Livestock	<ul style="list-style-type: none">Supporting farmers to harvest and bailing hay	County Government, DRSLP
Water	<ul style="list-style-type: none">Repair and servicing of the non-functional boreholes	County Government
Agriculture	<ul style="list-style-type: none">Ongoing construction of Kurungu livestock sale yard	DRSLP
Health	<ul style="list-style-type: none">Community led total sanitation (CLTS)COVID-19 sensitization	MOH

6.2 FOOD AID

- There was no humanitarian relief food aid distributed during the period under review.

7.0 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- Incidences of communal conflicts continued to be reported in the areas surrounding Baragoi between the Samburu and Turkana communities living in Samburu north sub county. The conflicts have led to loss of lives, livelihoods and limited access to grazing fields with pastures.

7.2 Migration

- Seasonal usual internal movement of cattle continued to be observed to dry grazing areas of conserved areas of Kirisia, Matthew ranges, Ndoto and Nyiro hills. Majority of cattle from Samburu East are moving towards El-barta plains, Marti plain and Suiyan and other towards Koom. Cattle in Samburu West especially Lodokojek and Baawa areas have moved towards Kirisia. Small livestock species are currently within the homesteads in the wet season grazing areas.

7.3 Food Security Prognosis

- The below normal performance of the short rains with an early cessation is likely to occasion earlier than normal depletion of pastures and drying up of water sources.
- The depressed short rains have resulted to total crop failure which in turn will lead to early depletion of food stocks. Consequently, there is likelihood of households relying on markets for staples thus likelihood in increase of cereal prices in the market
- The onset of January to March dry season is likely to drive further deterioration of Livestock body condition hence likelihood of decrease in livestock market prices.
- Projected increase in cereal prices coupled with expected decrease in livestock prices is likely to result in decline in terms of trade thus negatively affecting income access at household level.
- The ongoing migrations of cattle is likely to lead to low milk production and consumption at household level hence possibility of increase in proportion of malnourished under 5 children. Additionally, migration of cattle is likely to lead to competition of available pasture and water hence likelihood of flare up of conflicts in dry grazing areas.

RECOMMENDATIONS

Table 2: Proposed Interventions per Sector

SECTOR	INTERVENTION	Areas
Water	<ul style="list-style-type: none"> • Fuel subsidy to support genset operated strategic boreholes. • Upscale water trucking to institutions and communities. • Upscale repair of non-functional boreholes in Pastoral areas. 	<ul style="list-style-type: none"> • Samburu north and east sub counties
Agriculture	<ul style="list-style-type: none"> • Post-harvest management trainings to farmers. • Crop pests and diseases control in Lulu irrigation demonstration farm. 	<ul style="list-style-type: none"> • Samburu central
Livestock	<ul style="list-style-type: none"> • Support accelerated cattle off-take • Negotiation for access to pastures in conflict prone areas • Ring vaccination to livestock 	<ul style="list-style-type: none"> • County wide
Health and Nutrition	<ul style="list-style-type: none"> • Integrated medical outreaches to hard-to-reach areas in the county. • Provision of PPEs to frontline worker and Equipping of ICUs. 	<ul style="list-style-type: none"> • Health Facilities
Peace and Security	<ul style="list-style-type: none"> • Continuous inclusive peace dialogue initiatives in warring communities. 	<ul style="list-style-type: none"> • Samburu north
Social Protection	<ul style="list-style-type: none"> • Upscaling of cash transfers to more vulnerable households 	<ul style="list-style-type: none"> • County wide