



A Vision 2030 Flagship Project



National Drought Management Authority SAMBURU COUNTY

DROUGHT EARLY WARNING BULLETIN FOR MAY 2021

MAY 2021 EW PHASE

Drought Status: **ALERT**



Maandalizi ya mapema

Early Warning Phase Classification

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

Drought Situation & EW Phase Classification

Biophysical Indicators

- The March to May 2021 season was characterized by showers that were significantly below the long-term average throughout March and April except for the first and second dekad of May 2021. Forage and water resources were generally below the average.

Socio Economic Indicators Details

- Livestock body varied from good to fair however other especially in Samburu central had fair to poor body condition. Cattle body condition ranged from moderate neither fat or thin to Thin fore ribs visible. Goats, sheep and camel body condition was characterized by good smooth appearance to fair body condition. Household and livestock distances were within the long-term average.
- Selling prices for sampled livestock species were above long-term average across the livelihood zones.
- Current milk production at the household level was below the 2018 – 2020 average.
- Maize/Posho prices have retained a stable trend since the beginning of the year.
- The prevalence of moderately malnourished children under five years was 26.8 percent compared to 25.9 percent reported in the month of May as per the sampled sites data.

Biophysical Indicators	Value	Normal range/Value
VCI-3month (County)	33.83	35-50
VCI-3month (Samburu east)	27.57	35-50
Production indicators	Value	Normal ranges
Livestock Migration Pattern	Internal & External	No Migration
Livestock Body Conditions	Borderline to thin body	Good Smooth appearance
Milk Production (Litres/Household/day)	1.7	>1.55
Livestock deaths due to drought	No death	No death
Access Indicators	Value	Normal ranges
Terms of Trade (TOT)	79.1	>67.03
Milk Consumption (Litres/Household/day)	1.1	>1.45
Return distance (km)	Household	4.8
	Livestock	8
8.67	<8.67	
Utilization indicators	Value	Normal ranges
MUAC (%) Severely Malnourished	0.2	2.1
FCS (%)	Poor	1.8
	Borderline	28.9
	Acceptable	69.3
>35	>35	
rCSI	Mean	9.81
56	56	

- 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

The March to May 2021 long rains season was characterized by depressed and erratic precipitation with late onset. According to Climate Hazards Group InfraRed Precipitation with Station data (CHIRPS)

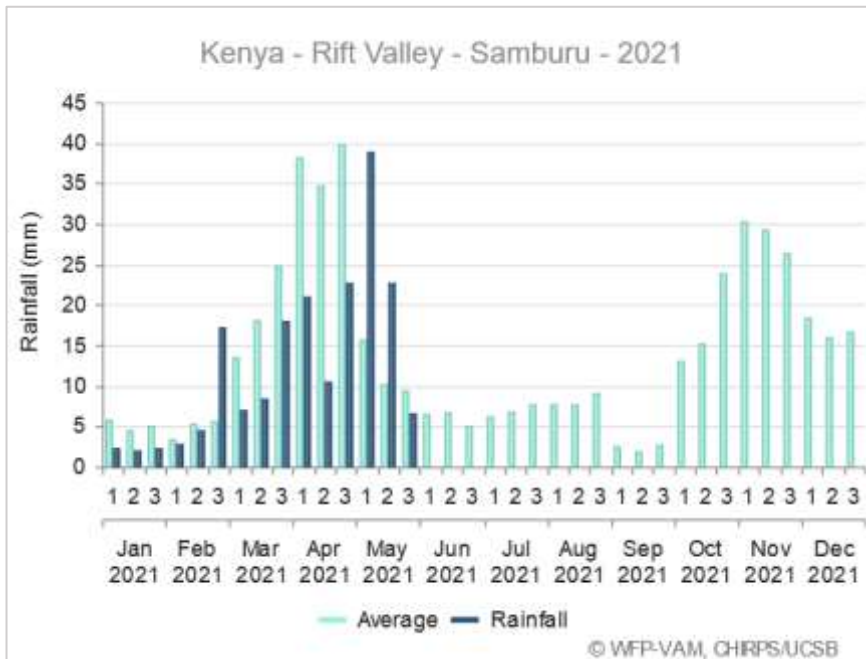


Figure 1: Dekadal Rainfall Estimate Trends

estimates, the county received showers that were significantly below the long-term average throughout March and April except for the first and second dekad of May 2021. The rainy days varied with most areas receiving rains between 4 – 6 days save for localized areas around Baragoi that recorded over 10 days of rain. The cessation for the rainfall season was earlier than normal.

long-term average by 149 percent and 124 percent in the first and second dekads respectively. However, in the third dekad the precipitation amounts decreased by 30 percent compared to the long-term average of the same dekad. Distribution of the received rainfall was uneven in terms of space and poor in terms of time as most areas received only 4 – 6 days of rains with varied intensities.

1.2 Amount of Rainfall and Spatial Distribution

During the month of May 2021, the rainfall amounts peaked in the first and second dekads. The amounts received were above the

1.3 Other Shocks and Hazards

1.3.1 COVID-19 Pandemic

- Corona disease (COVID-19) pandemic continued to be reported across the world. Samburu county had total cumulative corona pandemic positive cases as at 27th May 2021 are 233 (<https://www.statista.com>).

1.4 Other Shocks and Hazards

1.4.1 Locust Invasion

- No cases of desert locust reported across the county in the month of May 2021 in Samburu County. According to FAO Desert Locust situation update 17 May 2021, hatching has been detected in eastern Ethiopia and northwest Somalia where swarms have been laying eggs since late April. The hatchlings are forming small hopper bands that so far have been seen in a few places. A new round of breeding signifies the potential for a further increase in locust numbers in the Horn of Africa.

2.0 IMPACTS ON VEGETATION AND WATER

2.1 Vegetation Condition

2.1.1 Vegetation Condition Index (3 month-VCI)

- The poor performance of March to May 2021 rainfall season across the county has occasioned poor regeneration of vegetation. Satellite imageries suggest that there is below average greenness within the county, as measured by the satellite-derived Normalized Difference Vegetation Index (NDVI). The current NDVI as at second dekad of May was 0.30 against a long term NDVI of 0.45 at the period of the year (WFP-VAM, MODIS/NASA).
- The county average VCI depicted moderate vegetation deficit with a value of 33.83 against a normal range of 35-50. In terms of sub-counties, Samburu East had a VCI of 27.57 also indicating moderate vegetation deficit. Samburu North and Samburu Central had a VCI value of 38.93 and 41.81 respectively both remaining in normal vegetation deficit band.

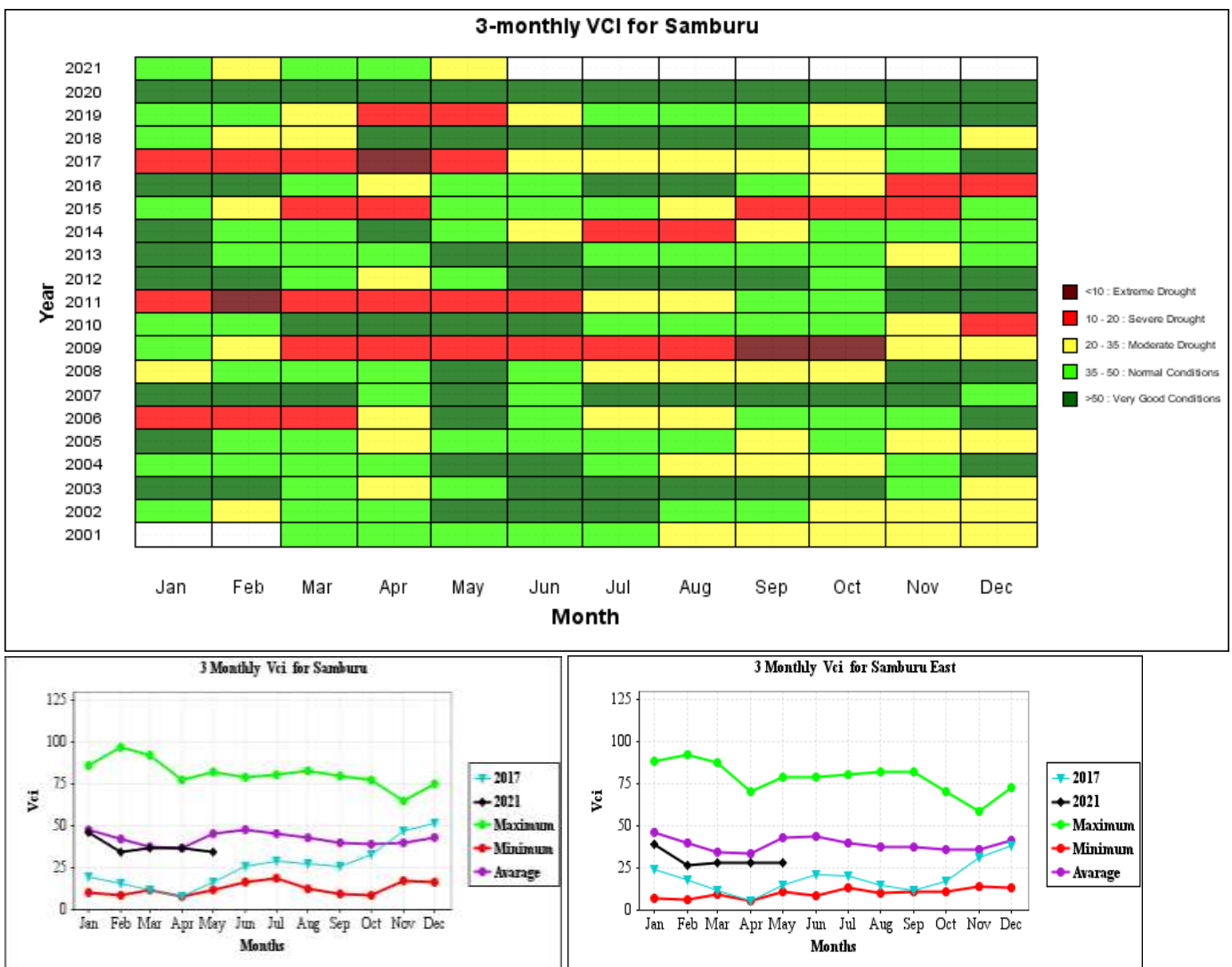


Figure 2: VCI Trends for Samburu County and Samburu East Subcounty

(Source: Boku University)

2.1.2 Forecast for Vegetation Condition (3 month-VCI)

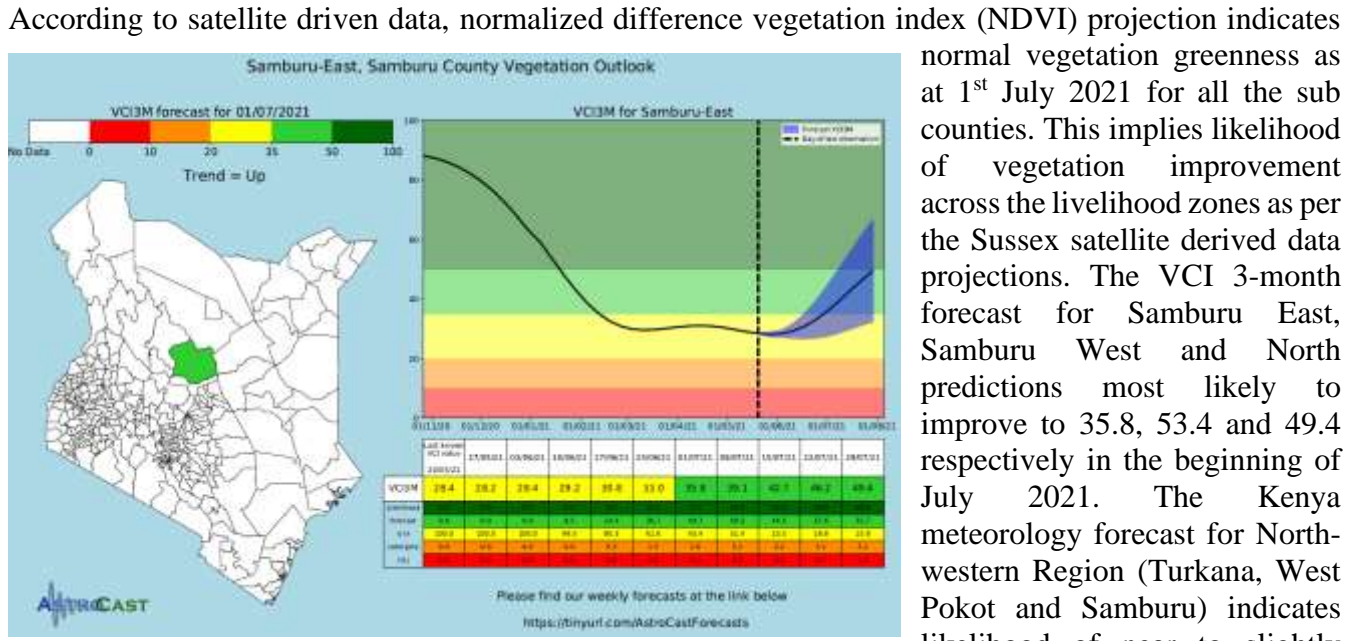


Figure 3: VCI Forecast Outlook for Samburu East Sub-County

2.1.2 Field Observations (Pasture and Browse Conditions)

Quality and Quantity

Following the depressed and erratic precipitation received towards end of April and beginning of May resulted into lush vegetation greenness in most of the areas although the quantity is very low. Better improvement was recorded in few places around Baragoi which are conflict prone areas. The available pastures are only enough for goats and sheep. According to fields reports and community key informant interviews indicated that pasture and browse remained below normal attributed to below average performance of the March to May 2021 rainfall season. Interviewed key informants reported slight improvement in quality of pasture and browse across the livelihood zones. Approximately 23.5 percent of the key informant said that pasture was in poor condition which they attributed to poor rainfall performance coupled with rangeland degradation resulting into increase of non-palatable plants species and gullies. A proportion of about 35.3 percent and 41.2 percent responded that pasture and browse are good respectively (Figure 4).

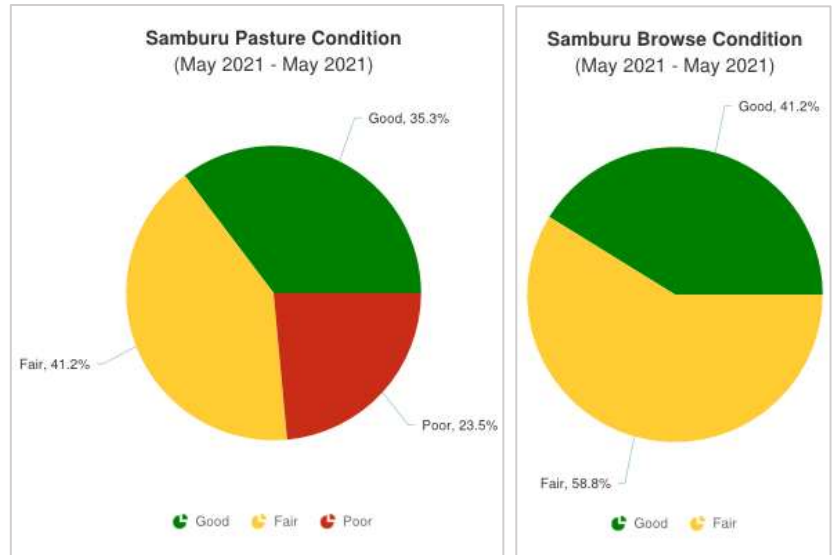


Figure 4: Pasture and Browse Condition

2.2. Water Resource

2.2.1 Sources

The three main water sources predominantly used during the period under review both by households and livestock were wells, pans and boreholes. Household water availability slightly improved however remains below average due to below normal rainfall performance across the livelihood zones. According to sampled households, 45.4 percent of them stated that get water from wells either hand dug or natural wells. Pans and dams were relied by 27.3 percent of the households which is an improvement compared to 23.1 percent recorded the previous month. Borehole's usage slightly decreased to 12.1 percent from 15.4 percent reported in the month of April. Collecting of water at household is a key responsibility of women and girls thus women and girls spend every day collecting water is a colossal waste of their valuable time. Households water consumption was ranging between 4 – 8 litres per person per day and 12 – 16 litres per person per day. The larger proportion of households reported daily water consumption per person was below the recommended World Health Organization (WHO) threshold of about 15 litres per person per day. Water turbidity was high however only small proportion of households reported boiling drinking water and stored in a close jerricans. Water cost at source remained at Ksh 5-10 per 20 litre jerrican in pastoral areas 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 20 – 30 per 20 litres jerrican inclusive of vendors transportation cost while in Baragoi, a 20 litre jerrican is going for up to Ksh 40.

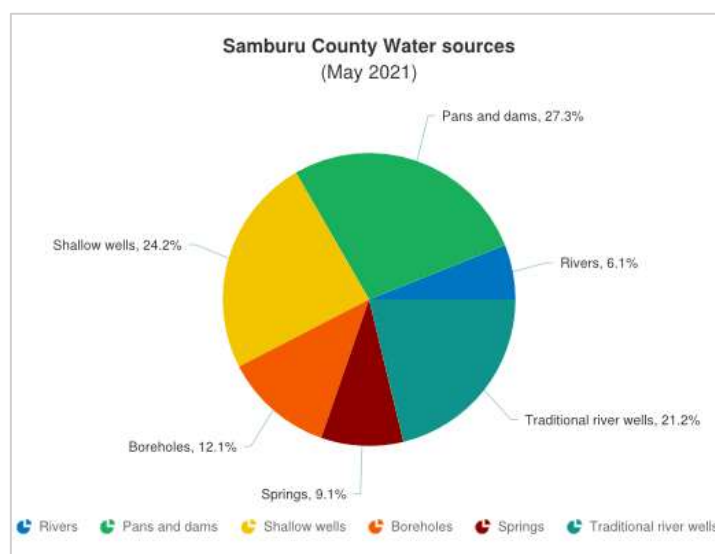


Figure 5: Frequently used Water Sources

Table 1: Non-Functional Strategic Boreholes in the County

Borehole	Requirement
• Loosuk	• Replacement of 7.5 kw submersible motor
• Lchingei	• Procure Automatic Voltage regulator
• Suguta Marmar	• Blown motor require replacement or rewinding

(Source: County department of water)

2.2.2 Household Access and Utilization

- The return distances for domestic water sources slightly decreased owing to below average precipitation that faintly recharged surface water sources. The recharged sources reduced households water stress in accessing water.
- The current return average distance for the period under review was 4.8 km compared to 5.5 km recorded in the month of April 2021. Wamba west and Waso wards recorded long distances averaging at around 5 – 10.7 km, however communities in localized hotspots of Nachola, Ndoto and Waso wards reported to have trekked more than 10 km in search of water.
- The current recorded average return distance of 4.8 km was within the 2018 – 2020 average at this period of the year (Figure 6).

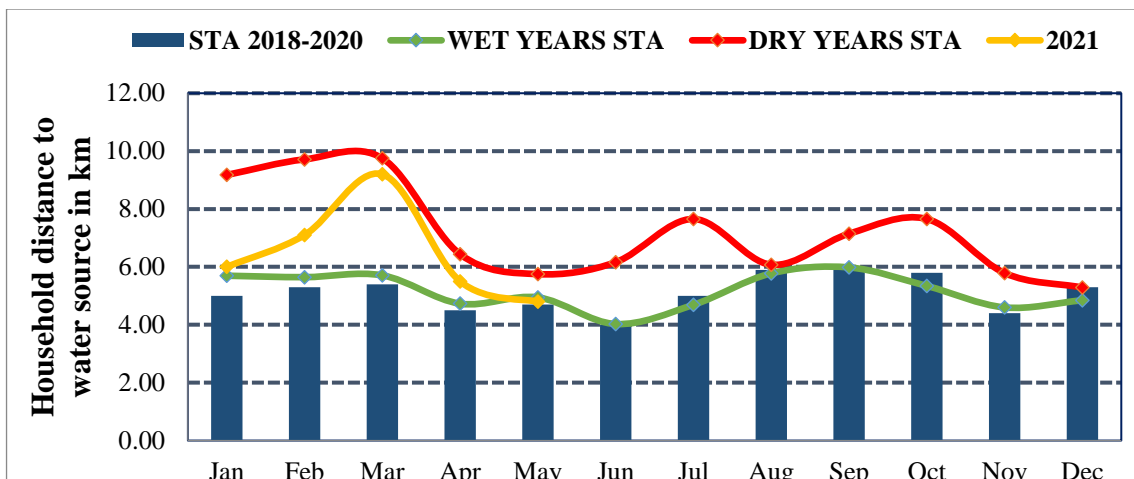


Figure 6: Average Distance Travelled by Households in Search of Water

2.2.3 Livestock Access (Grazing Distances to Water Points)

- The distance travelled by livestock from grazing fields gradually declined attributed to owing to depressed and erratic showers received during the period under review. In addition, slight rejuvenation of browse and pasture has also led to reduction in distances to the grazing fields. The small stocks (goats and sheep) are currently grazing within the wet season areas and even cattle in few places.
- The current return average distance trekked by livestock was 8 km down from 13.4 km recorded the previous month. The distances for sampled sentinel sites ranged between 4.7 – 8.7 km except in Wamba west whereby livestock travelled around 14.7 km in search of water.
- With respect to the 2018 – 2020 long term average, the current average return distance of 8 km trekked by livestock was eight percent below the long-term average at the same time of the year (Figure 7).

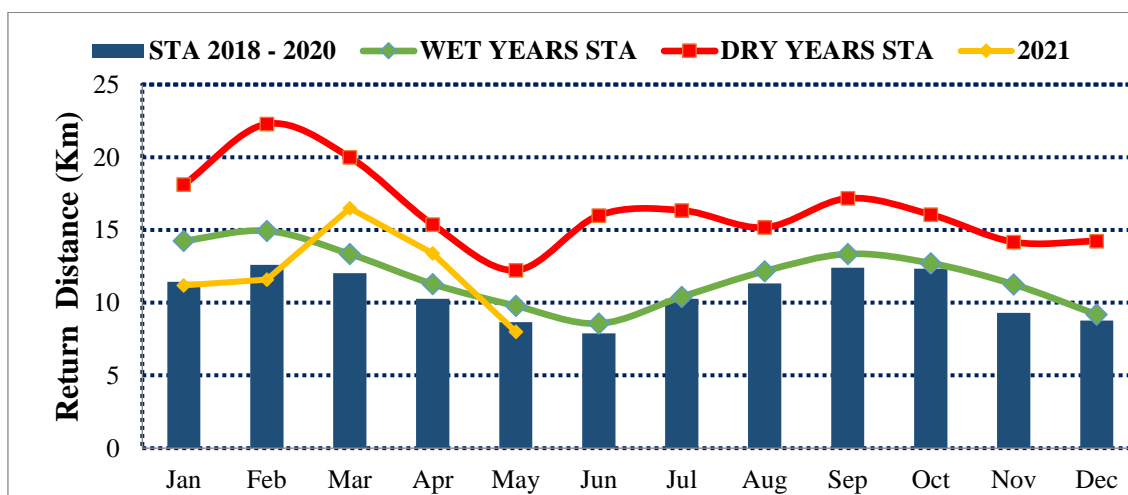


Figure 7: Distance Travelled from Grazing Areas to Water Points

3.0 PRODUCTION INDICATORS

3.1 Livestock Production

3.1.1 Livestock Body Condition

- The body condition of cattle remained between moderate neither fat or thin and border lines fore-ribs not visible 12th & 13th ribs visible. Good to fair body condition of all livestock species were observed Samburu North sub county due to favorable forage condition in the area. However, the body condition for lactating and old cattle was fair to poor. Goats, sheep and camel body condition was characterized by good smooth appearance to fair body condition. This is attributed to short stature grass due to inadequate precipitation coupled with grass defoliation in some areas.

3.1.2 Livestock Diseases and Deaths

- Incidence of bloating for cattle was reported in Samburu North sub county and even occasioned deaths of few cattle. No major disease outbreak was experienced in the county. However, cases of endemic diseases such as contagious caprine pleuropneumonia (CCPP), East Coast Fever (ECF) and worms' infestations continued to be 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 was similar to last month average production at 1.7 litres per household per day. Milk produced was majorly from goats with few households supplementing with cow and camel milk as per sentinel sites data. The low household production can be attributed to cattle migrations to dry season grazing areas coupled with decline in livestock body condition.
- The current production is 10 percent above the 2018 – 2020 long term average at similar period of the year (Figure 8).

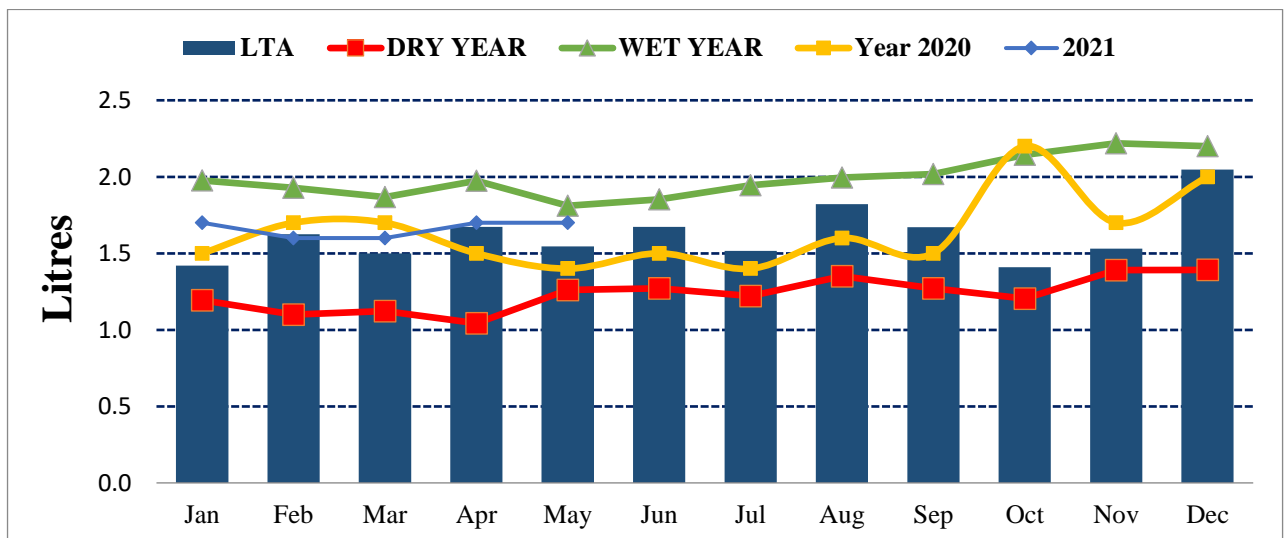


Figure 8: Trends in Milk Production per Household

3.2 Rain Fed Crop Production

3.2.1 Stage and Condition of Food Crops

- Maize and beans in most of the farms are currently in germination (second and third leaf collar) stage. However few farmers in pastoral areas around Baragoi (Ngilai and Bendera) that planted maize are now at knee high stage. Note that these are in very small-scale farming (small portions of farms).

3.2.2 Harvest of Crop

- The county recorded no harvest in the month which is normal as this is weeding month.

4.0 MARKET PERFORMANCE

4.1 Livestock Prices

4.1.1 Cattle Prices

- All the markets are operational save Baragoi market that has been non-operational due to inter-communal conflicts. Low volumes of cattle continued to be noticed in some market due to migrations coupled with poor body conditions fetching low prices. The retail price for a mature cow was standing at Ksh 20,690 which was stable compared to last month average price of Ksh 21,900.
- Sentinel sites data indicated that good prices were recorded in terminal market of Lolkuniani with average price of Ksh 27,333 for medium sized bull. The lowest prices were recorded in Lekuru at Ksh 15,000 for a bull
- The current cattle average price of Ksh 20,690 was above the 2018 – 2020 average by nine percent at the same time of the year (Figure 9).

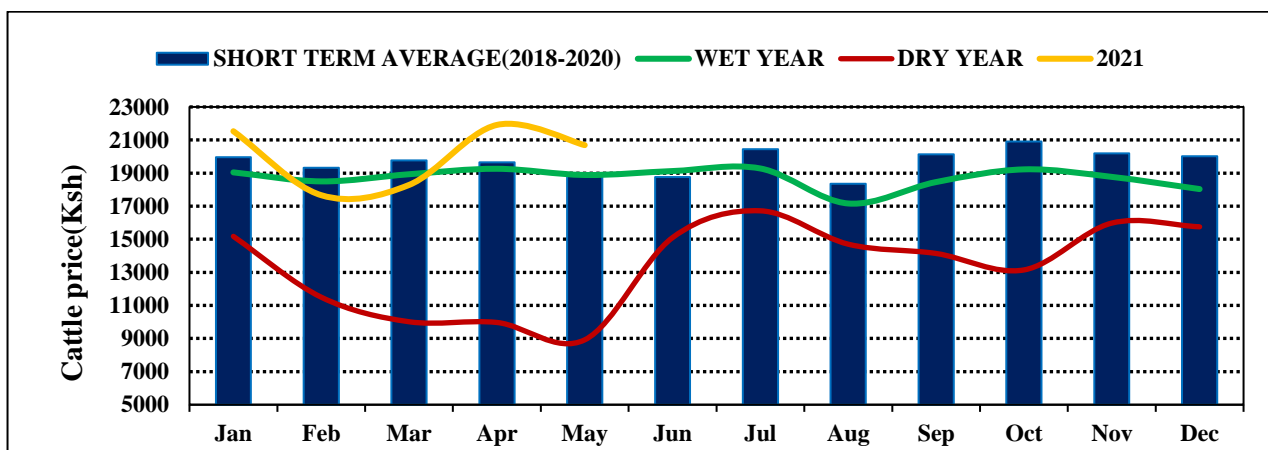


Figure 9: Cattle Selling Price Trends at Market Level

4.1.2 Goat Prices

- The retail price for a medium-sized mature goat slightly increased by seven percent to Ksh 3,720 from Ksh 3,470 recorded in last month. The slight increase is attributed to good body condition and households hold to livestock stocks to breed and support increase in herd size.
- High average prices for a goat were noticed in terminal market of Lolkuniani at Ksh 5,233 and Baragoi and Lekuru markets both recorded low average prices of about Ksh 3,000 for a goat. In comparison to the 2018 – 2020 average price, the current average goat price was 15 percent above the normal at similar period of the year (Figure 10).

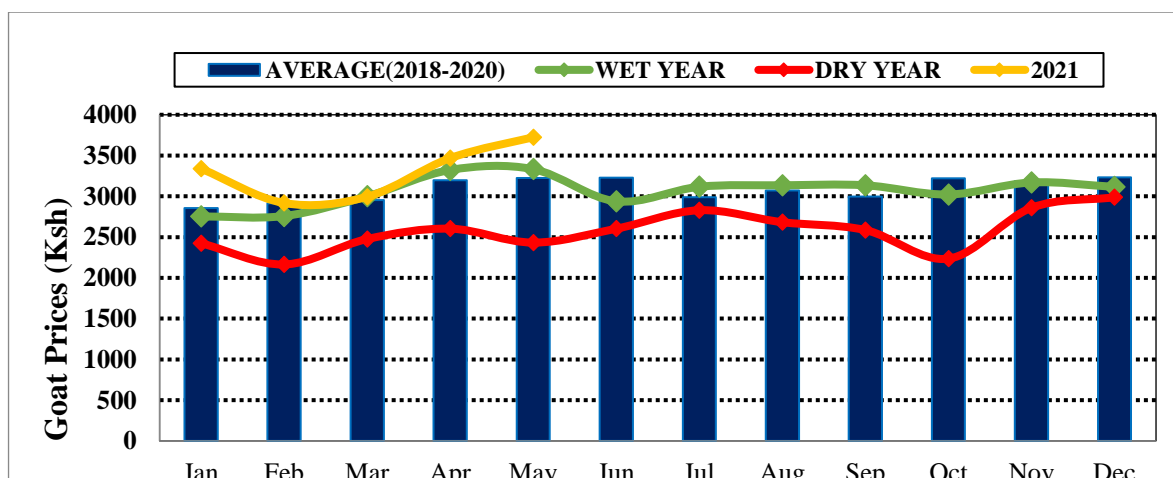


Figure 10: Goats' Selling Price Trends at market Level

4.1.3 Sheep Prices

- The market prices for sheep increased by 15 percent settling at Ksh 3,035 for a healthy mature sheep compared to last month price of 2,650. The increase is attributed to good to fair body condition. Like goats' prices, better sheep prices were reported in terminal market of Lolkuniani at Ksh 3,267 whereas Baragoi reported low prices at Ksh 2,700 due to market not operational as a result of inter-communal conflicts.
- In reference to 2018 – 2020 average, the current average sheep price of Ksh 3,035 was a 15 percent above the 2018-2020 average at the same period of the year (Figure 11).

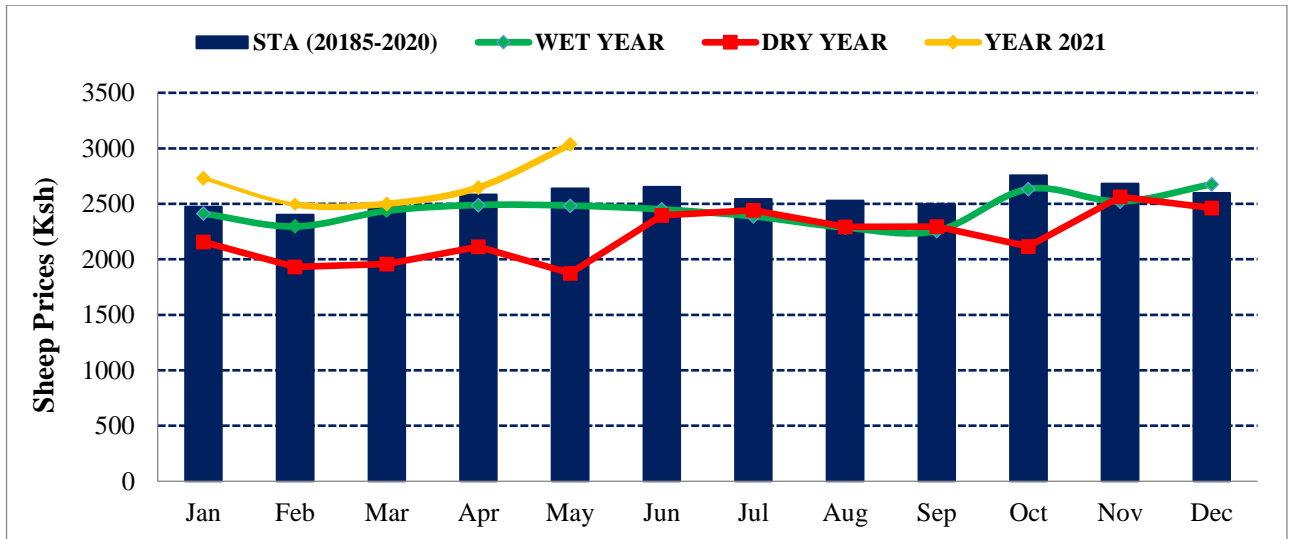


Figure 11: Sheep Selling Price Trends at Market Level

4.2 Crop Prices

4.2.1 Posho (Maize)

- Markets supplies for staple food commodities especially maize have maintained atypical within the seasonal average. The seasonal atypical trend can be attributed to supplies of cereals to the markets by local traders. The average price for a kilogram of maize during the period under review was Ksh 47.10 which was stable compared to last month average price of Ksh 46.90 per kilogram.
- According to sampled markets, some markets such as Lpus and Baragoi reported a price of about Ksh 40 – 45 for a kilogram while other markets which includes Illaut, Lekuru and Lolkuniani recorded a price of Ksh 50 per kilogram. The current average maize retail price for maize remained within 2018 -2020 average at the same period of the year (Figure 12).

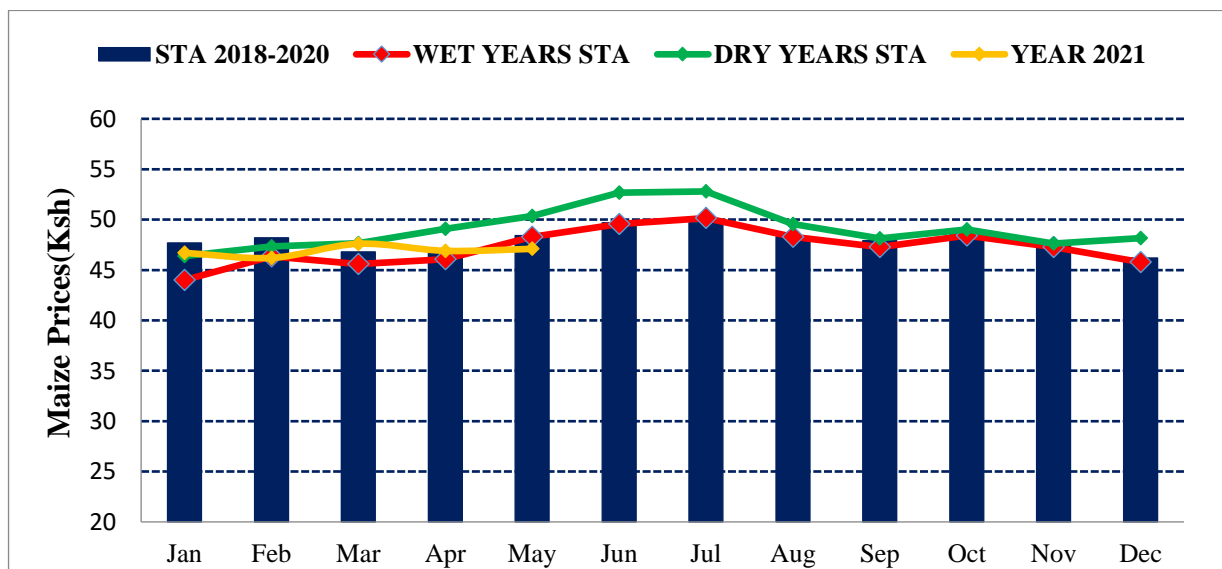


Figure 12: Maize Meal Price Trends

4.3 Terms of Trade (TOT)

- The goat to maize price ratio has remained favourable and slightly increased compared to last month driven by better goat prices coupled with stable maize prices. The average term of trade for the period under review was 79.1 compared to 73.3 recorded in the month of April 2021.
- In Agro pastoral livelihood zone, households were able to purchase 84.8 by selling one healthy medium-sized goat whereas households in Pastoral livelihood zone bought 62.4kilograms in exchange of income from one mature goat. The current average ToT of 79.1 kilograms was above the 2018 -2020 average by 18 percent at the same period of the year (Figure 13).

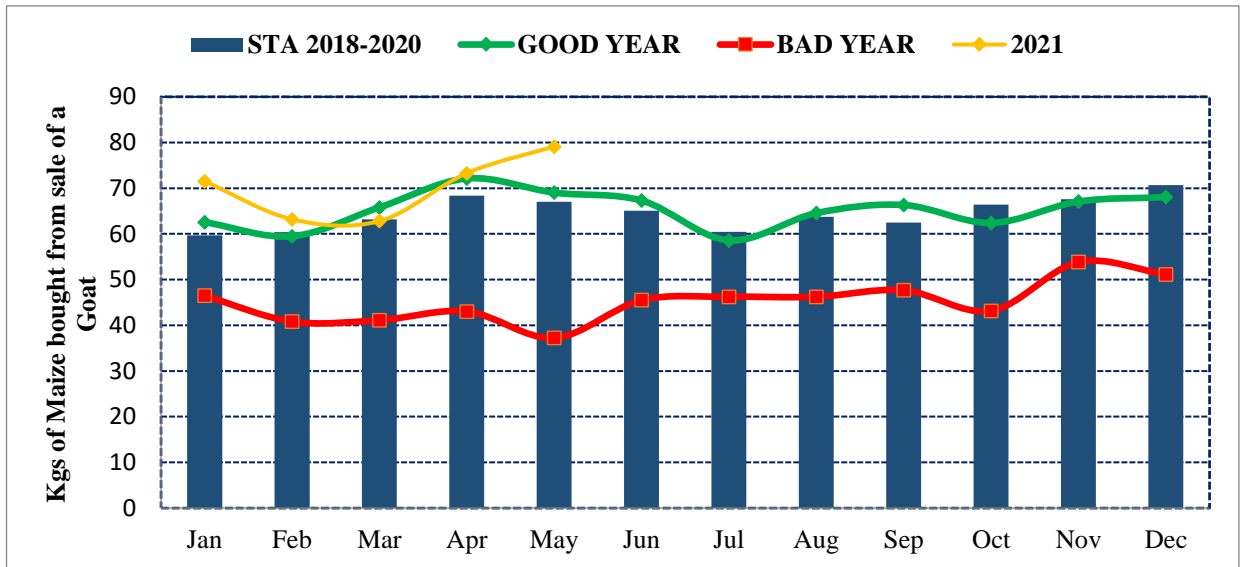


Figure 13: Trends in Terms of Trade (TOT)

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

- Household consumption like production was stable at 1.1 litres per household per day compared 1.3 litres recorded in last month. Milk produced is mainly consumed at household level by under-five aged children with few households 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 below the long term by 24 percent at similar period of the year (Figure 14).

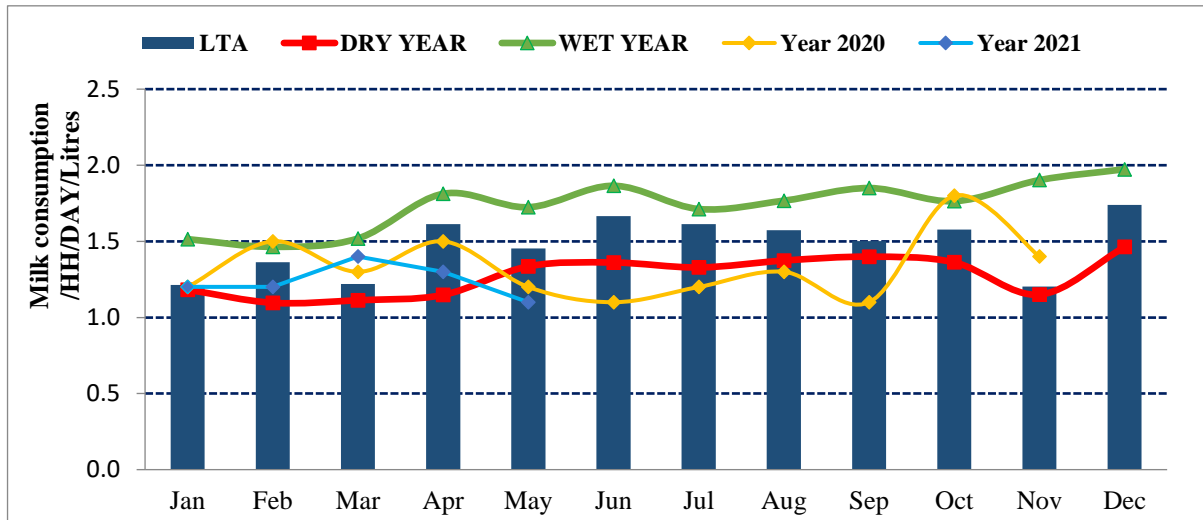


Figure 14: Trends in Milk Consumption per Household

5.2 Food Consumption Score (FCS)

- Access of diverse food groups at market level has supported stable food consumption patterns for majority of households. Generally, a large proportion of households of about 63.3 and 70.6 percent had acceptable food consumption in Agro Pastoral and Pastoral livelihood respectively. This implies assumption that household are consuming staples and vegetables complimented by consumption of oils and pulses.
- In pastoral livelihood zone, only 2.2 percent of households had poor food consumption indicating consumption of staples and vegetables only daily in a week (Figure 15).



Figure 15: FCS Per Livelihood zone

5.3 Health and Nutrition Status

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

- Nutritional status of children under-five of age stable compared to last month. The proportion of moderately malnourished children was 26.8 percent compared to 25.9 percent reported in the month of May as per the sampled sites data. The prevalence of malnourished children can be attributed to poor maternal and child health care practices coupled with inadequate milk availability due to migration of cattle to dry season grazing areas. Majority of moderately malnourished children were recorded in pastoral areas of Waso, Wamba North and Ndoto wards.

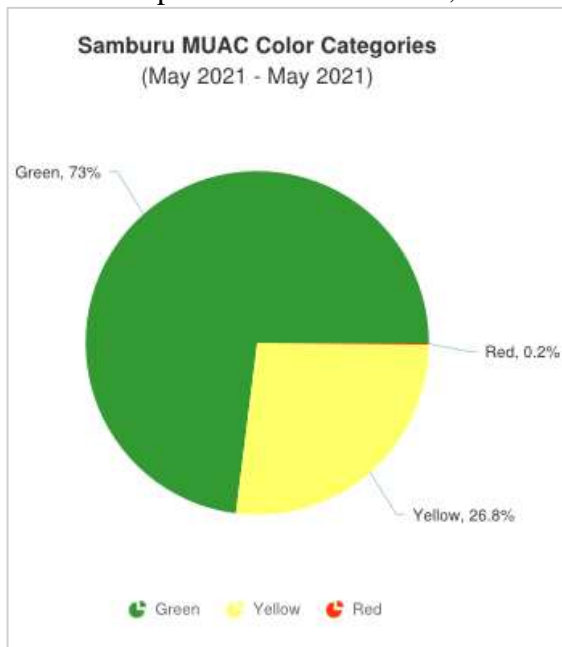


Figure 16: Nutritional Status (Family MUAC) for Children Under Five

5.3.2 Health

- According field data, out of sampled children 25.8 percent responded to have suffered illness. A proportion of 19.1 percent reported to have suffered by illness characterized by fever with breathing difficulties and only 6.3 percent had fever with chills like malaria. Health facility data reported through Kenya Health Information System (KHIS2) for the period of April to May 2021, illustrated that the three most diseases affecting both children under five and general population were Urinary Tract infections, diarrhoea and Pneumonia as shown in the table below.

Table 2: Morbidity for Under-fives and General Population for April - May 2021

Disease	Under five	General Population
Diarrhoea	1426	808
Pneumonia	827	1859
Upper Respiratory Tract Infections	3815	6419

(Source: KHIS2)

5.4 Reduced Coping Strategies Index (rCSI)

- The mean rCSI for food related was 9.81 which was stable compared to 10.15 reported in May. The rCSI for Agro-pastoral livelihood was 9.9 whereas Pastoral households had 9.8 average rCSI. Basically, rCSI are the various strategies households adopted to cater for lack of food or money to buy the food. The common strategy was reduction of meal portions and consumption of less preferred/cheaper food.

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Non-Food On-going Interventions

Table 3: Non-food On-going Interventions

SECTOR	INTERVENTION	IMPLEMENTERS
Livestock	<ul style="list-style-type: none">• Vaccination of cattle against Lumpy Skin Disease (LSD) and goats & sheep against PPR and Sheep and goat pox.• The county bought 173 camels to be distributed to beneficiaries in the one week.• Distribution of pastures seeds to one tonne of Rhodes grass to farmers	County Department of Veterinary and Partners
Water	<ul style="list-style-type: none">• Equipping and repair of Loijuk, Noontoto Nkookin boreholes.	County department of water and Partners
Health	<ul style="list-style-type: none">• Community led total sanitation (CLTS)	MOH, KRCS
Peace and Security	<ul style="list-style-type: none">• Ongoing road patrol and imposition of dusk to dawn curfew in Baragoi town	Ministry of Interior and Coordination

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

- The county remained calm especially in conflict prone areas around Baragoi due to tight security measures including dawn to dusk curfew in Baragoi town. Encroachment of herder into Samburu National Reserve in search of pastures thus possibility of human wildlife conflicts and predation of livestock by wild animals such as leopards, Hyenas and Fox.

7.2 Migration

- Majority of livestock from Samburu North are currently grazing within the seasonal wet grazing fields however, larger proportion of cattle Angata Sikiria plains. Cattle from Samburu East are within Loijuk, hills, Mathew ranges and other along the conservation areas. Goat, sheep and camels are within the homestead across the livelihood zones.

7.3 Food Security Prognosis

- The weather outlook for North-Eastern region and parts of Northwestern region (Samburu County) is expected to be generally sunny and dry throughout the forecast period. Occasional rains may occur over few places as per the June-July-August (JJA) 2021 season (Kenya Meteorology).
- Forage and water sources to continue dwindling as the long rains ceased with below average performance.
- The early cessation of the rains is likely to result in poor crop development in the Agro pastoral livelihood zone thus likelihood of crop failure.
- The market prices for livestock are likely to remain relatively stable however maize is likely to start increasing in the next months as household stocks deplete thus household rely on markets for food access.

RECOMMENDATIONS

Table 4: Proposed Interventions per Sector

SECTOR	INTERVENTION	Areas
Water	<ul style="list-style-type: none">• Rapid maintenance of boreholes across the livelihood zones	<ul style="list-style-type: none">• County wide
Agriculture	<ul style="list-style-type: none">• Promotion of low-cost and water saving technologies for small-scale irrigation.	<ul style="list-style-type: none">• County wide
Livestock	<ul style="list-style-type: none">• Vaccination of cattle against FMD.	<ul style="list-style-type: none">• County wide
Health and Nutrition	<ul style="list-style-type: none">• Integrated medical outreaches in hard-to-reach areas.• Strick adherence to MOH COVID-19 protocols	<ul style="list-style-type: none">• Health Facilities
Peace and Security	<ul style="list-style-type: none">• Support community led peace dialogue initiatives to curb cattle theft.	<ul style="list-style-type: none">• Samburu north