

A Vision 2030 Flagship Project



National Drought Management Authority SAMBURU COUNTY

DROUGHT EARLY WARNING BULLETIN FOR DECEMBER 2020



DECEMBER 2020 EW PHASE

Drought Situation & EW Phase Classification

Biophysical Indicators

- Vegetation condition has generally remained good to fair although some pockets in Samburu east and north had poor pasture. Satellite imagery indicates above normal vegetation greenness according to vegetation condition index (VCI)
- Open surface water sources in pastoral areas recharged by around 10-20 percent and 40 – 60 percent full in Agro pastoral livelihood.

Socio Economic Indicators Details

- Trekking for both livestock in both inter and Intra County was observed across the livelihood zones.
- Milk production increased while consumption remained stable at household during the period under review.
- Livestock body condition was varying between good to fair and small stocks had good body conditions.
- Stable prices were recorded for all livestock species in the sampled markets.
- Stable trend for maize/*posho* prices continued to be observed.
- Term of trade ratios were considerably above the long-term average thus enhancing household purchasing power.
- Prevalence of severely malnourished was 0.4 percent as measured by family Mid Upper Arm Circumference

Early Warning Phase Classification

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

Biophysical Indicators	Value	Normal range/Value	
VCI-3month (County)	57.84 (64.61)	35-50	
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)	2.0	>2.2	
Livestock deaths due to drought	No death.	No death	
Access Indicators	Value	Normal ranges	
Terms of Trade (TOT)	75.9	>53.41	
Milk Consumption (Litres/Household/day)	1.4	>1.9	
Return distance (km)	Household	4.4	<5.2
	Livestock	7.6	<12.8
Utilization indicators	Value	Normal ranges	
MUAC (%) Severely Malnourished	0.4	2.1	
FCS (%)	Poor	3.6	0 - 21
	Borderline	26	21.5 - 35
	Acceptable	70	>35
rCSI	Mean	10.94	56

<ul style="list-style-type: none"> Short rains harvests Short dry spell Reduced milk yields Increased HH Food Stocks Land preparation 	<ul style="list-style-type: none"> Planting/Weeding Long rains High Calving Rate Milk Yields Increase 	<ul style="list-style-type: none"> Long rains harvests A long dry spell Land preparation Increased HH Food Stocks Kidding (Sept) 	<ul style="list-style-type: none"> Short rains Planting/weeding 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1.0 CLIMATIC CONDITIONS

1.1 Rainfall Performance

Sunny, windy and dry weather conditions prevailed over several parts of the county in the month of December 2020. Observantly, daytime temperatures increased however, nighttime temperatures slightly decreased. Generally, the October to December 2020 short rains season was below average with an early cessation.

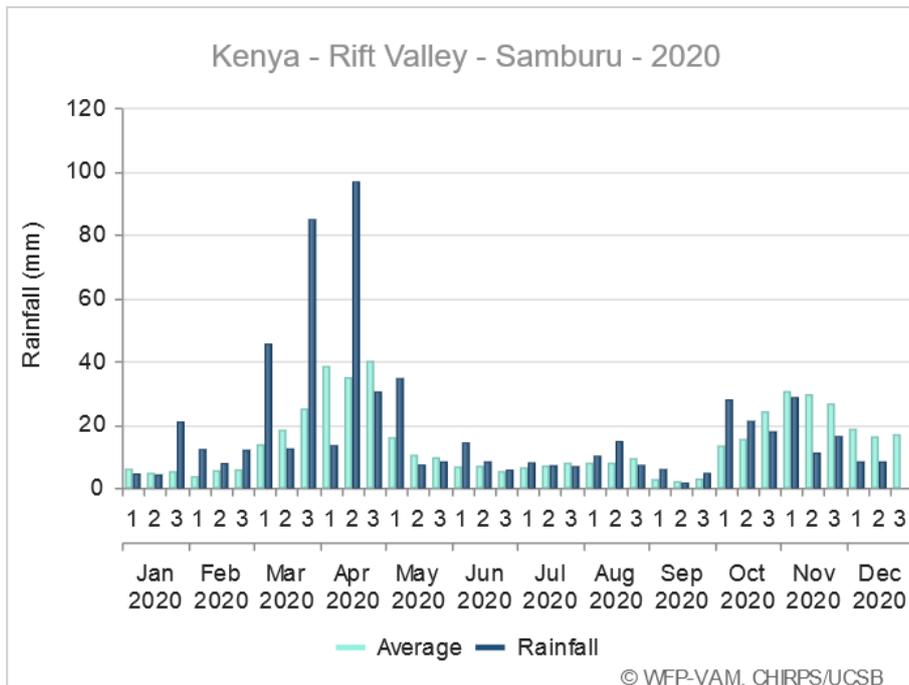


Figure 1: Rainfall Estimates (RFE) Trends

respectively as per Climate Hazards Group InfraRed Precipitation with Station data (CHIRPS). 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

- According to Samburu County department of health briefing, the county recorded the highest positive cases of COVID-19 on Sunday 13th December 2020 at 42. The total cumulative reported positive cases for Samburu County are 177 as at 14th December 2020. Samburu central sub county is the epicentre of the coronavirus in Samburu county registering 153 positive cases corresponding to 86.4 percent out of the total cases reported so far.

1.3.2 Locust Invasion

- Mature swarm of locust were spotted Ndoto ward with insignificant impact on forage. FAO locust watch updates on 19th December 2020, predicts new threat of immature locusts from Tanzania, Somali and Ethiopia borders where egg laying and hopper bands have been reported.

1.2 Amount of Rainfall and Spatial Distribution

The precipitation received in the period under review was considerably below normal. According to satellite-derived rainfall data, the county recorded precipitation of about 56 and 50 percent below the long-term average in the first and second dekad

2.0 IMPACTS ON VEGETATION AND WATER

2.1 Vegetation Condition

2.1.1 Vegetation Condition Index (3 month-VCI)

- Rangeland grass and other forage plants have started wilting due to reduction in soil moisture content driven by early cessation of the October to December 2020 short rains coupled with current sunny and dry weather conditions. The decline in soil moisture content coupled with high transpiration have induced vegetation water stress.
- Frequent and intensity of grazing in some grazing fields have led to rangeland degradation thus occasioning increased growth of invasive alien plants. The forage condition is expected to deteriorate onwards as the normal January to March 2021 dry period sets in.
- Satellite earth observation imagery as December 2020 showed vegetation greenness above normal as measured by VCI as shown in Figure 2. The above vegetation greenness was driven by above average long rains that supported good rangeland regeneration.

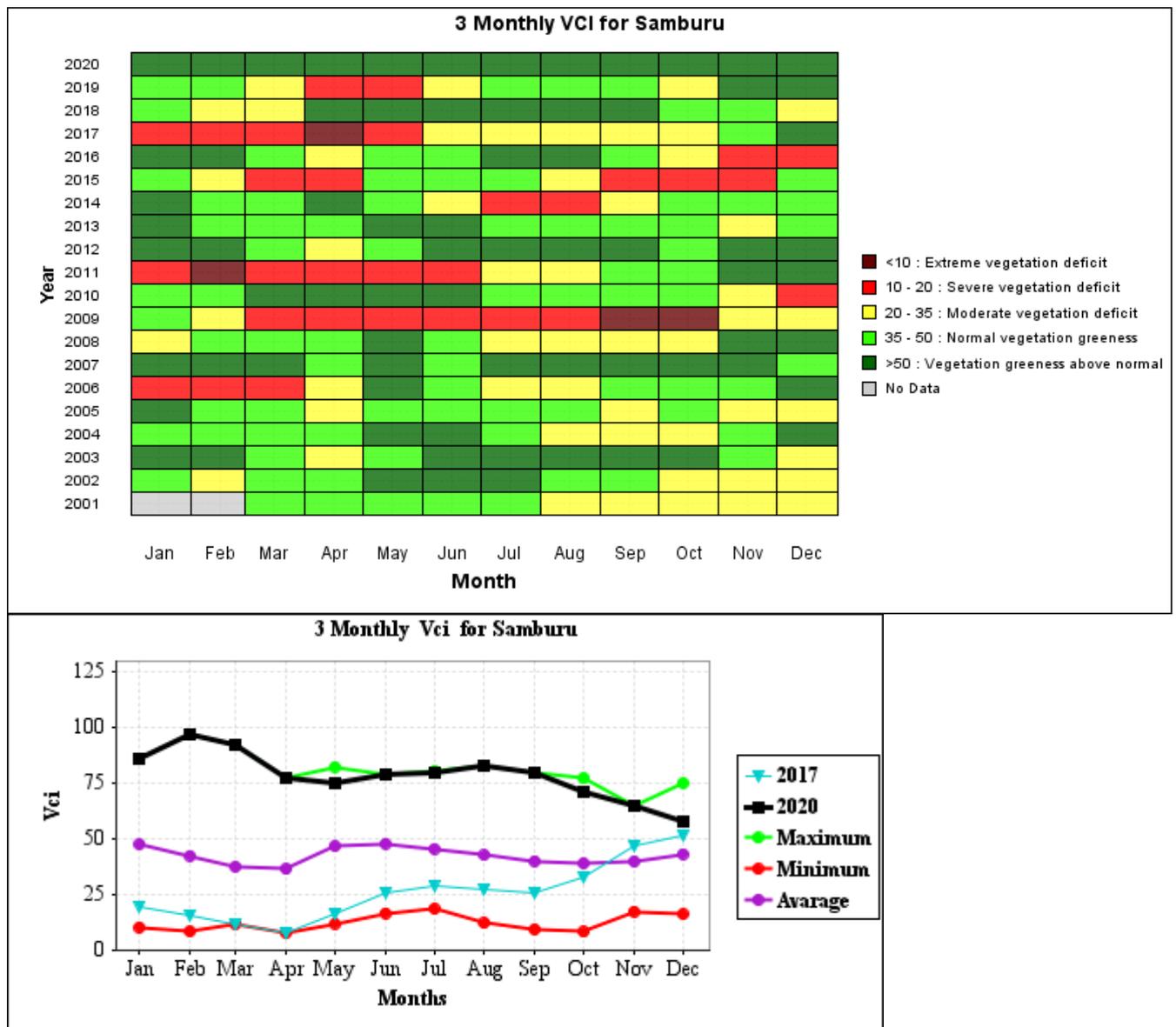


Figure 2: VCI Trends for Samburu County
(Source: Boku University)

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

Vegetation condition slightly deteriorated owing to early cessation resulting in sunny and dry weather conditions. South easterly winds have also occasioned high transpiration resulting in wilting of forage in the rangelands.

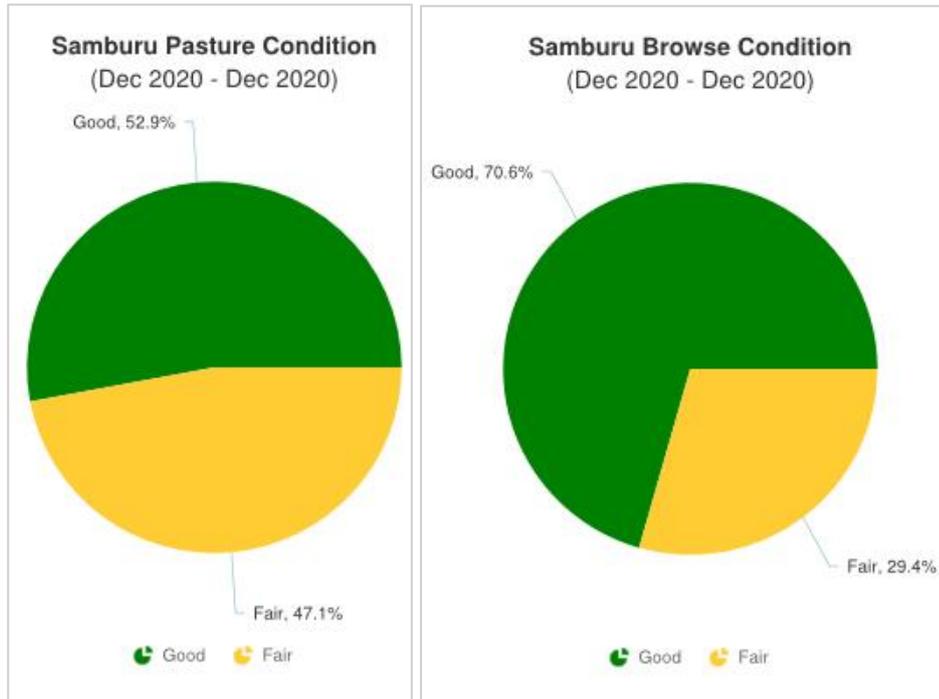


Figure 3: Pasture and Browse Condition

however, access is limited due to community conflicts. Interviewed community key informants indicated that a proportion of 52.9 percent and 70.6 percent responded pasture and browse is good respectively (Figure 3).

Various constraints were reported limiting access to pasture which include wildlife animals in Ndoto and Wamba West wards. Insecurity and conflicts were also limiting access to forage and water sources in parts of Samburu north Sub County.

Areas with substantial amounts of pasture are Mbukoi, Suiyan, Angata Sikira and Kawop

2.2. Water Resource

2.2.1 Sources

During the month of December 2020, wells, boreholes, pans and dams were the most frequently used

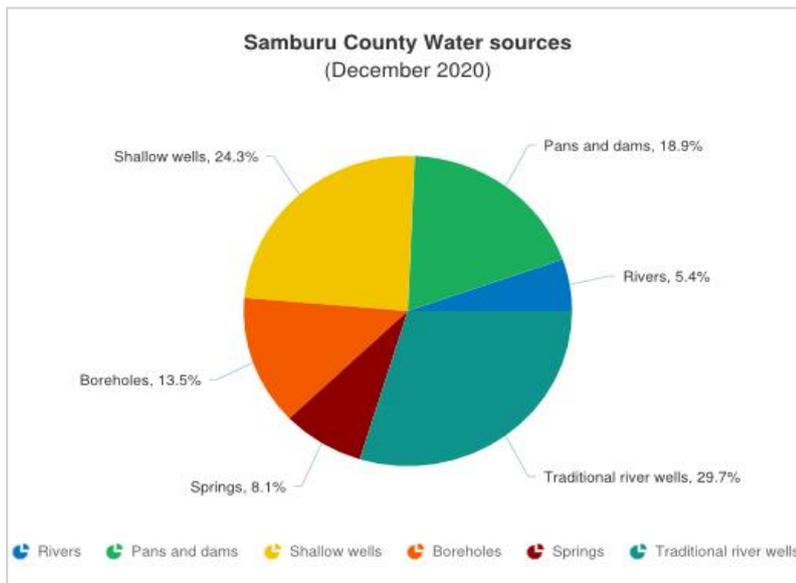


Figure 4: Commonly Used Water Sources

water sources both for livestock and domestic use. Open surface water sources are diminishing owing to windy and sunny weather conditions evidenced by increase in proportion using boreholes. Boreholes usage increased to 13.5 percent from 10.3 percent. Shallow wells usage decreased to 24.3 percent from 28.2 percent reported in the month of November 2020 (Figure 4).

Below average coupled early cessation of the 2020 short rains has also contributed to low volumes of water in open surface water sources.

Majority of households across the livelihood zones stored drinking water in closed 20 litres jerrican and in

process, decantation occurs thus water turbidity reduces. 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.

2.2.2 Household Access and Utilization

- The trekked distance by households in search of water slightly increased from 3.9 km to 4.4 km. The increase is attributed to declining of volumes of water on surface sources coupled with increase in turbidity due to wading by animals forcing households to search for clean water.
- Households in Wamba West and Waso sentinel sites were reported to walk long distances in search of water of about 6 – 7.3 km.
- Households are still trekking below the long-term average by 13 percent at similar period of the year in spite of the increase in trekking distances (Figure 5).

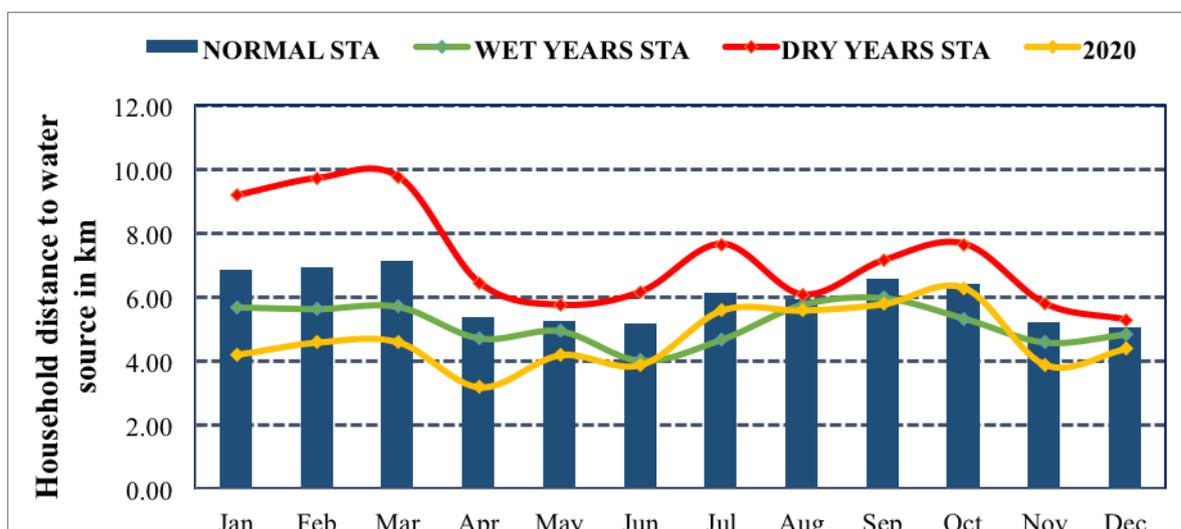


Figure 5: Average Distance Travelled by Households in Search of Water

2.2.3 Livestock Access (Grazing Distances to Water Points)

- Deterioration of vegetation cover coupled with drying up of surface water sources have occasioned to increased distances to both grazing fields and watering points. The current average return increased to 7.6 km from 6.2 km trekked in the last month.
- Livestock in pastoral areas of Samburu east sub county trekked longest return distance of up to 10 km due to depletion of pastures and diminishing of water sources. Grazing distances are projected to increase further as the January to March dry season sets in.
- Despite of the increase in grazing distances, the current return average distance of 7.6 km remained below the normal average by approximately 36 percent at the same period of the year (Figure 6).

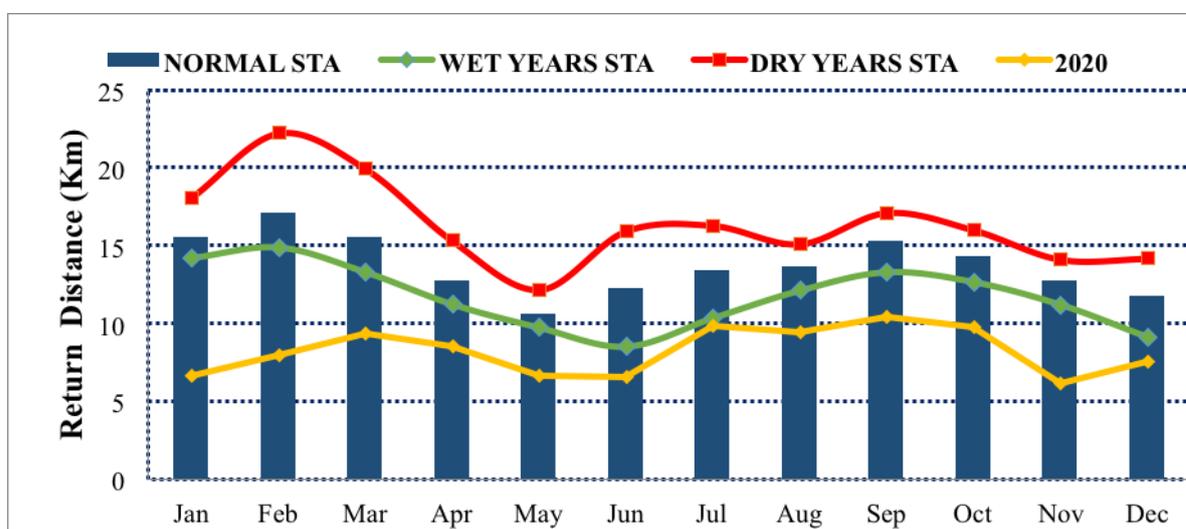


Figure 6: Distance Travelled from Grazing Areas to Water Points

3.0 PRODUCTION INDICATORS

3.1 Livestock Production

3.1.1 Livestock Body Condition

- The body condition of cattle is slightly deteriorating owing to depletion of pastures resulting in increased grazing distances. Body condition for cattle is ranging between good to fair and good for goats, sheep and camels.

3.1.2 Livestock Diseases and Deaths

- Community members continued to report clinical signs of Foot and Mouth Disease (FMD) across the livelihood zones. Goats and sheep have been affected by endemic diseases such as contagious caprine pleuropneumonia, enterotoxaemia, Sheep and goat Pox. No unusual occurrence of livestock mortalities reported across the livelihood zones during the period under review.

3.1.3 Milk Production

- Current average milk production was 2 litres per household per day up from 1.7 litres recorded in last month. Milk production increased as a result of calving of camels in the month of November. The amounts produced slight remained above the long-term average due to good performance of the long rains supported by enhanced livestock productivity.
- The milk production is likely to decrease in the next month as the depressed and erratic short rains performance is below the seasonal normal average.

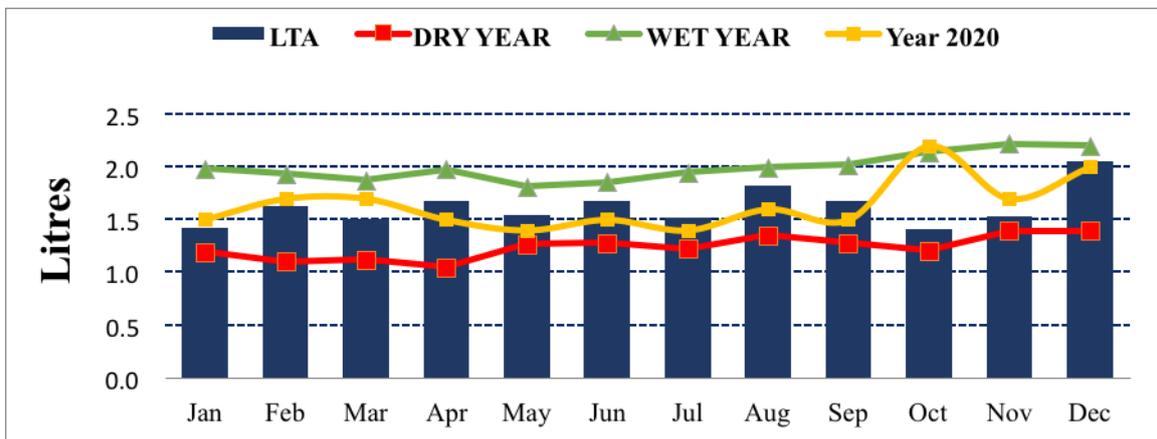


Figure 7: Trends in Milk Production per Household

3.2 Rain Fed Crop Production

3.2.1 Stage and Condition of Food Crops

- Maize and beans crops planted along the Kirisia hills in the areas of Baawa, Kirimun and Lodokejek during the 2020 short rains season have started wilting due to water stress. The wilting has been induced by early cessation of the short rains resulting in sunny and dry weather conditions. Crop failure is expected as the dry season sets in.
- Crops planted in the 33-acre Lulu irrigation farm have reached maturity stage however; diseases such as fall armyworm were noticed.

3.2.2 Harvest of Crop

- Harvesting of maize has been concluded in Loosuk, Lolmolog, Longewan and Suguta and crops residues utilized as livestock feeds.

4.0 MARKET PERFORMANCE

4.1 Livestock Prices

4.1.1 Cattle Prices

- Market operations are vibrant with adequate volumes of both food commodities and livestock across the livelihood zones. Cattle prices have been stable averaging at Ksh 21,714 compared to last month average price of Ksh 22,885.
- Highest price of about Ksh 28,000 and Ksh 26,667 was reported in Lpus and Lolkuniani markets respectively. Cattle prices have been above the long-term average for the last five months due to good body condition. The improved livestock body condition is attributed to availability of pastures and browse occasioned by good performance of the last two consecutive rainfall seasons. The current average price of Ksh 21,714 was above the long-term average by 21 percent at the time of the year (Figure 8).

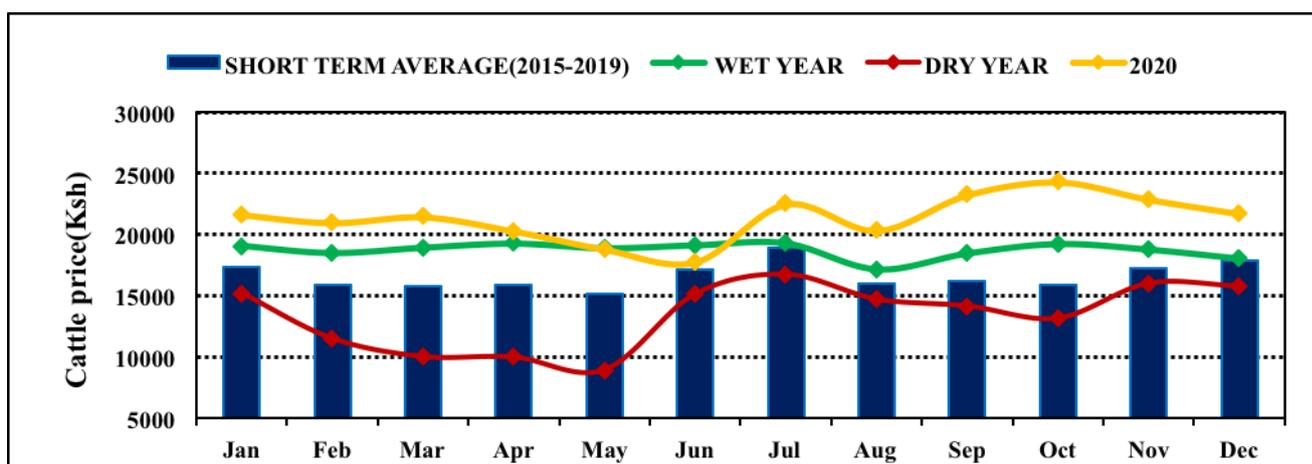


Figure 8: Cattle Selling Price Trends at Market Level

4.1.2 Goat Prices

- Slight decrease was noted in goats market prices attributed to oversupply to the markets in preparation for Christmas celebrations and school fees as school expected to be open in January 2021. The current average price for a medium sized goat was Ksh 3,241 compared to Ksh 3,595 recorded in the month of November. Good prices were reported in Lolkuniani market with an average of Ksh 5,100 and low prices recorded in Illaut market at Ksh 2,000.
- The current average price was within the 2015-2019 long term average at the same period of the year (Figure 9).

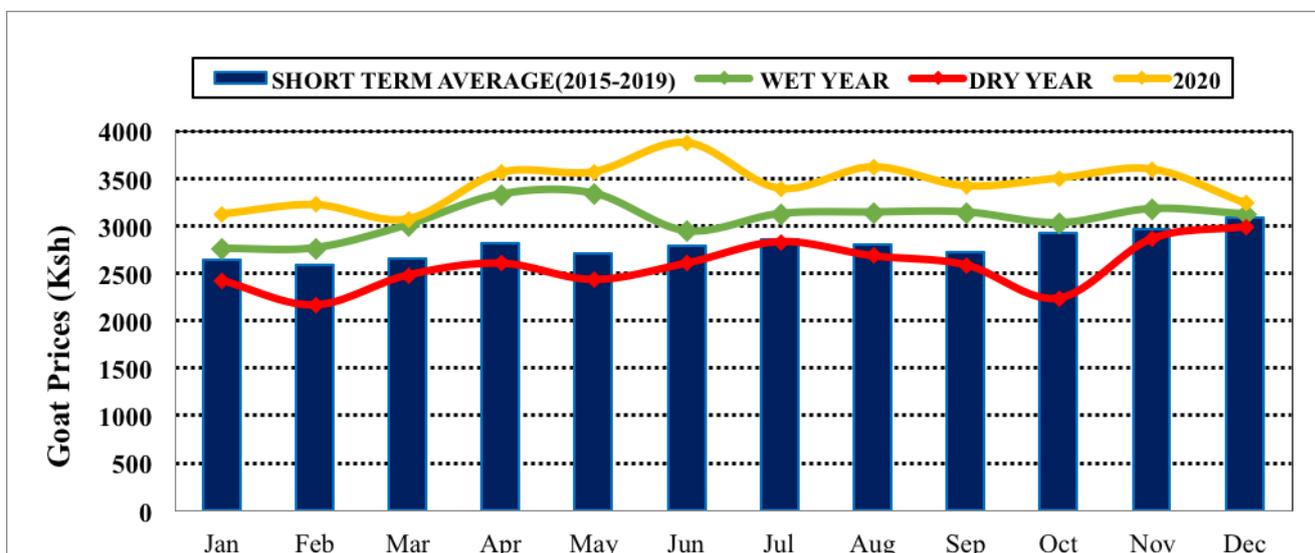


Figure 9: Goats' Selling Price Trends at market Level

4.1.3 Sheep Prices

- Market selling prices for sheep have retained stability since the month of August attributed to stable body condition. Good to fair vegetation condition has enhanced improved livestock body condition thus fetching better market prices.
- The current average selling price for medium sized sheep was Ksh 2,944 compared to Ksh 3,015 recorded in the month of November 2020.
- High prices for sheep continued to be recorded in Lekuru market in Samburu central, which acts as a terminal market in Agro pastoral livelihood zone with selling price of Ksh 3,800 while lowest price reported in Illaut at Ksh 2,000.
- The current average price of Ksh 2,944 remained above the 2015-2019 short-term average by 15 percent at the same time of the year (Figure 10).

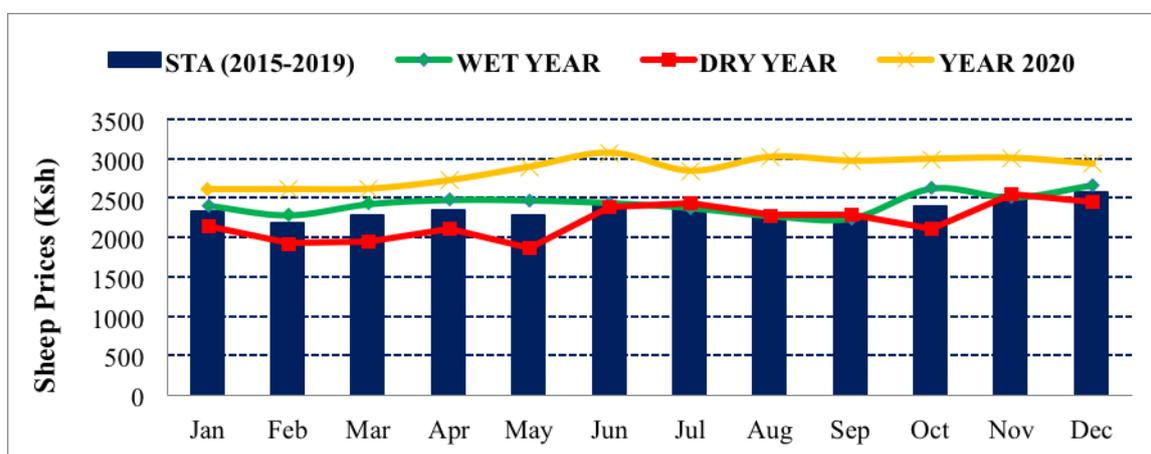


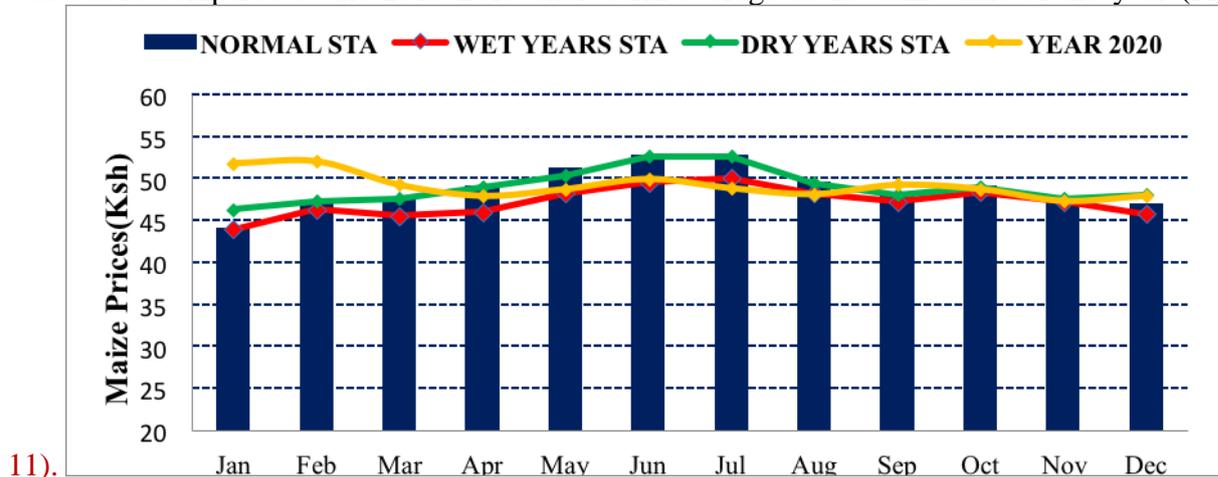
Figure 10: Sheep Selling Price Trends at Market Level

4.2 Crop Prices

4.2.1 Posho (Maize)

- Overall, farmgate and market prices for maize in the county have retained stable trend. During the period under review, the current average price was Ksh 48 per kilogram compared to Ksh 47.4 per kilogram recorded in November. Traders have attributed the stable trend for maize prices to availability of cereals in the markets driven by local harvests from the long rains harvest coupled with imports from Meru, Nakuru and Uasin Gishu counties.
- The estimate price range across the sampled markets was between Ksh 40-50 per kilogram save for Archers post and Lekuru market that reported price of Ksh 40 per kilogram. The average price

was stable compared to the 2015-2019 short-term average at the same time of the year (Figure



11).

Figure 11: Maize Meal Price Trends

4.3 Terms of Trade (TOT)

- The goat to cereal ratio has remained above average, given sustained above average goat market prices and relatively favourable maize prices. The proceeds from sale of one goat on average bought 68.9 kilograms of maize which was a decrease compared to 75.90 kilograms fetched in last month.
- Households in pastoral livelihood zone can get 50 kilograms in exchange of one mature goat while in Agro pastoral livelihood; households were able to buy 70 kilograms of cereal by selling one goat.
- The terms of trade have remained considerably above the short-term average by 35percent at the same period of the year (Figure 12).

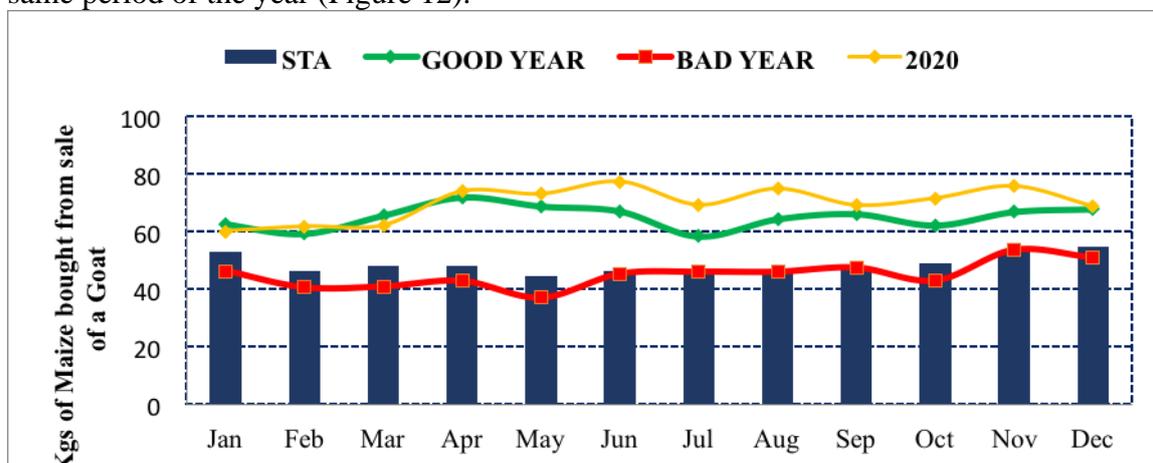


Figure 12: Trends in Terms of Trade (TOT)

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

- Current milk consumption stands at 1.4 litres per household per day which is a stable.
- Households are currently selling a litre of milk in urban centre Ksh 60 – 70 per litres with localized areas of pastoral livelihood zone selling camel milk at Ksh 90 – 100 per litre.
- The consumption rate at the household level remained below the long-term average by 18 percent at similar period of the year (Figure 13).

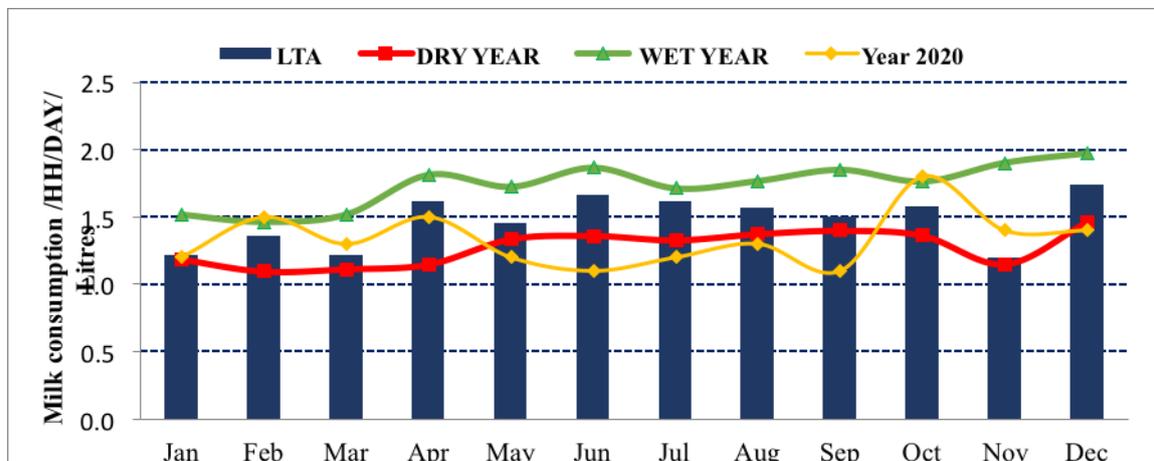


Figure 13: Trends in Milk Consumption per Household

5.2 Food Consumption Score (FCS)

- Food intake at household level was moderately stable with around 70 percent of the households remaining in acceptable band. This implies diverse dietary intake is more frequent for majority of households. The improved dietary diversity especially in Agro pastoral is attributed to long rains crops harvest that replenished the household stocks coupled with improved milk due to calving and kidding.
- Majority of households around 89.9 percent in Agro pastoral livelihood zone and 66.7 percent in Pastoral livelihood zone had acceptable food consumption patterns. Around 29 percent in Pastoral livelihood zone had borderline food consumption implying consuming starch and vegetables seven days a week with limited proteins (Figure 14)

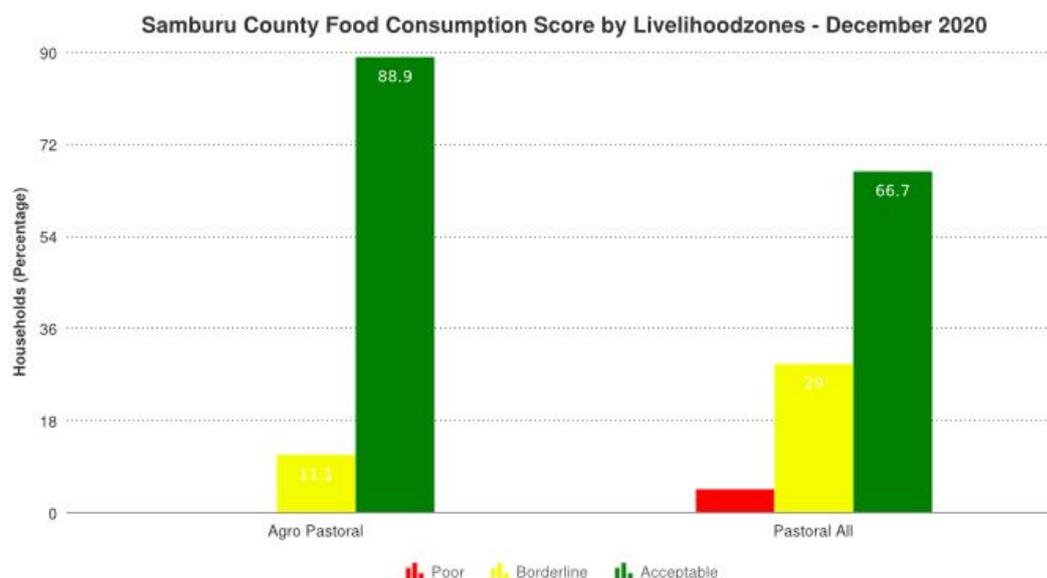


Figure 14: Food consumption score

5.3 Health and Nutrition Status

5.3.1

ID Upper-Arm Circumference (MUAC 125-134 mm)

- The nutritional status for children under five years old remains stable compared to November. The prevalence of moderately malnourished children stands at 26.8 percent compared to 24.5 percent recorded in November 2020 as per Family MUAC measurements. The situation remained Critical as per WHO classification. The proportion of malnourished children was 0.4 percent, which indicates, is acceptable situation according to WHO classification. Poor child maternal care practices coupled with poor health care seeking behaviour attributed to fear of COVID 19 possibly influencing the high malnutrition rates. (Figure 15)

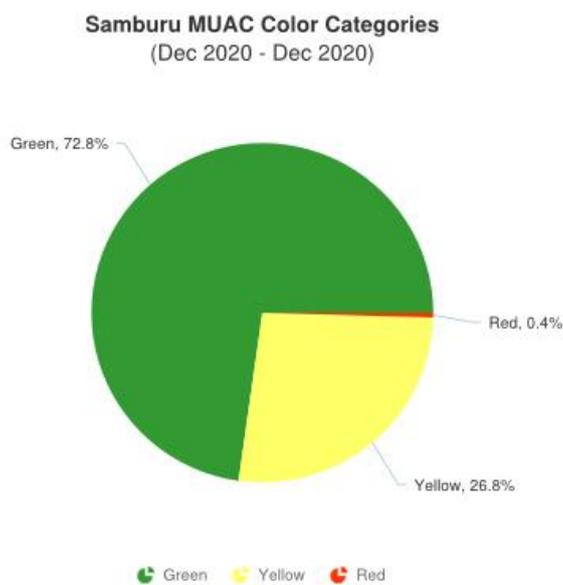


Figure 15: Nutritional Status (Family MUAC) for Children Under Five

5.3.2 Health

- Upper respiratory tract infections (URTI), diarrhoea and pneumonia continued to be reported for both under five and general population as per Kenya Health Information System (KHIS) monthly data.

5.4 Reduced Coping Strategies Index (rCSI)

- The mean coping index was stable at 10.94 compared to 9.53 recorded in last month. Households reported frequently employing the following, which include relied on less preferred and/or less expensive food, reduced the portion of meals taken in a day, and borrowing from the neighbours.

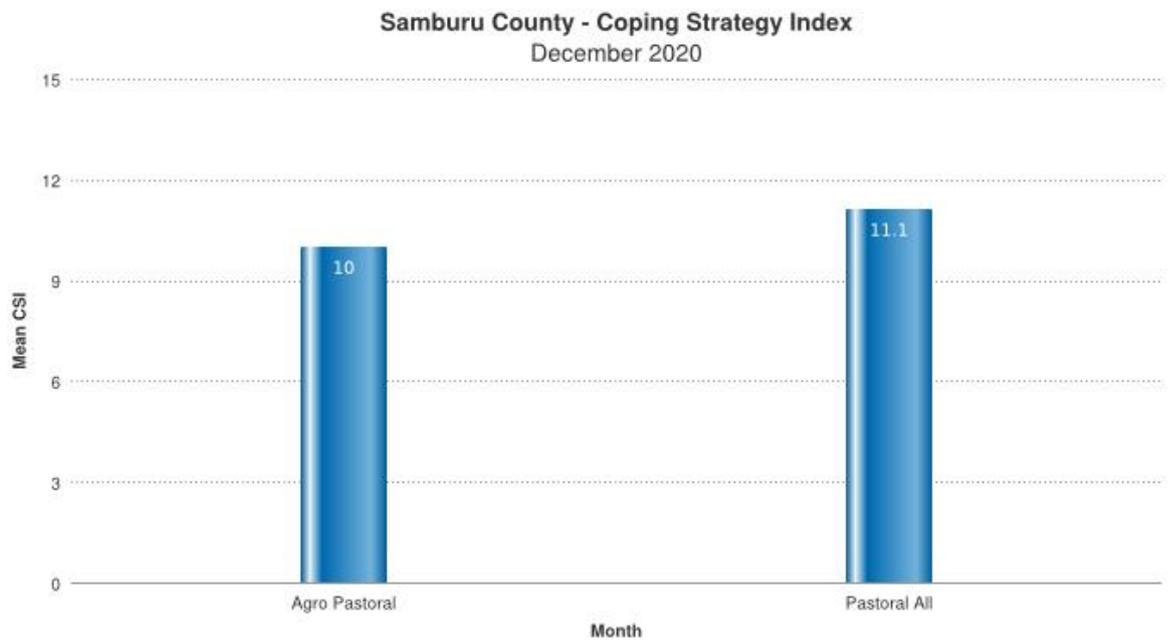


Figure 14: rCSI per Livelihood Zone

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Non-Food On-going Interventions

Table 1: Non-food On-going Interventions

SECTOR	INTERVENTION	IMPLEMENTERS
Interior	<ul style="list-style-type: none"> Peace building and Conflict management in Samburu North 	Interior and CARITAS
Livestock	<ul style="list-style-type: none"> Supporting farmers to harvest and bailing hay 	County Government, DRSLP
	<ul style="list-style-type: none"> Provision of supplementary feeds in Samburu East and North Sub-Counties 	County Government and FHI
Social Protection & Safety Nets	<ul style="list-style-type: none"> July – August 2020 cycle cash transfers to older person and orphan and vulnerable children 	National Government
Water	<ul style="list-style-type: none"> Repair and servicing of the non-functional boreholes Water trucking in strategic health centres to support COVID 19 response activities 	County Government
Agriculture	<ul style="list-style-type: none"> Hydrological survey for drilling of boreholes 	DRSLP
Health	<ul style="list-style-type: none"> Nutritional screening by household caregivers 	MOH and NDMA
	<ul style="list-style-type: none"> Covid 19 testing and contact tracing 	MOH
	<ul style="list-style-type: none"> Covid 19 awareness creation 	MOH and Mercy Corps

6.2 FOOD AID

- No provision of food aid distributed in the county during the month of October.

7.0 EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- The recurring retaliatory attacks in Baragoi in Samburu north Sub County have led to death of a nine (9) year old child and boda boda operator in the month of November 2020.

7.2 Migration

- Internal movement of cattle across the livelihood zones to normal dry season grazing areas has intensified. Majority of cattle in Samburu East have converged in areas around Sarara, Sira and Losessia likely to move towards Koom. Cattle from Wamba north have migrated towards Suiyan and cattle in Elbarta ward, Lesirikan, and parts of Nyiro have converged in surrounding of Waso Rongai to utilize the available pastures in conflicts prone plains of Kawop.
- Majority of cattle in Agro pastoral have moved to Longewan, Noolkera and Louwa Nyekie. A smaller proportion of cattle from Samburu central have migrated to Laikipia to take the opportunity of grazing on ranches chargeable on agreed fee.

7.3 Food Security Prognosis

- The 2020 short rains performance was below average and had early cessation occasioning early deterioration in rangeland cover thus further worsening of pasture and browse in the County.
- Surface water sources are projected dry up due to early cessation coupled with prevailing sunny, windy and dry weather conditions.
- Livestock prices are projected to remain thus sustaining favourable terms of trade supporting access to staple food commodities for households in the next month.

- Livestock migrations is likely to intensify possibly resulting in reduction in milk production and consumption at household level thus worsening of children at risk of malnutrition.
- Market operations are expected to remain vibrant and maize prices are projected to remain below average driven by above average long rains production in the county coupled with imports from Uasin Gishu and Trans-Nzoia counties by traders.

RECOMMENDATIONS

Table 2: Proposed Interventions per Sector

SECTOR	INTERVENTION	Areas
Water	<ul style="list-style-type: none"> • Water trucking to institutions and communities. • Fastrack 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"> • Community training on post-harvest management. • 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"> • Prepositioning of livestock feeds especially hay. 	<ul style="list-style-type: none"> • County wide
Health and Nutrition	<ul style="list-style-type: none"> • Provision of PPEs to frontline worker and Equipping of ICUs. 	<ul style="list-style-type: none"> • Health Facilities
	<ul style="list-style-type: none"> • Provision of masks and water to schools 	<ul style="list-style-type: none"> • County wide
	<ul style="list-style-type: none"> • Awareness creation on COVID 19 	<ul style="list-style-type: none"> • County wide
Peace and Security	<ul style="list-style-type: none"> • Communities' negotiations on access and sharing of available pastures and water resources. • 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