



**National Drought Management Authority
ISIOLO COUNTY
DROUGHT EARLY WARNING BULLETIN FOR JANUARY 2021**

JANUARY 2021 EW Phase

Drought Status: ALERT



Maandalizi ya Mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- The month of January was characterized by sunny and hot weather with few parts experiencing little showers.
- Vegetation condition in a greater proportion of the county remained at moderate vegetation deficit.
- A great proportion of accessible forage ranged from fair to poor following poor to no regeneration in pastoral livelihood zones. Shortage of livestock feed is therefore looming.
- Water availability was fair due to low recharge levels and worsened by increasing distances to forage.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Body condition of camel, goats and cattle ranged from good to fair in all livelihood zones and expected to worsen.
- Household milk production was low and expected to deteriorate in all livelihood zones.

Access Indicators

- Livestock prices increased in all markets as demand firms up to the festive season. Food commodities prices stabilized.
- Household milk consumption was low given the reducing production.

Utilization Indicators

- Proportion of households with poor and borderline food consumption increased slightly.
- Proportion of children who were moderately and severely malnourished decreased marginally.

Early Warning Phase Classification

Livelihood Zone	EW PHASE	TRENDS
Pastoral-All Species	Alert	Worsening
Agro-Pastoral	Normal	Worsening
Casual Waged Labour /Charcoal burning	Alert	Worsening
County	Alert	Worsening
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	3.7mm	>14.3mm
VCI-3month (Isiolo)	29.1	>33.3
State of Water Sources	4	5
Production Indicators	Value	Normal
Livestock Body Condition	Good	Fair to Good
Milk Production	1.80 Litres	>1.78 Litres
Livestock deaths (from drought)	None	No deaths
Livestock Migration Pattern	Internal migration	Normal
Access Indicators	Value	Normal
Terms of Trade (ToT)	72.1	>54.8
Milk Consumption	1.30 Litres	>1.2 Litres
Return distance (water sources to households)	2.4 km	<3.7 km
Cost of water at source (20 litres)	Ksh 2.00	<Ksh. 5.00
Utilization indicators	Value	Range/Value
Moderately malnourished	4.2 percent	<4.0 percent
Severely malnourished	3.1 percent	<1.1 percent
Coping Strategy Index (CSI)	11.1	14.0
Food Consumption	45.4	>41.3

Seasonal Calendar

<ul style="list-style-type: none"> ▪ Short rains start ▪ Short dry spell ▪ Reduced milk yields ▪ Migration to dry season area ▪ Land preparation 	<ul style="list-style-type: none"> ▪ Migration to wet grazing areas ▪ Long rains ▪ High Calving Rate ▪ Milk Yields Increase ▪ Reduced pasture/water stress (Normal Scenario) 	<ul style="list-style-type: none"> ▪ Long rains harvests ▪ A long dry spell ▪ Increased distances to water and pasture ▪ Reduced water levels ▪ Kidding (Sept) ▪ Community/HH coping measures taken 	<ul style="list-style-type: none"> ▪ Short rains ▪ Planting in Agro-pastoral LZ ▪ Migration from dry season area ▪ Increased milk yield ▪ Reduced pasture/water stress (Normal scenario) 								
Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec

1. CLIMATIC CONDITIONS

1.1 RAINFALL PERFORMANCE

- From figure 1 below, dekadal rainfall estimates (RFE) amounts for the first and second dekad were below normal when compared to their respective long-term dekadal rainfall for estimate (RFE) averages. Generally, current dekadal rainfall amounts deviated from the normal trend from first dekad of the month under review with low amounts of rainfall compared to average.
- Normalized Difference Vegetation Index (NDVI) for the first, second and third dekad were below normal when compared to their respective long-term dekadal NDVI values.

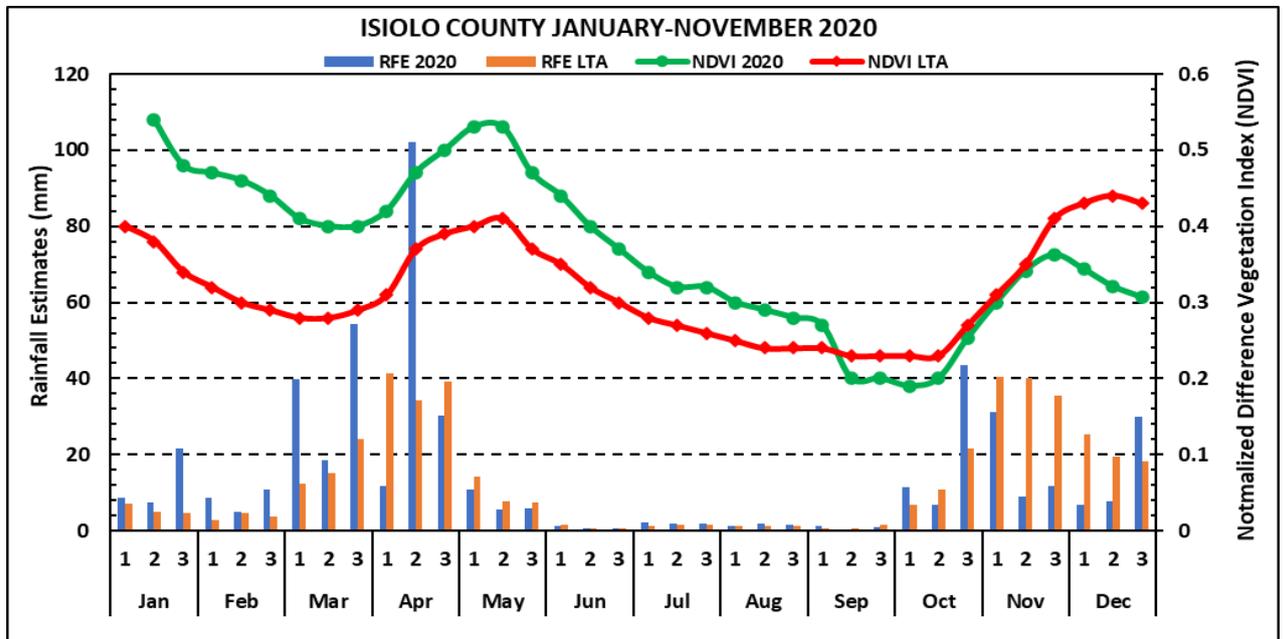


Figure 1: Rainfall estimates and NDVI

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- The county received an average of 5.6mm of off-season showers in the month under review with a poor spatial and temporal distribution.
- In the larger pastoral livelihood zone, very few parts received the off-season showers with the rest remaining dry throughout the period.
- A greater proportion of the received amount was concentrated at the agro-pastoral livelihood zone mainly Burat, Bulapesa and Wabera wards.

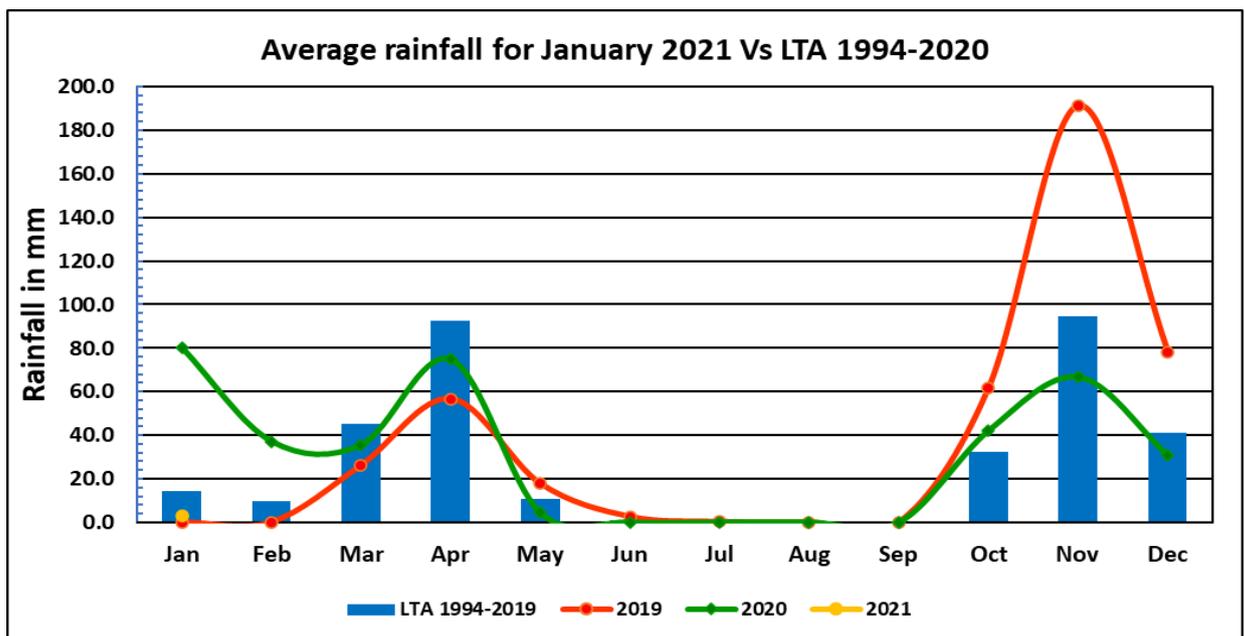


Figure 2: Average amount of rainfall (station data)

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The matrix below illustrates January 2021 Vegetation Condition Index, classified as agricultural drought based on VCI thresholds. The chart shows a retrospective analysis of the vegetation condition as related to drought.

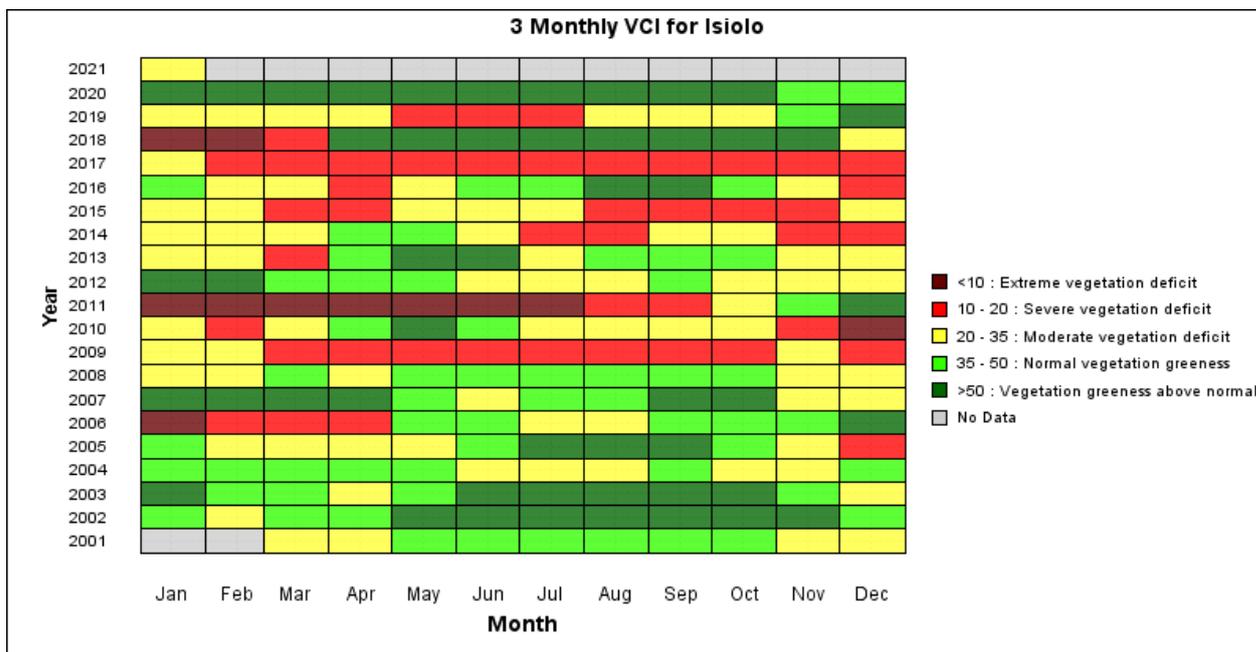


Figure 3: Vegetation Condition Index for Isiolo North Sub-County

- A generally moderate vegetation deficit prevailed in the county with VCI average index of 29.1 as shown in figure 3 above.
- The county overall 3-Month vegetation condition index for Isiolo North decreased significantly to 22.56 in the period under review from 29.8 in the previous month.
- The index has been on a declining trend, a phenomenon that could be attributed to the poor performance of short rains, both temporary and spatially.
- The vegetation condition is expected to decline further in the following month, a period that is usually characterized as the peak of the dry spell.

2.1.2 Pasture

- General pasture conditions ranged from fair to poor in the accessible grazing areas and are expected to last about one to two months. This was attributed to the poor regeneration of natural vegetation and subsequent gradual depletion palatable grass species.
- However, dry season grazing reserves have significant amount of good quality pasture but inaccessible due to prevailing challenges of insecurity as well as scarce water sources.
- Overall pasture condition in the month under review was poor though at a relatively poorer condition compared to a similar period in the previous year and in the long-term.
- The amount and quality of pasture is expected to deteriorate steadily with possibilities of depletion in a period not exceeding two months.

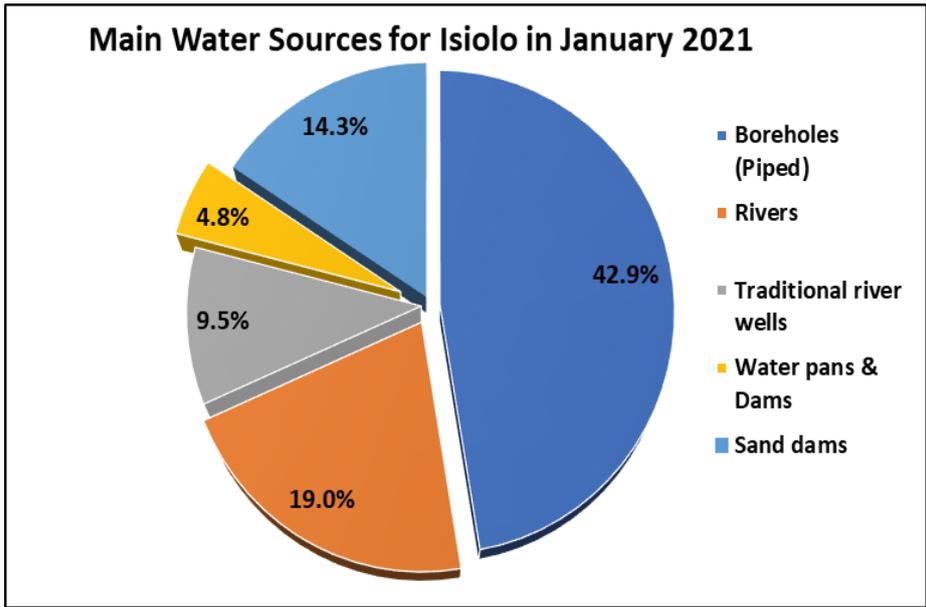
2.1.3 Browse

- The condition of browse ranged from fair to poor in the pastoral and agro-pastoral livelihood zones following moderate to poor regeneration.
- The current condition of browse has been attributed to a relatively poor regeneration of shrubs and trees in majority of pastoral livelihood zones that received low amounts of rain.
- Overall browse condition in the month under review was at a poorer condition compared to a similar period in the previous year.

- Overall browse condition is expected to deteriorate steadily as the short January-March dry spell continues facilitating shedding of leaves and eventual depletion by wildlife and livestock.

2.1.4 Water Sources;

- Main water sources during the period under review boreholes, springs, shallow wells, traditional river wells, sand dams and rivers. Other limited sources are water pans.
- Recharge in the three permanent rivers was relatively good but the water volumes are reducing steadily with water flow expected to last for less than two months. An increasing number of temporary rivers have dried upstream leaving wet sands where river wells are dug to obtain water for domestic and livestock watering.
- The proportion of boreholes on normal usage reduced to 52 percent in the previous month out of the 52 installed with sensors. However, the proportion of boreholes that were not used at all reduced considerably to 17% from 25 percent during the previous month.



Households in established settlements accessed water from boreholes supplied through household taps and/or community water kiosks which is normal at this time of the year. Water supply for Isiolo town residents was normal with minor pipeline interruptions.

Figure 4: Main water sources

2.1.5 Household access and Utilization

- Household water access distance to main sources increased considerably to an average of 2.4km during the period under review from 2.0km in the previous month.
- A large proportion of households accessed water from boreholes while those that depend on water pans turning to boreholes for considerably long distances.

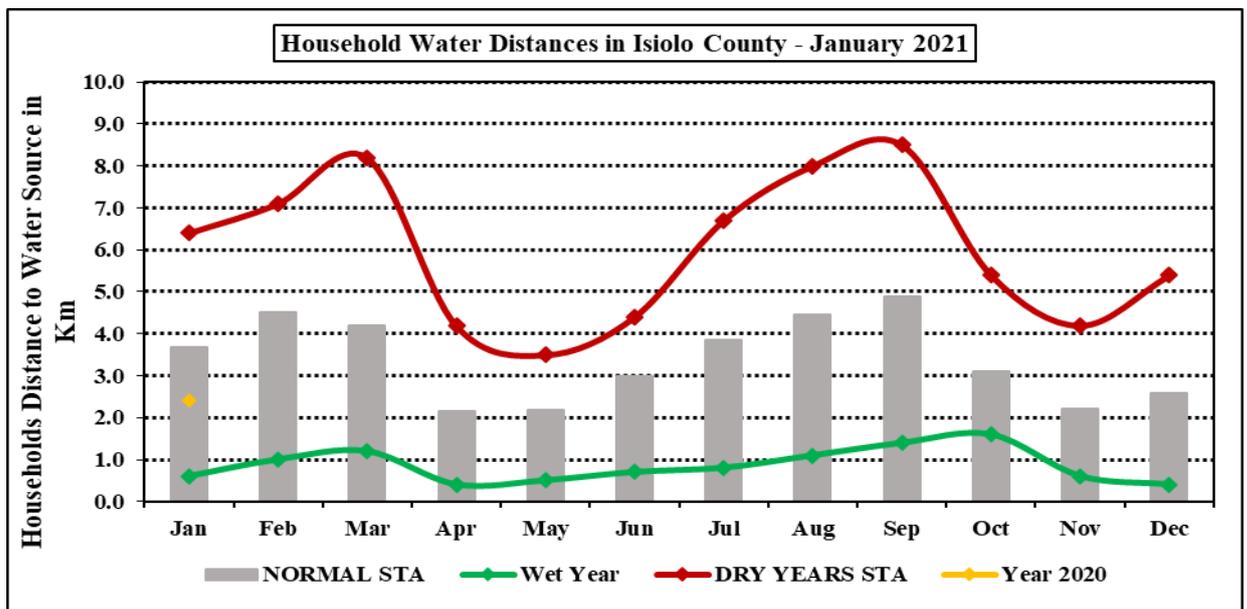


Figure 4: Household distance to water sources

- Water availability in majority of semi-permanent sources such as rivers, sand dams, traditional river wells, water pans and shallow wells deteriorated considerably as water volumes declined due to poor recharge. The January-March dry spell is expected to accelerate drying of majority of the temporary water sources.
- The average cost of water from piped distribution points (*kiosks*) was Ksh.2.00 per 20 litre jerrican which is normal at this time of the year.
- Waiting time at main sources in the pastoral livelihood zones settlements increased slightly to range between 10 and 20 minutes.
- The longest one-way distance was in Cherab ward where household walked an average of 4.0km (one way) to River Ewaso Nyiro. The shortest average distance of about 0.3km was recorded in the casual-waged labour livelihood zone where households access water from household/community access taps.

2.1.6 Livestock Access

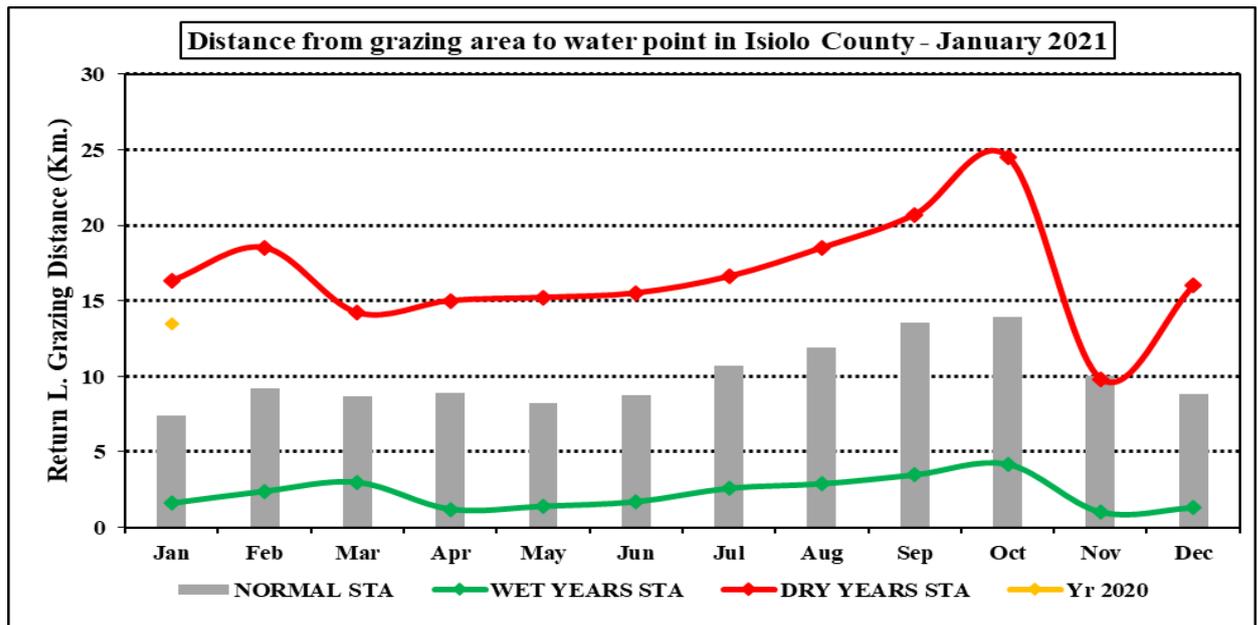


Figure 5: A graph of distance to grazing areas from water points

- The average distance to water sources from the grazing areas recorded a significant increment to 13.6km in the month under review from 11.2km in the previous month.
- The increment in watering distance was mainly attributed to the deteriorating condition of forage as well as drying of temporary water sources in the pastoral livelihood zones.
- The month's average livestock watering distance was 84 percent higher than the long-term average of 7.4km at a similar period of the year.
- Livestock watering interval ranged from one to two days for cattle, sheep and goat and four to eight days for camels. Watering distance from grazing areas expected to increase considerably following poor recharge to water sources and a deprived availability of pasture in majority of the pastoral and agro-pastoral livelihood zones.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Body conditions for all livestock species ranged from good to fair in the pastoral and agropastoral livelihood zones as there has been a considerably prolonged availability of feed thereby providing a favourable environment for production.
- The livestock body condition is expected to deteriorate to some extent in the next two months which are normally characterized by hot weather and shortage of adequate and quality forage.
- The current livestock body condition was relatively better compared to a similar period in the long-term.

3.1.2 Livestock Diseases

- There is confirmed outbreak of Lumpy Skin Disease among cattle in Merti and Sericho.
- Rift Valley Fever outbreak has been confirmed in Cherab and Sericho wards with fears of further spread to other areas due to continued migration of livestock in search of pasture and browse.
- CCPP as an endemic livestock disease was reported in several areas across the county.
- Cases of foot and mouth disease were also reported in some parts of Charri ward.

3.1.3 Milk Production

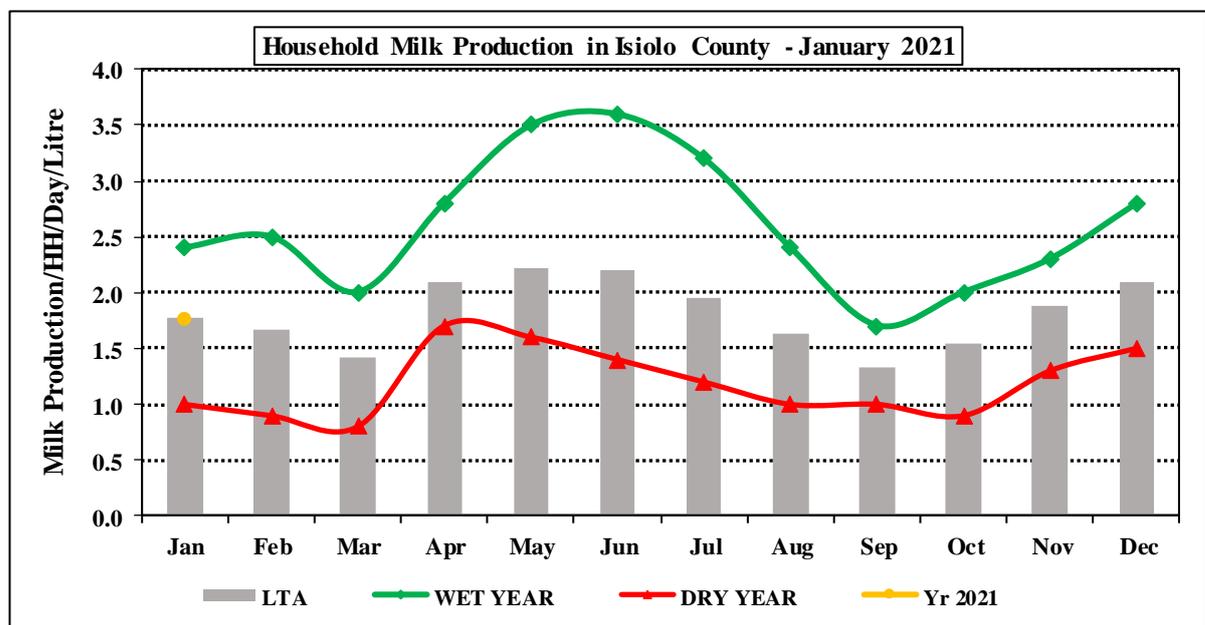


Figure 6: A graph of average milk production in litres

- Milk produced in milking households stabilized at 1.8 litres in the month under review.
- Kinna and a few parts of Garbatulla wards were the largest sources of milk that is supplied to Isiolo markets where camel population is currently concentrated
- The low production though stable for the moment is attributed to diminishing availability and quality forage.
- The amount produced is expected to decrease considerably in the following month as quantity and quality of forage is expected to deteriorate as the dry spell continues.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

- Maize crops planted early are maturing/drying stages while majority of green grams, beans and cow peas are being harvested.
- However, maize crops planted a late after onset of the rainy season have dried up at middle stages of development due to moisture stress that resulted after delayed rains along the season.
- Small-scale irrigation went on along the permanent rivers which are still flowing with water where there was continued watering of horticultural crops including onions, kales and tomatoes.

4.0 MARKET PERFORMANCE

4.1 Livestock Marketing

Cattle Prices

- Average cattle price recorded decreased slightly to Ksh.27,500 in the month under review from Ksh. 29,600 in the previous month.
- Cattle price decline was partly attributed to a relatively higher supply at the start of the year as parents sought to raise money to cater for opening of schools and other household necessities after a long holiday occasioned by the covid-19 pandemic.
- The price is expected to decline in the following month which is characterized by relatively higher sales in a bid to destock some animals to reduce risk of losing them in the ongoing dry spell. Demand is expected to stabilize for the next two months.
- The highest average price was recorded in Isiolo town market at Ksh.36,500 while the least was Ksh.24,000 in Merti market.
- The period's price was however 45 percent above the long-term average of Ksh.18,800 at the same period of the year.

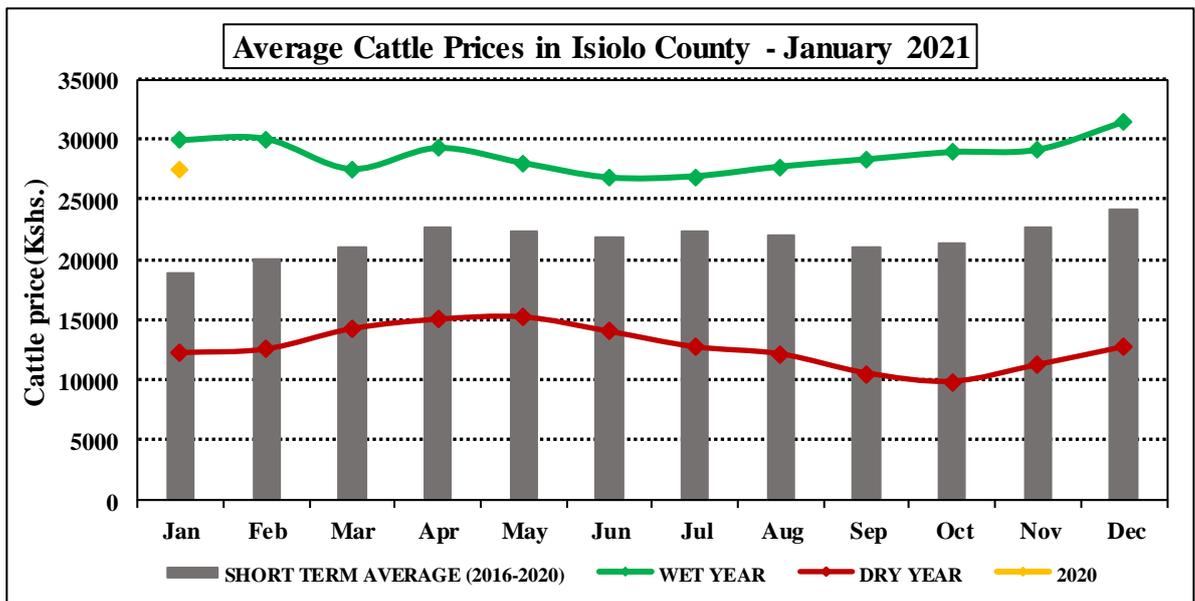


Figure 7: A graph of average market price of cattle

Small Ruminants Prices (Goat)

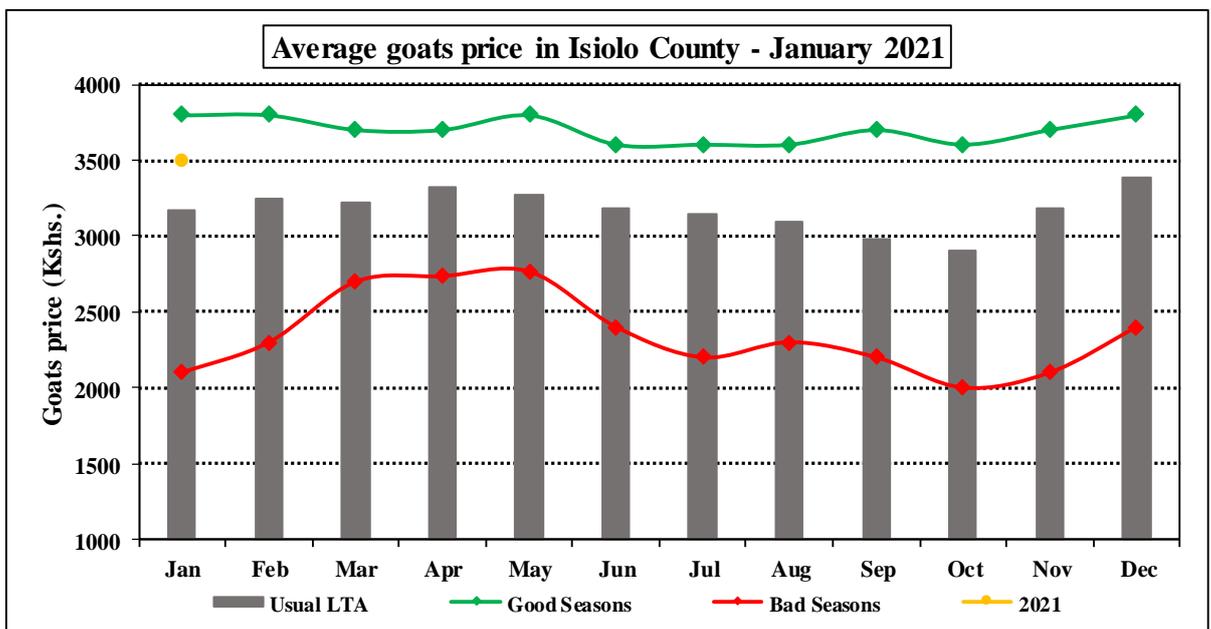


Figure 8: Average price of goats

- Average goat price had a significant decline to Ksh.3,500 in the month under review from Ksh. 3,900 in the previous month.
- The price reduction observed could be attributed to a high supply of goats to the market as herders sought to raise funds to cater for school fees and other household necessities. However, the price has been boosted by the stable body condition of the species.
- The least and highest market prices recorded were Ksh.3,000 and Ksh.4,000 in Oldonyiro and Isiolo town markets respectively.
- Average goat price for the period was 10 percent higher than the long-term average of Ksh.3,200 during the same period of the year.

4.2 CROP PRICES

Maize

- The market price of a kilogram of maize reduced considerably to Ksh.48.50 in the month under review from Ksh.51.20 in the month under review.
- The cereal price stability was attributed to its steady supply to the markets from within and out of the county.
- The cereal's price is expected to stabilize as there are adequate supplies in the country following surplus production from the neighbouring counties and Rift Valley.
- Cereals lowest price was Ksh.40 in Isiolo town markets and highest in Merti at Ksh.60.
- The cereal's price in rural markets including Merti, Bisan Biliqo and Sericho was relatively high as supplies were not consistent attributed to the long distances and community cereal preferences.
- Average price of maize was five percent lower than the long-term average of Ksh.52 at a similar period of the year.

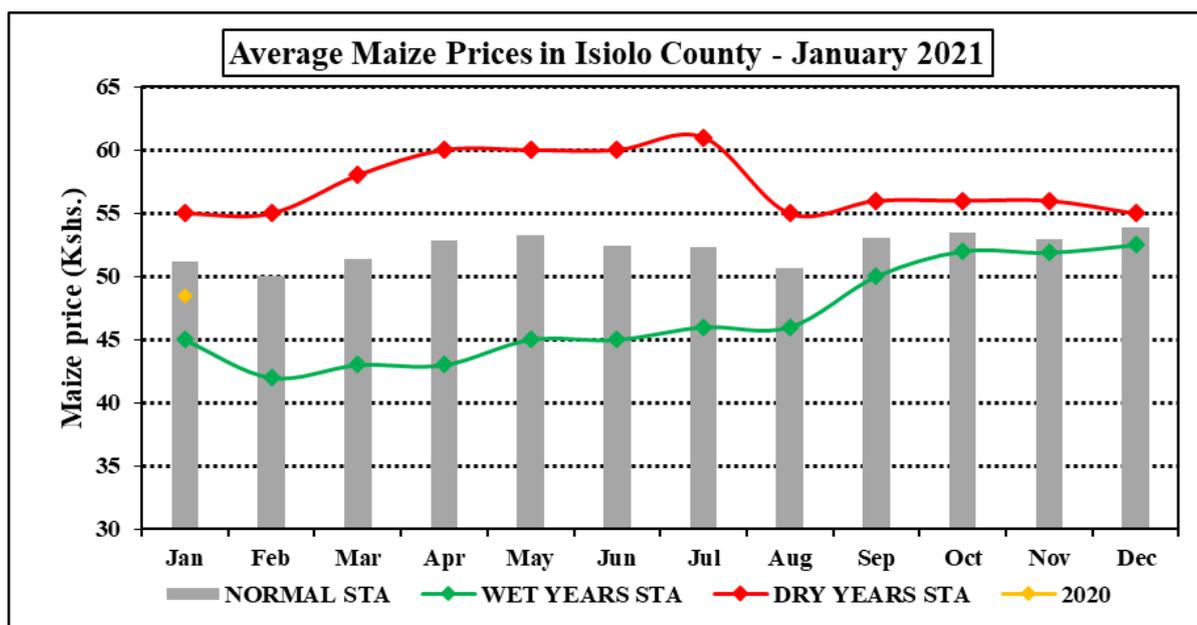


Figure 9: A graph of average maize (cereal) market price in the county

Beans

- Average price of beans decreased significantly to Ksh.101.50 in the month under review from Ksh. 114 in the previous month.
- The pulse's price reduction could be attributed to increased supplies following the ongoing harvest season in the county and neighboring areas.
- The pulse's price is expected to decrease further in the following month then stabilize for some time before rising again.
- The highest price was recorded in Merti market in the pastoral livelihood zone at an average of Ksh.120 while the lowest price was in Isiolo at Ksh.80 in Isiolo central market.
- The price was five percent higher than the long-term average price of Ksh.96.40 during a similar period of the year.

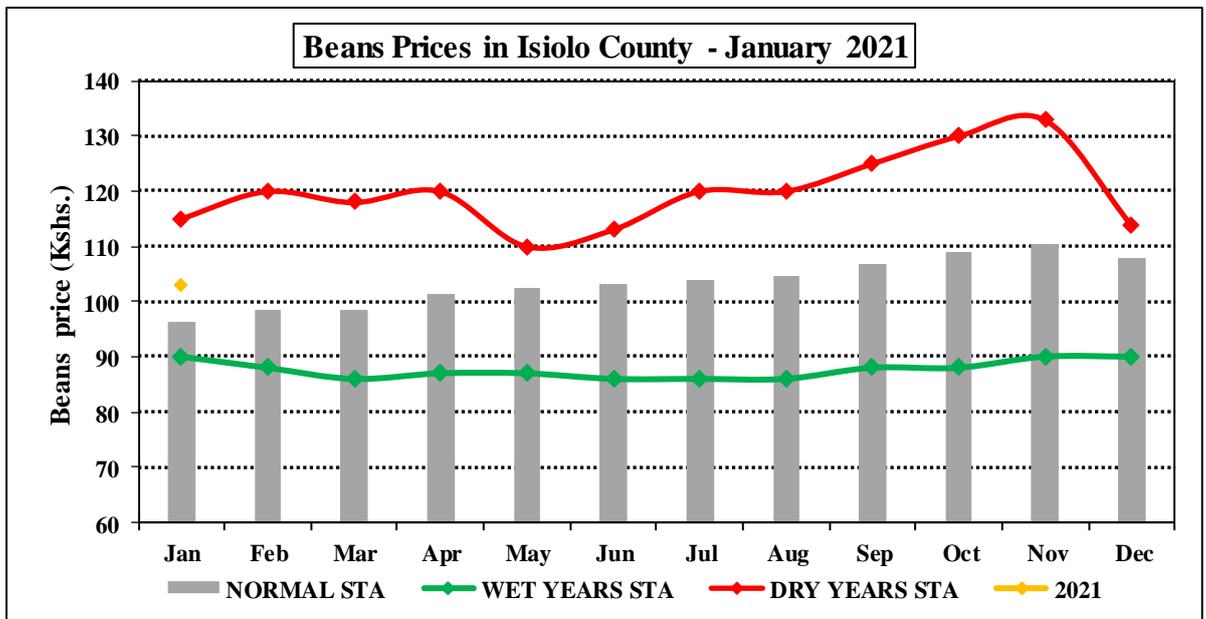


Figure 10: A graph showing average market price for pulses (beans)

4.3 Livestock Price Ratio/Terms of Trade

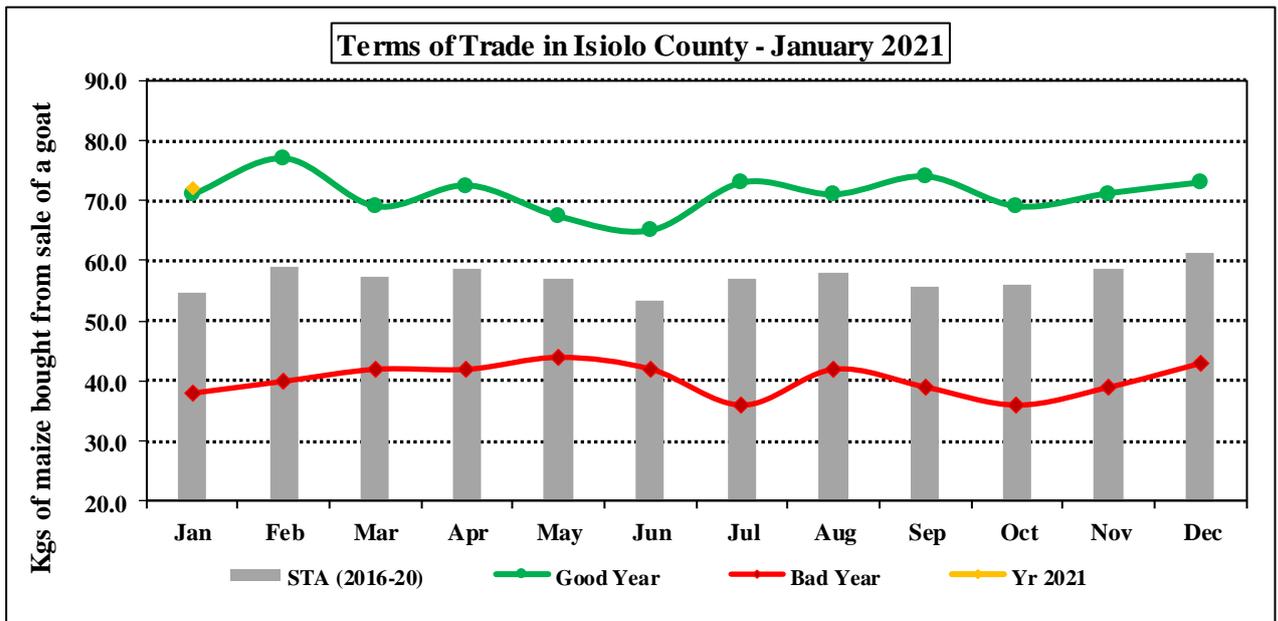


Figure 11: A graph showing the typical pastoralist households Terms of Trade in the county

- Terms of Trade (the number of kilograms of maize a farmer would purchase after a sale of one goat) stabilized at 72kg/goat in the period under review.
- The ratio was 31 percent higher than the long-term average of 54kg/goat at a similar period of time in a year.
- Stability in the TOT reflected a firm household's purchasing power mainly attributed to a consistent performance of livestock and food markets.
- The measure of purchasing power in the county is expected to decline substantially should livestock prices drop during the January-March dry spell where body conditions may decline.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

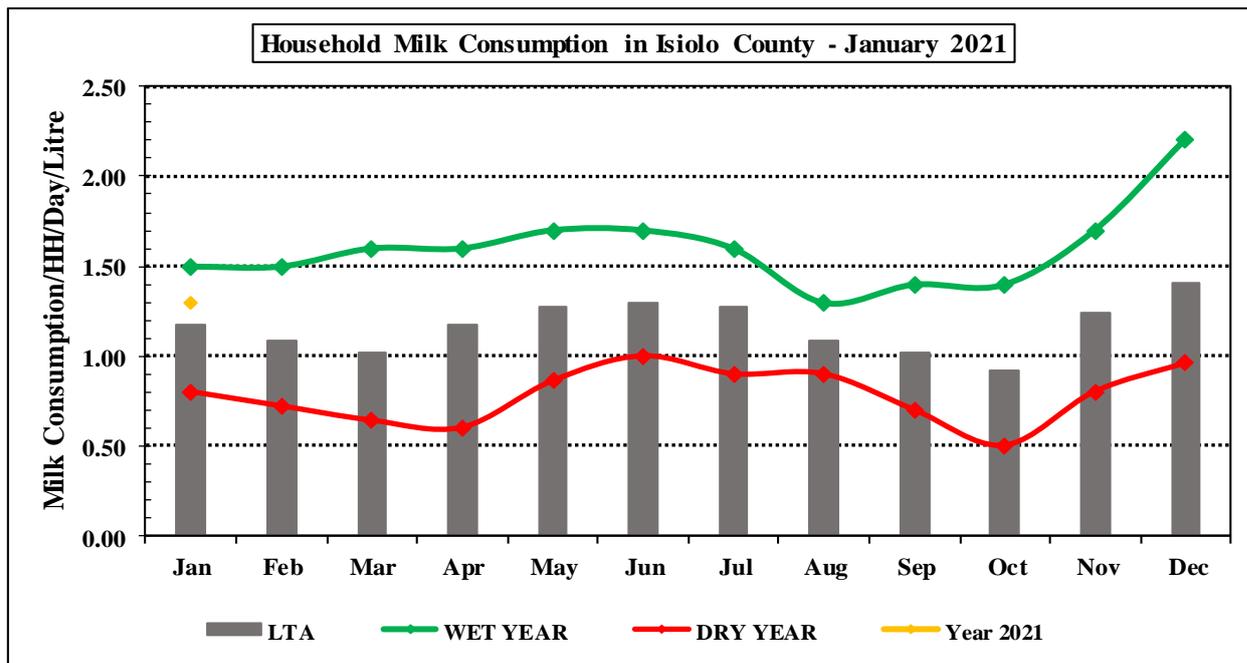


Figure 12: Average milk consumption in litres

- Average milk consumption per household stabilized at 1.20 litres in the month under review.
- The low amount of fresh milk consumed at the households was attributed to the declining production.
- Average consumption was 2 percent higher than the long-term average during a similar period of the year and is expected to decline during the two months dry spell.
- Consumption was higher in the pastoral livelihood zone when compared to the agro-pastoral and casual-waged labor/employment livelihood zones.

5.2 FOOD CONSUMPTION SCORE

- Patterns of household food consumption deteriorated marginally as shown in Figure 13 where an estimated 4.1 percent of households had poor food consumption. 21 percent had borderline food consumption.

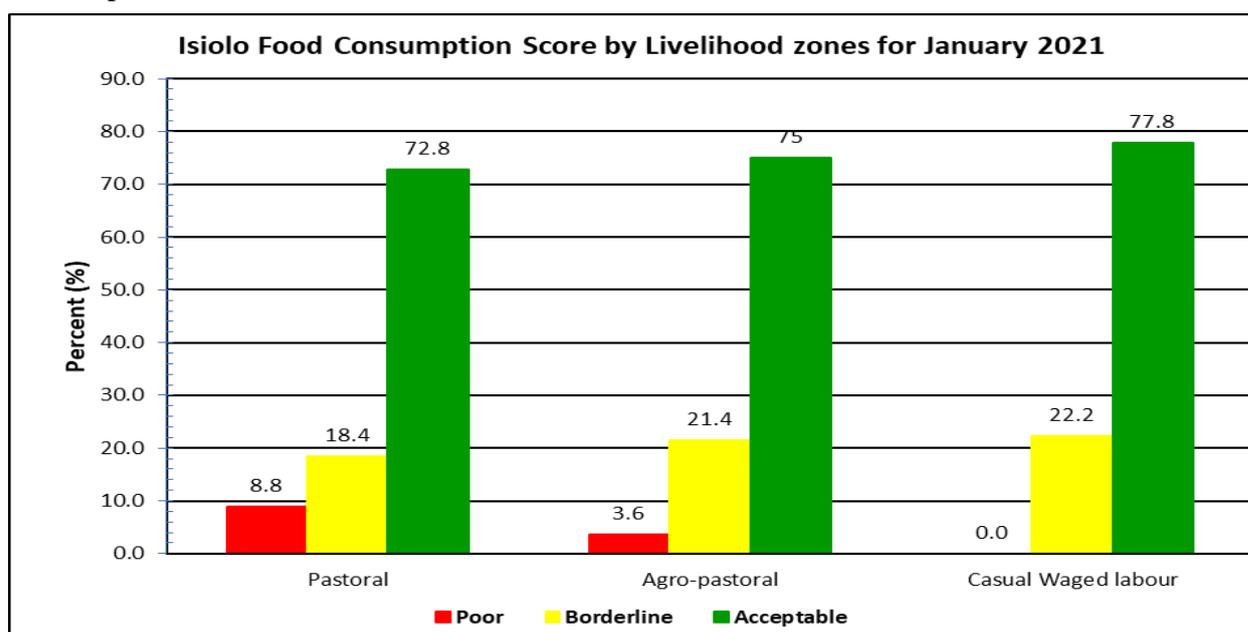


Figure 13: Households' food consumption score

- The households that had poor food consumption were mainly concentrated in the pastoral livelihood zone. The same zone had more households with acceptable food consumption mainly attributed to the relatively good consumption of fresh milk.
- Dietary diversity especially in the larger pastoral livelihood zone remained considerably poor, a scenario that is blamed on poor availability of quite a number of food varieties as well as consistent prevalence of certain food types. Transport challenges that hinder consistent supply is also a contributing factor.
- Food consumption situation is expected to deteriorate considerably in the month of February as the ongoing dry spell continues to impact negatively on livestock body condition, milk production and availability of fruits and fresh vegetables.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- In the month of January, 3.1% and 4.0% of children were severely malnourished and moderately malnourished respectively. The proportion of malnourished children had a slight decline depicting a few more children recovered from malnutrition during the period under review.

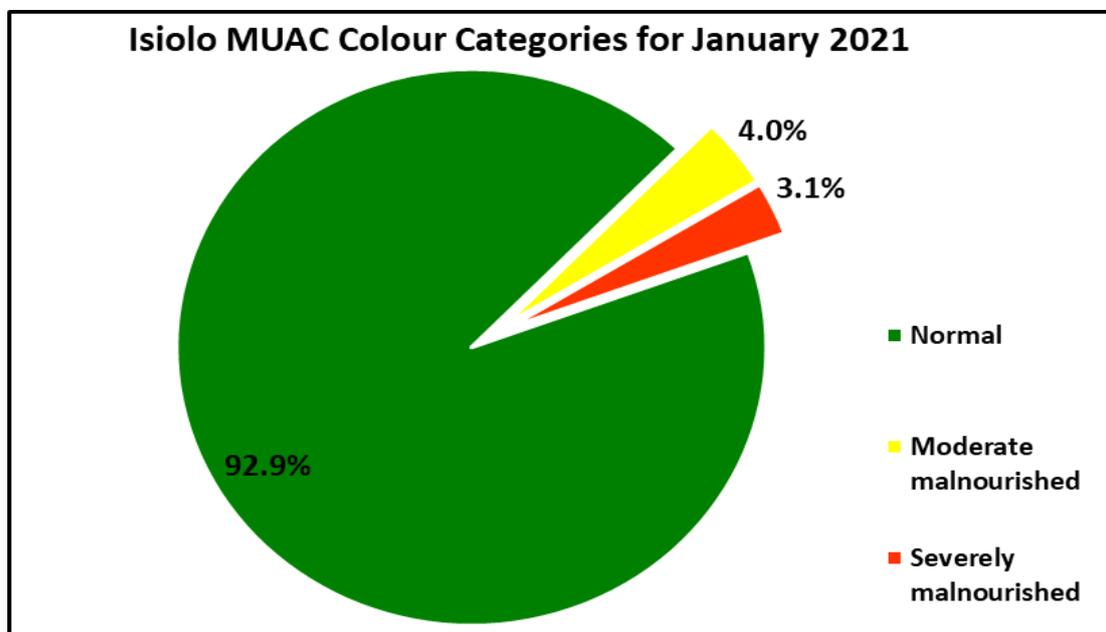


Figure 14: Proportion of under five-year children who are moderately and severely malnourished

- The proportion of children who are moderately malnourished decreased slightly from the previous month rate. This could be attributed to the increased care of medical personnel and subsequent recovery of some of them.
- The prevailing rate of children at risk of malnutrition could also be attributed to poor young child nutrition among pastoral households as well as prevalence of endemic diseases such as diarrheal ailments and upper respiratory tract infections among the under-fives.

5.3.2 Health

- The health seeking behavior in the county has been steadily increasing and returning to normalcy following several months where health seeking was negatively affected by fear of contracting the Covid-19.
- The general populations' most prevalent diseases included acute upper respiratory tract infections (URTI), malaria, skin disease and urinary tract infections.
- Children under five years' most prevalent diseases included the diarrheal, acute respiratory tract infections, pneumonia, intestinal worms and skin disease.

5.4 COPING STRATEGIES

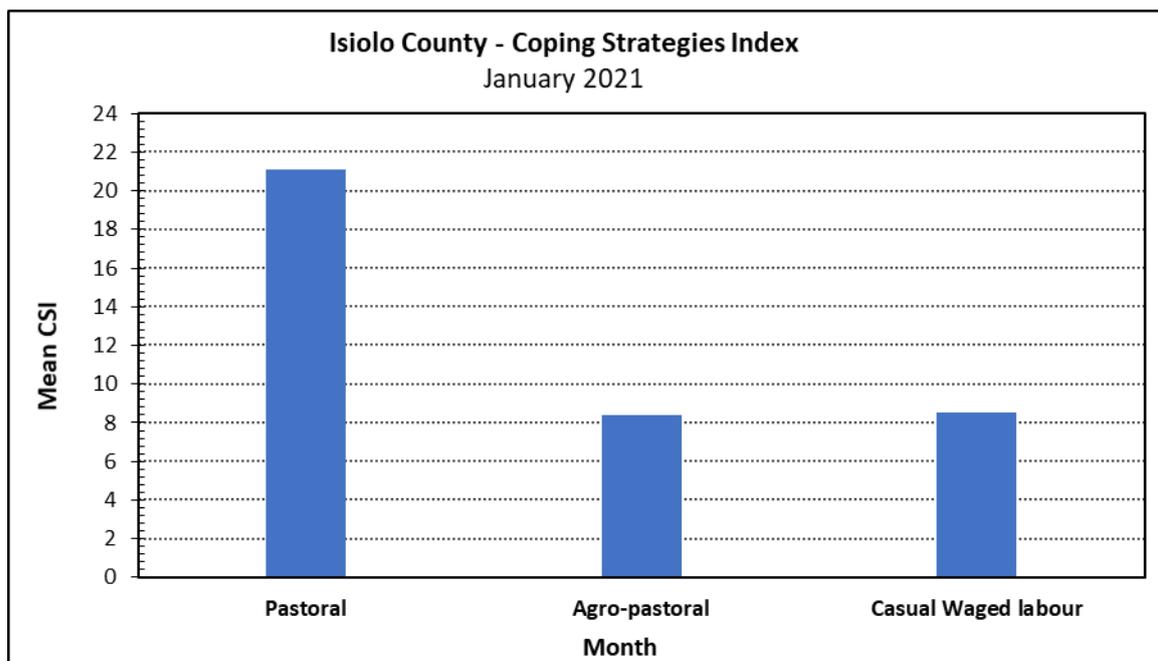


Figure 15: Household Reduced Coping Strategies Index

- Coping Strategy Index (CSI) increased slightly to 11.1 during the month under review from 10.0 in the previous month implying that some food-based coping strategies were employed at a higher frequency compared to the previous month.
- The stability could be attributed to deteriorating food consumption at household level in especially in the pastoral livelihood zone where migrations in search of pasture and insecurity are on the rise.
- However, a small proportion of households continued to employ more than three food livelihood-based coping strategies, a situation attributable to economic livelihood hardships triggered by migration due to insufficiency of pasture and browse.
- Households without a stable source of income either from keeping of livestock, business or casual labour are prone to cyclic food shortages, thereby becoming victims who employed coping strategies.
- The most commonly employed coping strategies over the period were skipping of meals, reliance on less preferred and/or less expensive foods as well as taking credit from neighbours and shops.
- Other commonly employed coping strategies are reduction of the number of meals and reduction in portion or size of meals and borrowing.
- The most commonly employed livelihood-based coping strategy was spending of savings.

6.0 CURRENT INTERVENTION MEASURES (ACTIONS)

6.1 NON-FOOD INTERVENTIONS

Table 1: A table showing the current non-food interventions in the county

Type of intervention	Ward	Sub-county	Action	Amount/ Targets
Cash transfer to HHS affected by locust invasion	Oldonyiro (Kipsing and Lenguruma location, Gotu, Godha, Bassa, Barambate, Kula mawe, Yaqbarsati, Malkadaka, Gafarsa Iresaboru,	Isiolo North and Isiolo South	Mid-P	1792 HHS
	Ngaremara ward Cherab ward	Isiolo North	CRS-NAWIRI	200HH Ngaremara 400HH Cherab
	Oldonyiro, Charri Kinna	Isiolo North Isiolo South	FAO	1000 HH
Prepositioning of drugs and medical equipment in health institutions	All wards	Isiolo North and Isiolo South	Isiolo County Government	36 health facilities
Livestock disease surveillance	All wards	All sub county	RPLRP and VSF SUISSE	All wards
Rift Valley Fever (RVF) outbreak response intervention	Garbatulla, Sericho, Cherab, Charri		CCM, Zoonotic Disease Unit (ZDU) VSF and County government of Isiolo	Ksh 6M

7. EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- Major resource-based conflicts were reported along Wajir-Isiolo pitting herders from Merti and Wajir West sub-counties and along Isiolo-Garissa border.
- The Isiolo South-Garissa border/resource-based conflicts has affected livestock marketing after Duse and Escort livestock markets stopped their normal operations.

7.2 Migration

- Movements in search of forage were mainly internal with an increased number of immigrants from neighbouring counties such as Wajir and Garissa.
- There were internal movements of herders deeper into areas around Kulamawe-Gachuru section which has better availability of forage.

7.2 Assumptions and Food Security Prognosis

Assumptions

- There will be no significant amounts of off-season rains during the short dry spell lasting between January and Mid-March.
- Incidences of insecurity will be few and of low magnitude.

Prognosis

- The level of food security in the county has been stable for the past one year but the situation looks bleak considering the below normal performance of the short rains season, which was dismal both temporary and spatially.
- Livestock production contributed much of the food consumed in all the livelihood zones directly and indirectly. Animal productivity is currently stable but the deteriorating forage condition is likely to deal a blow to current good to fair body conditions and milk production. Milk production is already on the decline.
- Crop production is going on well in the current season though its productivity will be negatively affected by the poor rainfall performance which have resulted into short lived recharge across all water sources. In that regard, the available water may fail to last until end of the dry spell with high likelihoods of negatively affecting small-scale irrigation schemes are key in provision of fresh vegetables and fruits to the county fresh produce market. Incomes from the farming are likely to reduce as the dry spell progresses.
- Access to livestock and farm produce markets was normal with majority of households accessing food commodities from them in all livelihood zones. The situation is expected to stabilize for the next three months apart from areas experiencing challenges of insecurity.
- Food consumption has been stable in all livelihoods as majority of households had acceptable food consumption. However, this may be negatively affected by low availability of food that might result from negative effects of deteriorating livestock and crop production environment characterized by poor forage availability and reducing water levels in rivers.
- Food utilization was significantly boosted by the relatively stable availability of water across the three livelihood zones. However, water availability is expected to be diminish following poor recharge in majority of sources following poor recharge in most water sources, a factor that will likely lead to increased distances to sources in the next three months.
- There was increased competition over rangeland resources within the county as pressure from neighboring counties (whose forage situation is poor) mount in the county. The scenario may continue fueling the ongoing resource-based conflicts hence make forage search problematic and therefore affect greatly the pastoral livelihoods.
- The overall food security situation remains in the stressed phase (IPC 2) and on a worsening trend.

8. RECOMMENDATIONS

- Promote commercial destocking initiatives mainly targeting cattle and sheep while they are in good body condition to ease pressure on available forage resources.
- Support response intervention on the outbreak of Rift valley Fever (RVF) in both human and livestock.
- Engage and support grazing committees to enable them manage/implement community's' grazing patterns so as to ensure the fairly available forage resources are sustainably utilized and prevent or minimize resource-based conflicts.
- Support learning institutions with hand sanitizers and water storage facilities after the recent re-opening of schools. This will go a long way in ensuring hygiene in the institutions and help fight possible spread of Covid-19.
- Support active and continuous human and livestock disease surveillance for any possible outbreak.
- Support preparation of county drought response plans.
- Sensitize the community on safety precautionary measures to stem spread of coronavirus disease (COVID-19).
- Sensitize caregivers at the household level on disease and malnutrition identification in children under five years of age to enhance screening during the prevailing period where public health measures have been enforced to control spread of COVID-19. This will help formulate appropriate nutrition interventions.
- Promotion of hygiene and sanitation practices especially the Community Led Total Sanitation (CLTS).
- Upscale cash transfer programs to caution vulnerable households against impacts of the livelihood losses that emanated from imposition of Covid-19 restrictions, Locust invasion and Drought.