



**National Drought Management Authority
ISIOLO COUNTY**

DROUGHT EARLY WARNING BULLETIN FOR FEBRUARY 2021

FEBRUARY 2021 EW Phase

Drought Status: ALERT



Maandalizi ya Mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- The month was characterized by hot sunny weather with Isiolo central and Kinna experiencing off-season 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 further in all livelihood zones.

Access Indicators

- Livestock prices stabilized in all markets as supply reduced compared to January. 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 increased marginally.

Early Warning Phase Classification

Livelihood Zone	EW PHASE	TRENDS
Pastoral-All Species	Alert	Worsening
Agro-Pastoral	Alert	Worsening
Casual Waged Labour /Charcoal burning	Alert	Worsening
County	Alert	Worsening
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	5.7mm	>9.6mm
VCI-3month (Isiolo)	22.4	>32.8
State of Water Sources	4	5
Production Indicators	Value	Normal
Livestock Body Condition	Fair to good	Fair to Good
Milk Production	1.6 Litres	>1.68 Litres
Livestock deaths (from drought)	None	No deaths
Livestock Migration Pattern	Internal migration	Normal
Access Indicators	Value	Normal
Terms of Trade (ToT)	71	>59.0
Milk Consumption	1.2 Litres	>1.1 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	5.1 percent	<5.1 percent
Severely malnourished	3.4 percent	<0.5 percent
Coping Strategy Index (CSI)	11.5	14.7
Food Consumption	46.1	>41.5

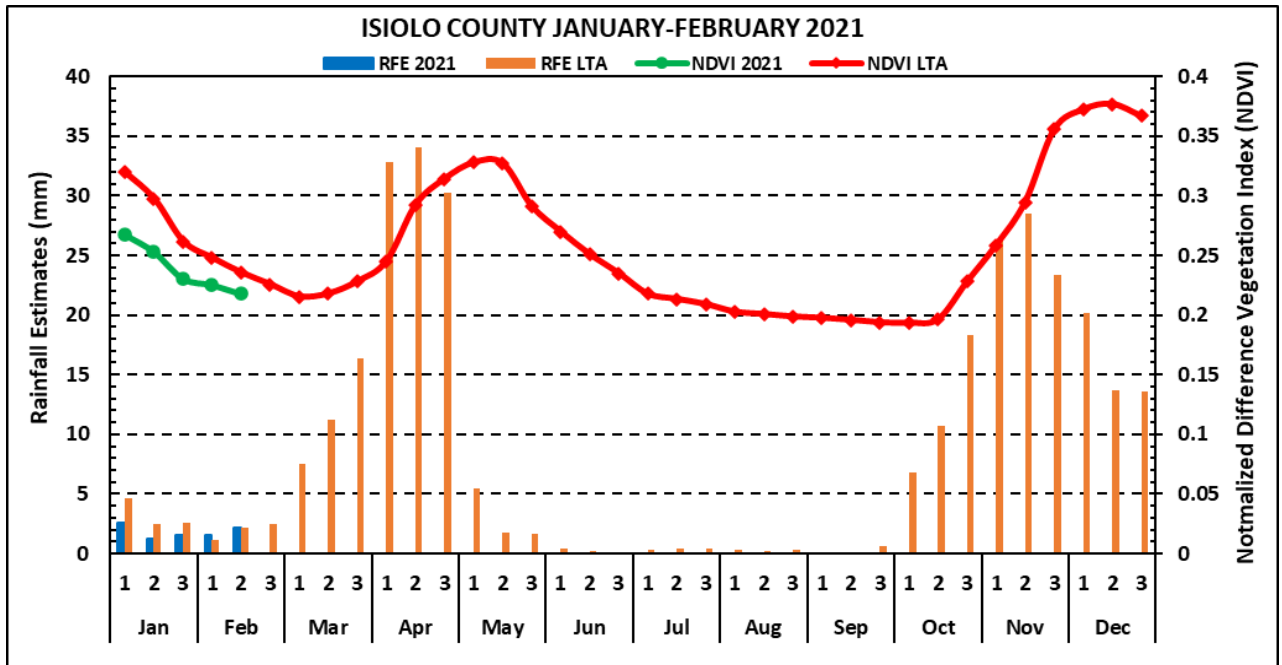
Seasonal Calendar

<ul style="list-style-type: none"> ▪ Short rains starts ▪ 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 had a normal trend from first dekad of the month under review with similar amounts of rainfall to the long-term 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.



1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- The county received an average of 5.7mm of off-season showers in the month under review. The showers were however poorly distributed both spatially and temporally.
- 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 in Burat in the agro-pastoral livelihood zone and Kinna in pastoral livelihood zone.

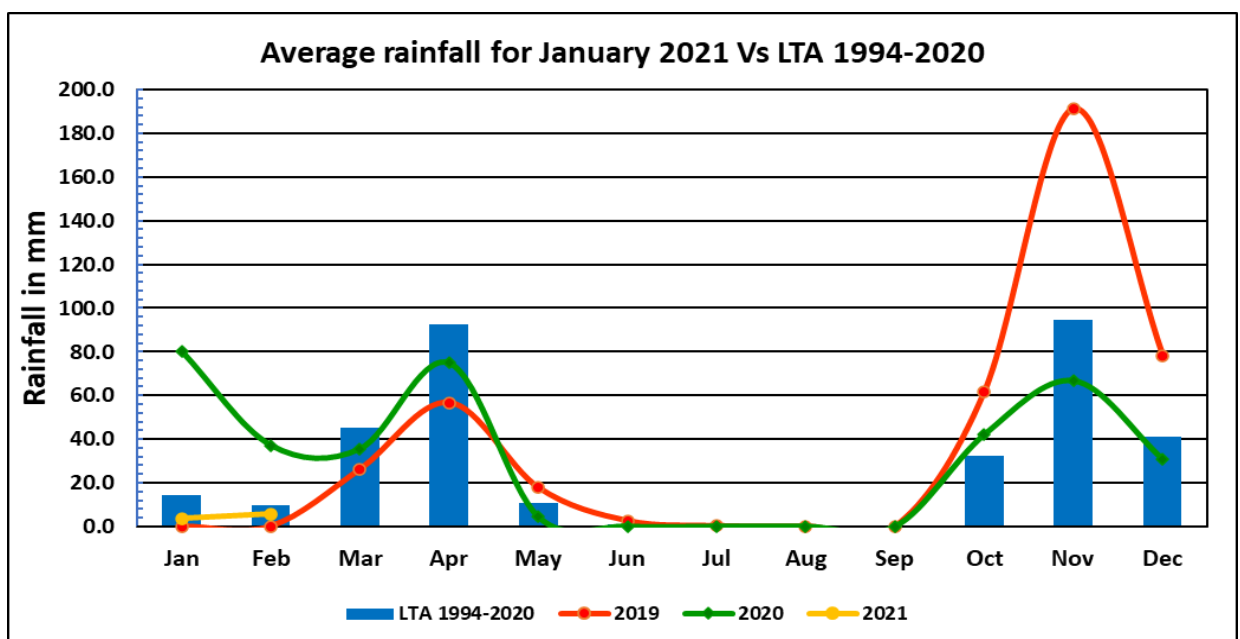


Figure 1: Average amount of rainfall (station data)

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The matrix below illustrates February 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.

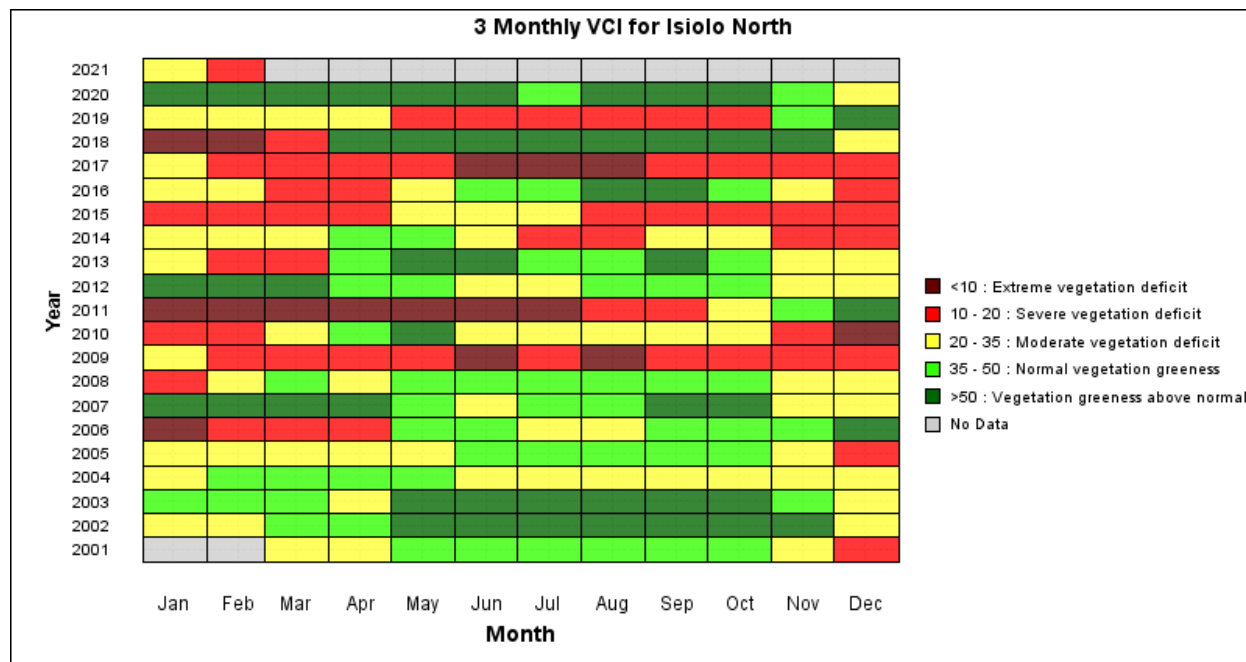


Figure 2: Vegetation Condition Index for Isiolo North Sub-County

- The county overall 3-Month vegetation condition for Isiolo North deteriorated to severe vegetation deficit as shown in figure 3 above, a condition that was confirmed through ground observation
- A generally moderate vegetation deficit prevailed in the county with VCI average index of 22.4. This is a reduction from the previous month VCI value of 29.1.
- The index has been on a declining trend, a phenomenon that could be attributed to the poor regeneration of natural vegetation that due to 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 month. 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.

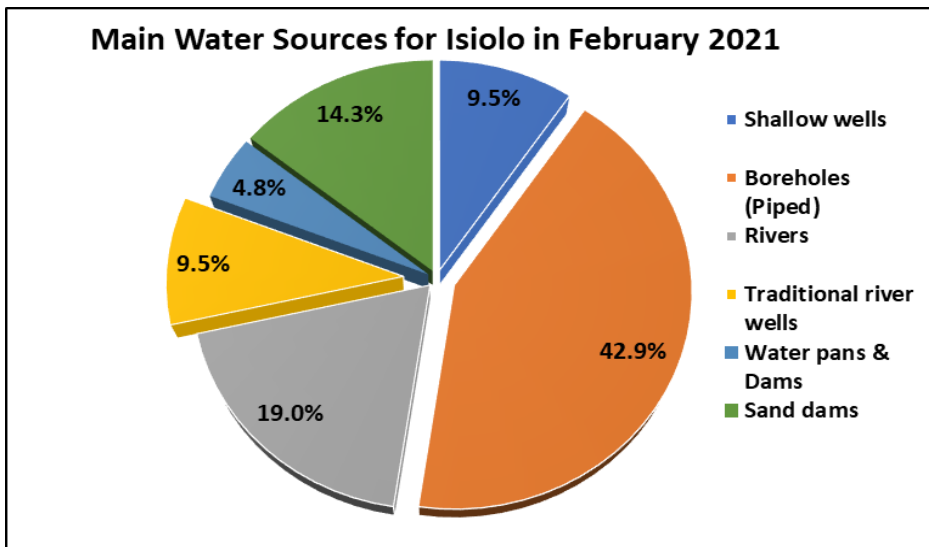
2.1.3 Browse

- The condition of browse ranged from fair to poor in the pastoral and agro-pastoral livelihood zones following moderate to poor regeneration and eventual depletion.
- 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 included boreholes, rivers, springs, shallow wells, traditional river wells and sand dams. Other water sources were water pans and pipes.
- Recharge in the three permanent rivers was relatively good but the water volumes are reducing steadily with water flow expected to cease downstream in less than two months' time. An increasing number of temporary rivers have dried upstream leaving wet sands where river wells have dug to get water for domestic and livestock watering.
- The proportion of boreholes on normal usage increased significantly to 68 percent in the month under review from 53 percent in the previous month. However, the proportion of boreholes that were not used at all reduced slightly to 15 percent from 17 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 3.1km during the period under review from 2.4km 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.

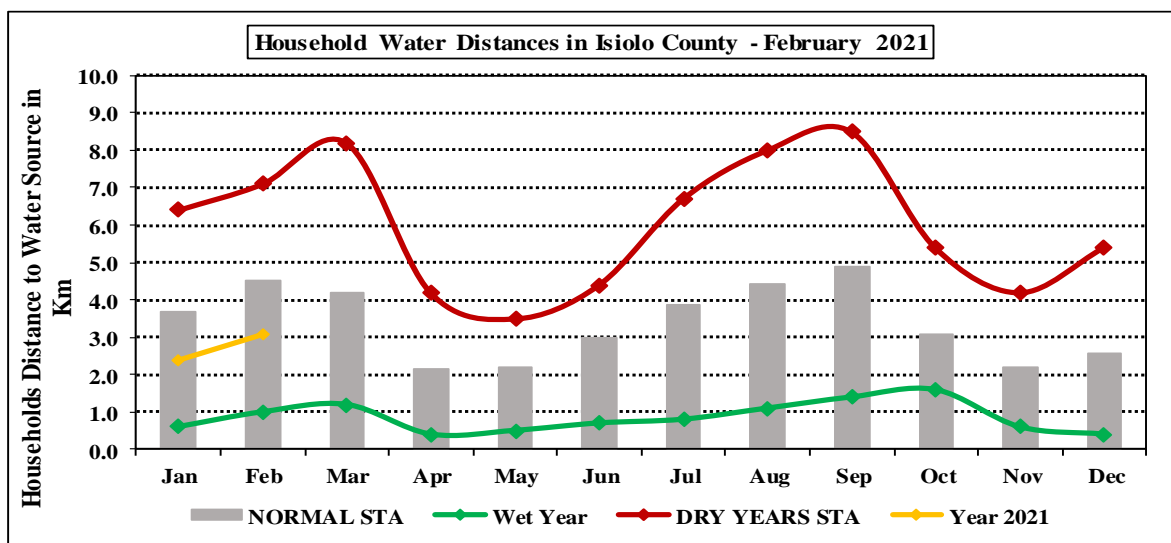


Figure 3: Household distance to water sources

- 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

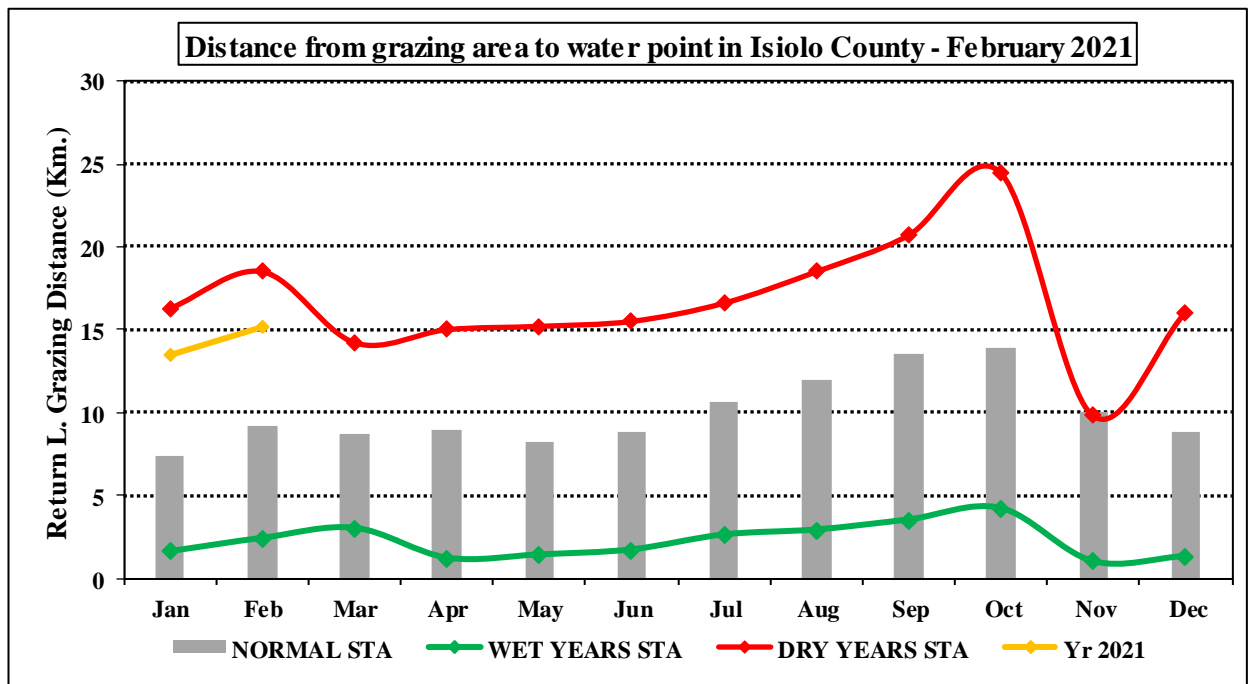


Figure 4: A graph of distance to grazing areas from water points

- The average distance to water sources from the grazing areas recorded a significant increment to 15.1km in the month under review from 13.6km in the previous month.
- There are areas where herders are trekking up to 20km to water points mostly in Cherab, Charri, Sericho and Garbatulla wards as forage shortage deepens in the grazing areas.
- The increment in watering distance was mainly attributed to the diminishing availability of forage as well as drying of temporary water sources in the pastoral livelihood zones.
- The month's average livestock watering distance was 65 percent higher than the long-term average of 9.2km at a similar period of the year.
- Livestock watering interval ranged from two to three days for cattle, sheep and goat and 6-9 days among the camels. The distance is expected to increase considerably following the continued depletion of forage resources and as herders move deeper into the grazing reserves for better pasture availability.

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 agro-pastoral 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

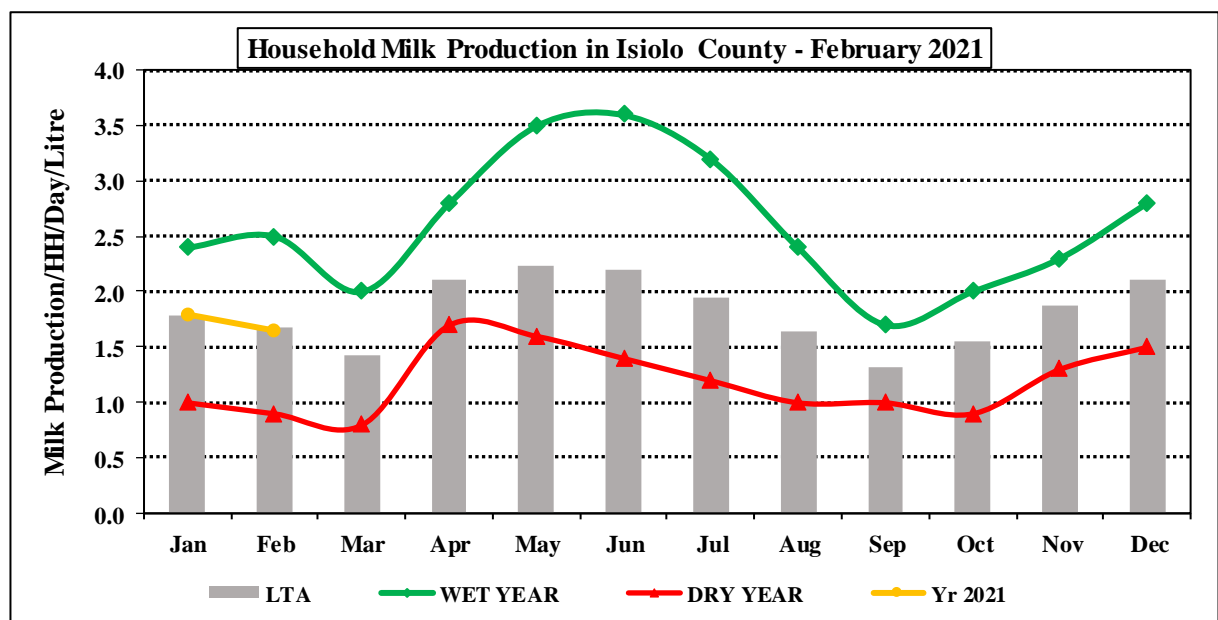


Figure 5: A graph of average milk production in litres

- Milk produced in milking households reduced slightly to 1.63 litres in the month under review from 1.80 in the previous month.
- 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 which is on a deteriorating trend as recorded in the last three consecutive months is attributed to diminishing quantities and quality of 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 bites.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

- All food crops for the short rains season have been harvested and farmers already preparing their farms in readiness for the planting season which is predicted to begin in late March.
- 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 stabilized at Ksh.27,600 in the month under review.
- Cattle price decline was partly attributed to a relatively higher supply at the start of the year as pastoral households sought to raise funds to cater for re-opening of schools and other household necessities after a long holiday occasioned by the covid-19 pandemic.
- The price is expected to rise in the following month which is characterized by relatively low supply in a bid to hold the animals with the hope of onset of the rains.
- The highest average price was recorded in Isiolo town market at Ksh.33,000 while the least was Ksh.25,000 in Merti market.
- The period's price was however 33 percent above the long-term average of Ksh.20,000 at the same period of the year.

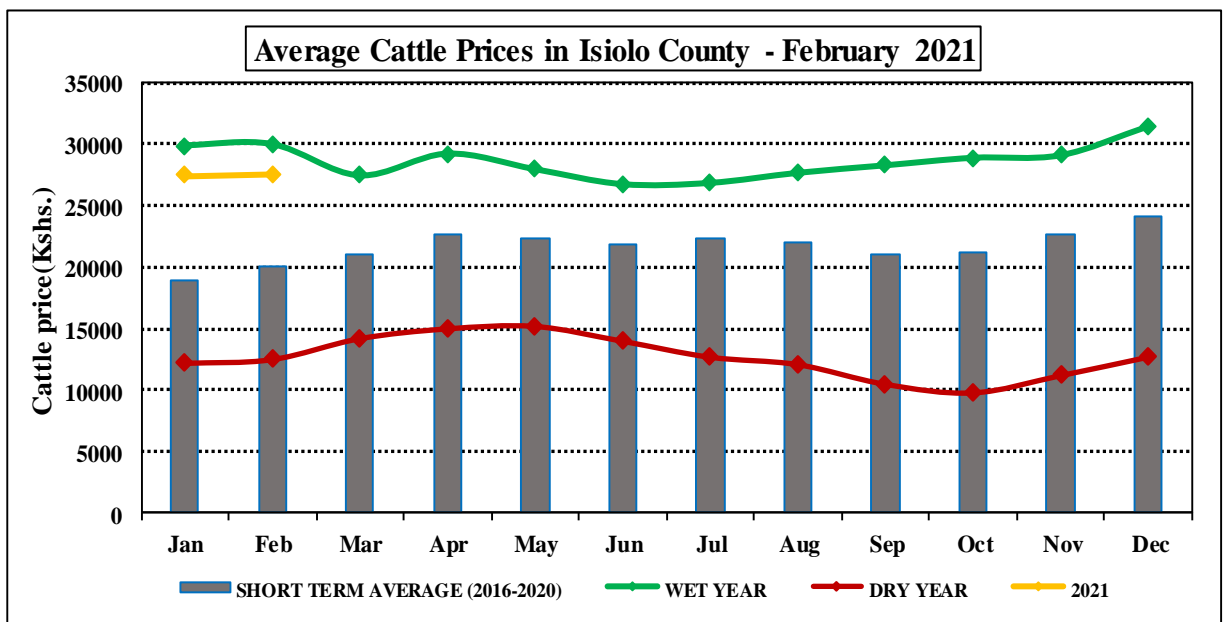


Figure 6: A graph of average market price of cattle

Small Ruminants Prices (Goat)

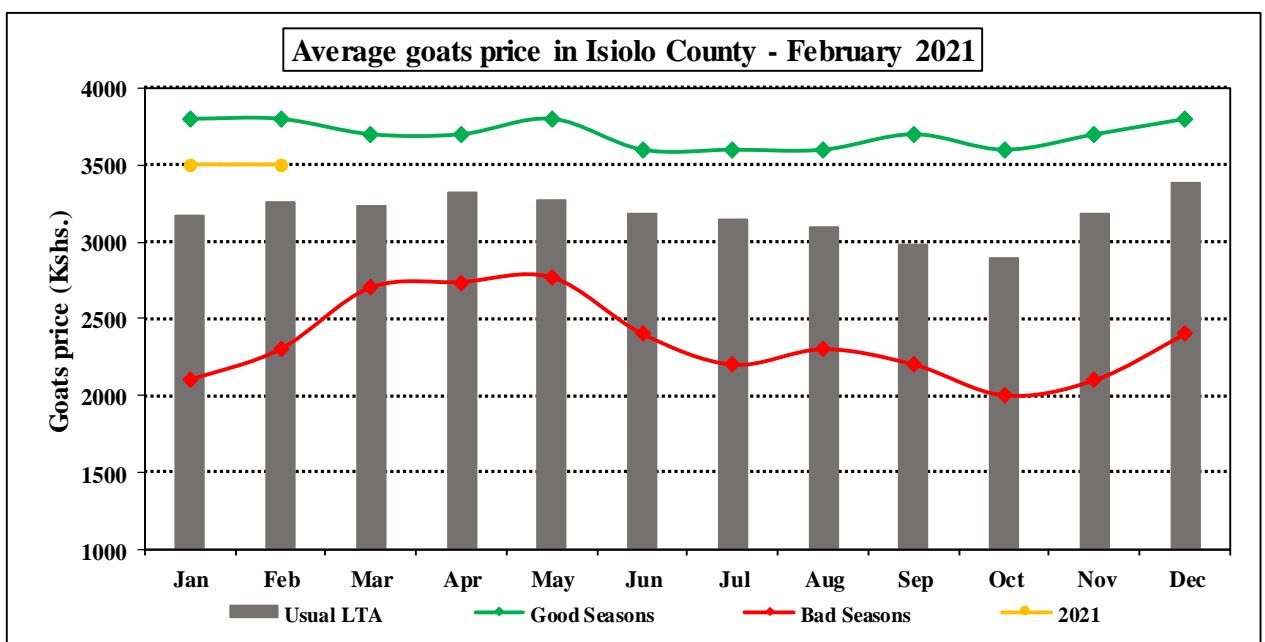


Figure 7: Average price of goats

- Average goat price recorded some form of stability at Ksh.3,500 in the month under review.
- The price stability recorded could be attributed to moderate to normal supply of goats to the market and a stable demand for the period under review. Additionally, the price has been boosted by the good to fair body condition of the species.
- The least and highest market prices recorded were Ksh.28,000 and Ksh.4,000 in Oldonyiro and Isiolo town markets respectively.
- Average goat price for the period was 8 percent higher than the long-term average of Ksh.3,300 during the same period of the year.

4.2 CROP PRICES

Maize

- The market price of a kilogram of maize stabilized at Ksh.49.00 in the period under review.
- The cereal price stability was attributed to its steady supply to the markets from within and out of the county as the harvesting season draws to a close.
- 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 three percent lower than the long-term average of Ksh.52 at a similar period of the year.

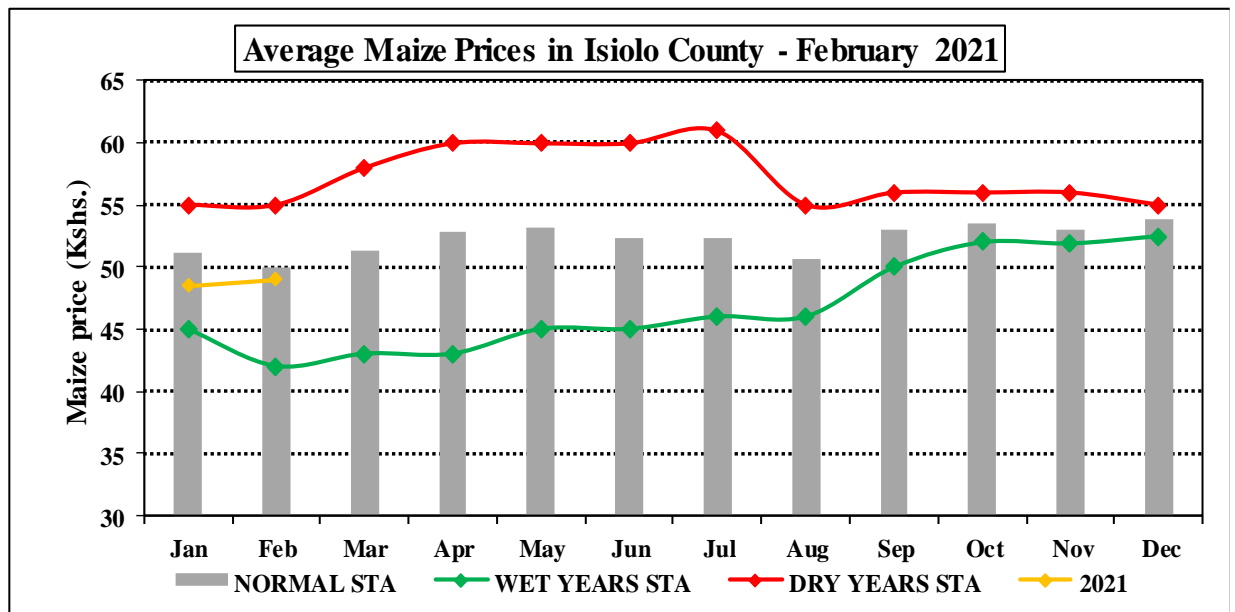


Figure 8: A graph of average maize (cereal) market price in the county

Beans

- Average price of beans increased slightly to Ksh.106.50 in the month under review from Ksh. 101.5 in the previous month.
- The pulse's price increment could be attributed to diminishing supplies as stocks held by farmers reduce gradually.
- The pulse's price is expected to increase considerably in the following month which marks the planting period for the long rains season.
- 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.90 in Isiolo central market.
- The price was eight percent higher than the long-term average price of Ksh.98.40 during a similar period of the year.

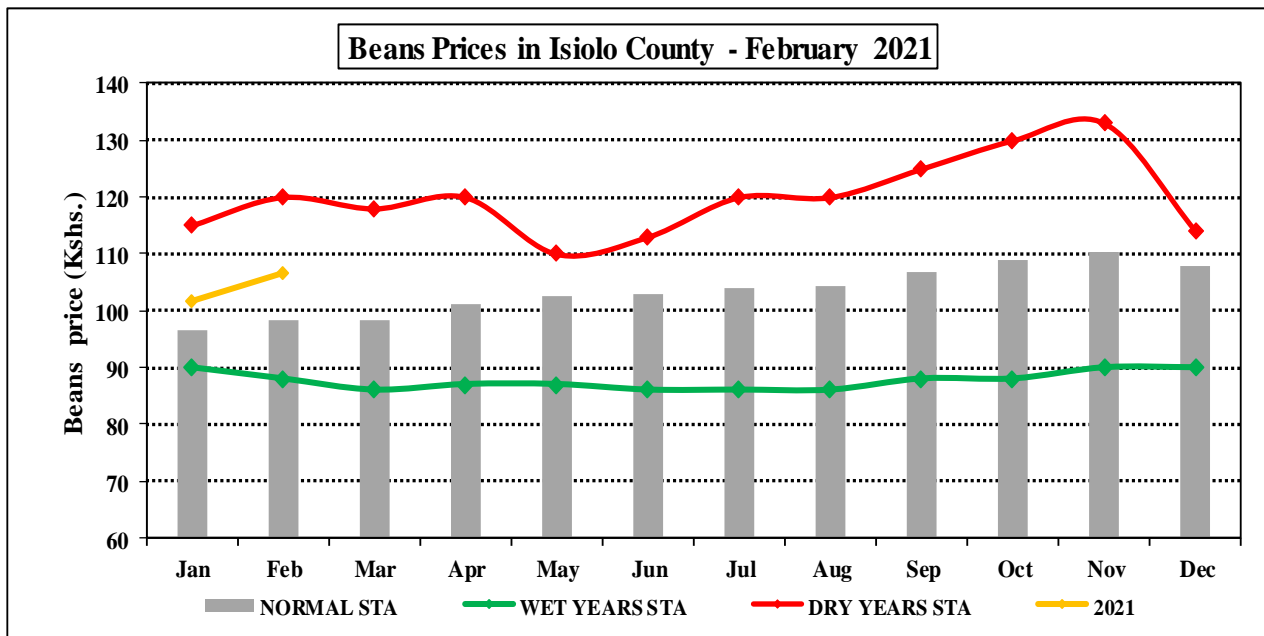


Figure 9: A graph showing average market price for pulses (beans)

4.3 Livestock Price Ratio/Terms of Trade

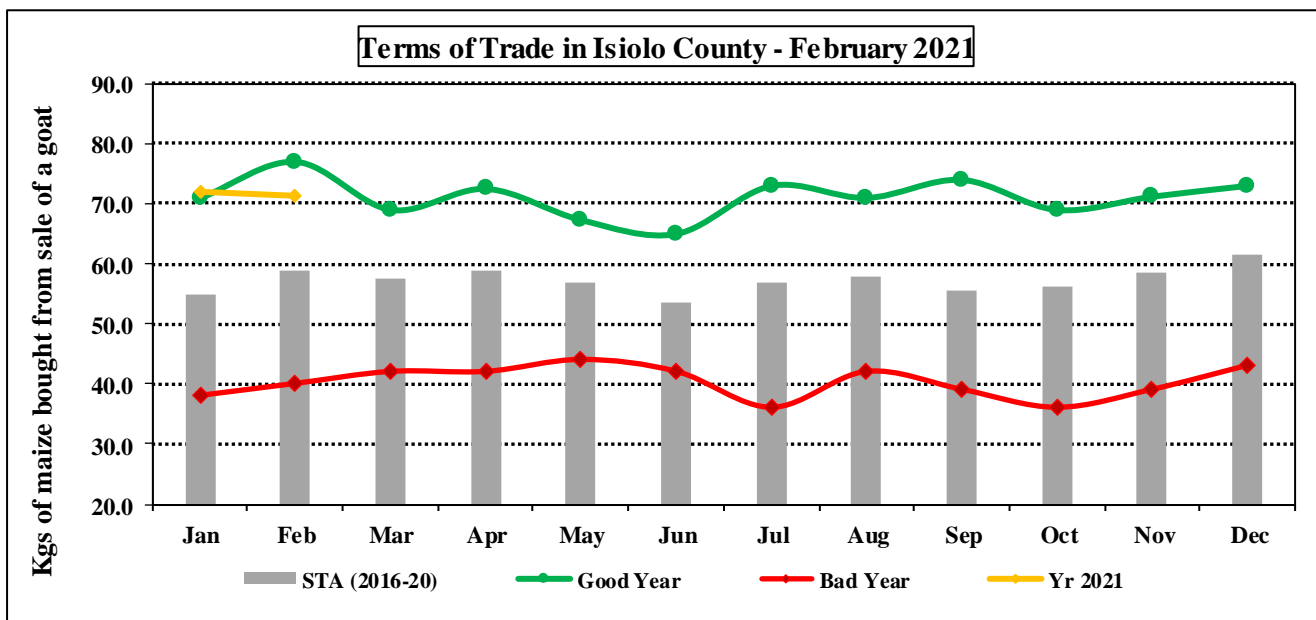


Figure 10: A graph showing the typical pastoralist households Terms of Trade in the county

- Terms of Trade (the number of kilograms of maize a farmer would purchase after a sale of one goat) stabilized at 71kg/goat in the period under review.
- The ratio was 21 percent higher than the long-term average of 59kg/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 stabilize into the month of March when onset of long rainfall season is expected.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

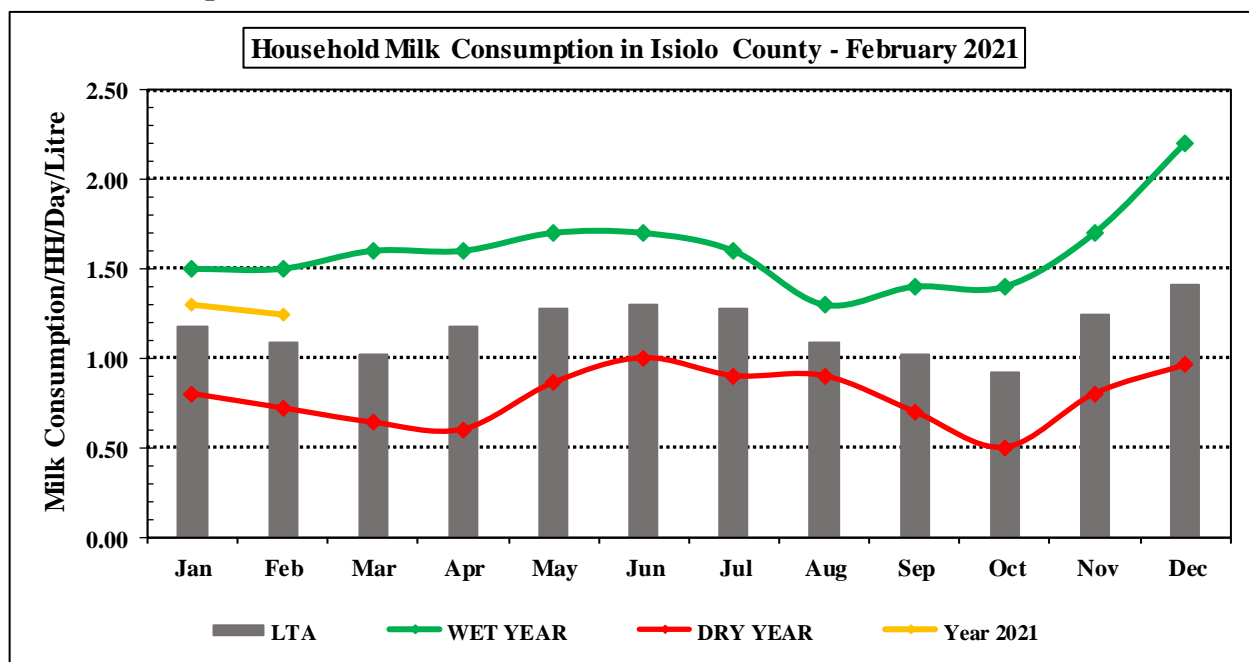


Figure 11: Average milk consumption in litres

- Average milk consumption per household reduced slightly to 1.24 litres in the month under review from 1.32 litres in the previous month.
- The low amount of fresh milk consumed at the households was attributed to the declining production.
- Average consumption was 15 percent higher than the long-term average during a similar period of the year and is expected to decline further in the following month.
- 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 6.3 percent and 21.7 percent of households had poor and borderline food consumption respectively.

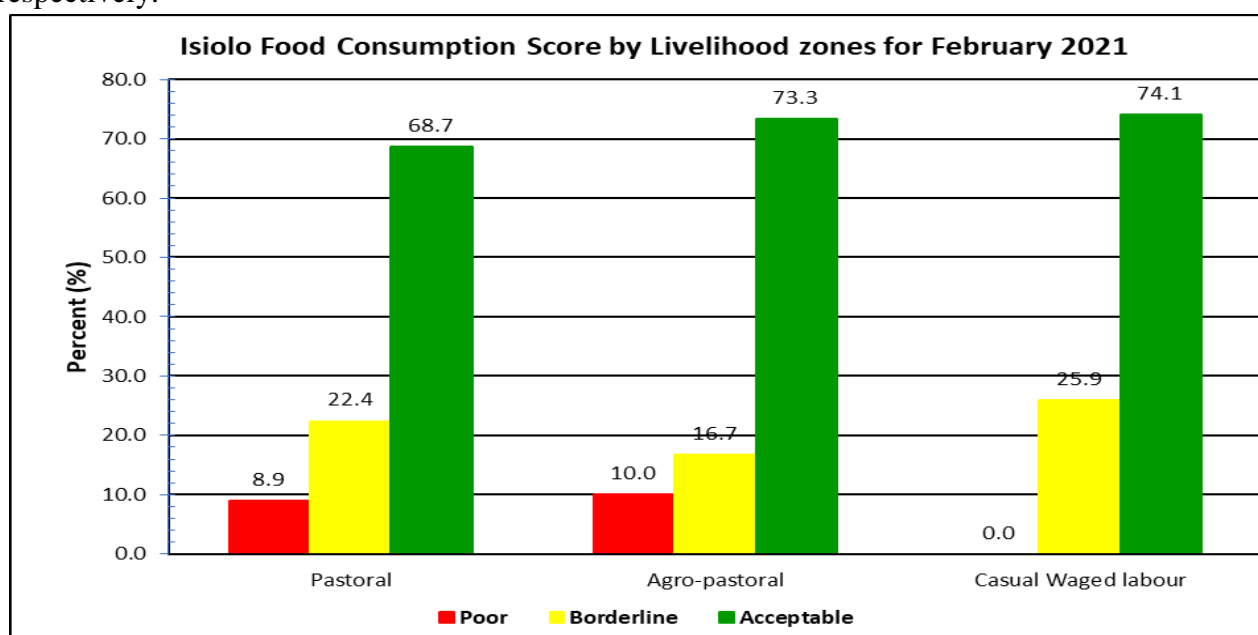


Figure 12: Households' food consumption score

- The households that had poor food consumption were mainly concentrated in the pastoral and agro-pastoral livelihood zones. The agro-pastoral livelihood zone had more households with acceptable food consumption mainly attributed to the relatively good consumption of fresh milk and pulses grown in the area.
- 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 March as the ongoing dry spell continues to impact negatively on livestock productivity mainly hitting milk production and availability of fruits and fresh vegetables.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- During the period under review, 3.4 percent and 5.1 percent of children were severely malnourished and moderately malnourished respectively.
- The proportion of malnourished children had a slight increment depicting a few more children got malnourished during the period under review.

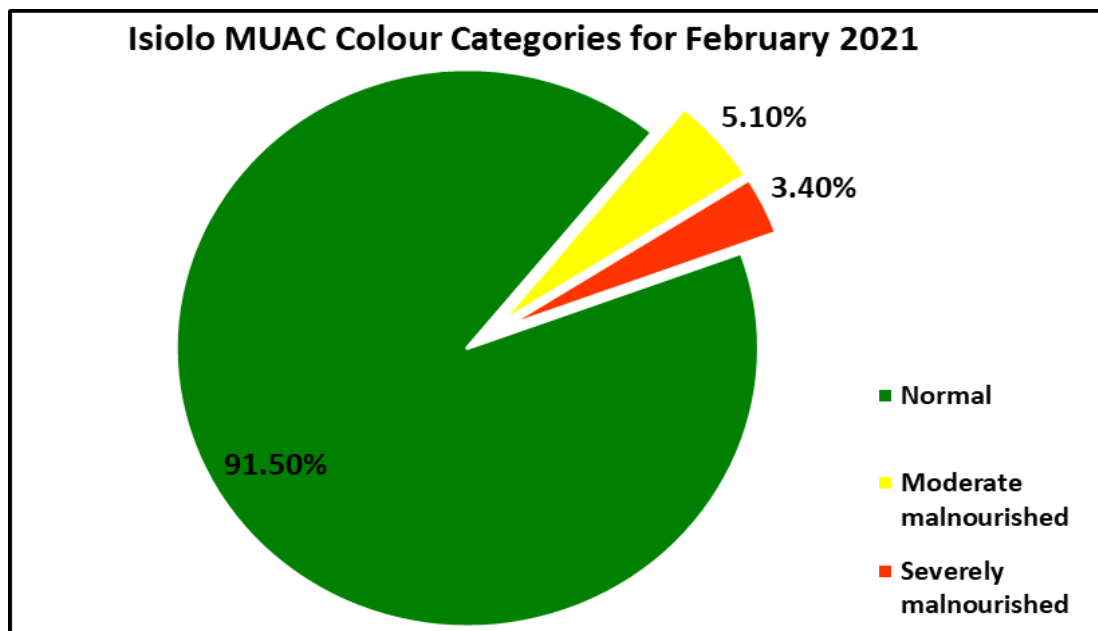


Figure 13: Proportion of under five-year children who are moderately and severely malnourished

- The proportion of children who are moderately malnourished increased marginally compared to the previous month. This could be attributed to poor feeding behavior, mostly associated with migratory movements by herders who move along with their children.
- 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, upper respiratory tract infections and malaria 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 diarrhoea, acute respiratory tract infections, pneumonia, intestinal worms and skin disease.

5.4 COPING STRATEGIES

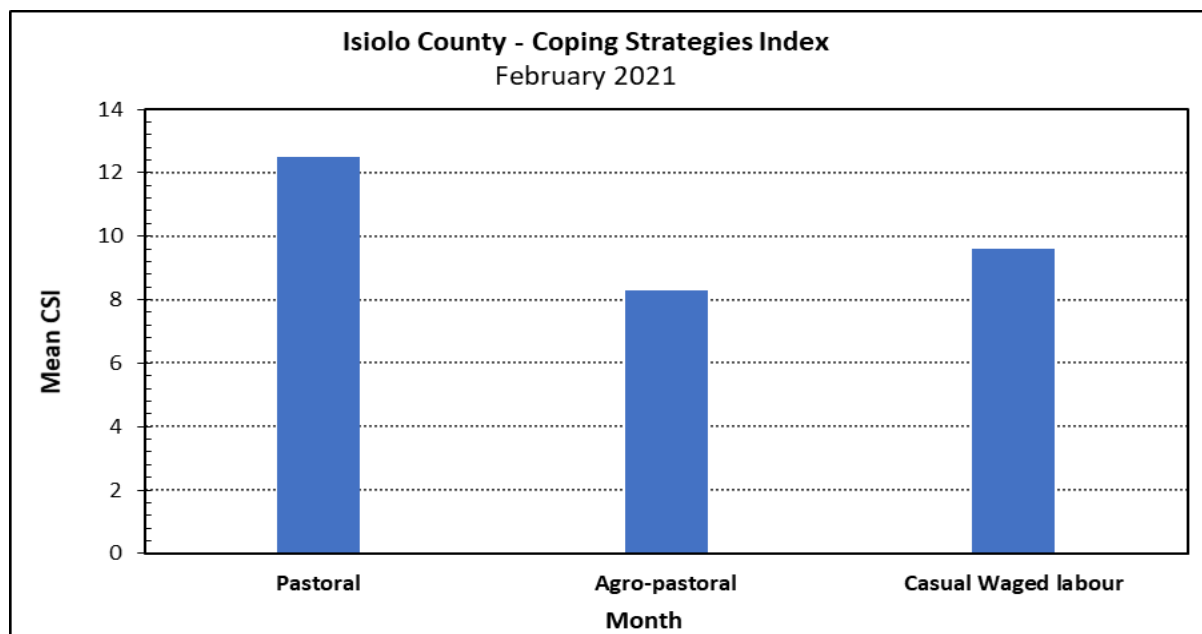


Figure 14: Household Reduced Coping Strategies Index

- Coping Strategy Index (CSI) increased marginally to 11.5 during the month under review from 11.1 in the previous month implying that some food-based coping strategies were employed at a higher frequency compared to the previous month.
- The increment could be attributed to deteriorating food availability at the household level especially in the casual-waged labour and pastoral livelihood zones. Food availability difficulties in the pastoral livelihood zone were attributed to resultant migrations by herding families in search of forage.
- Households without a stable source of income either from keeping of livestock, business or casual labour are prone to cyclic food shortages, thereby resulting to employment of some mild to severe 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	Ngaremara ward Cherab ward	Isiolo North	CRS-NAWIRI	200HH Ngaremara 400HH Cherab
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
Drilling of Borehole	Gotu,Moliti,Kinna,Bili qi,Longopito,Ngaremar a,Eremet Nantudu	Isiolo North and Isiolo South	DRSLP	3000HH

7. EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- Fears of attacked continued to loom in the resource-based conflict stricken Wajir West-Isiolo border where recent conflicts occurred. Tension also remained along the Garisa-Isiolo south borderline after resurgence of resource-based conflicts in the month of January.
- The Isiolo South-Garissa border/resource-based conflicts led to closure of marketing activities in Duse and Escort livestock markets.

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 (Nyambene hills) section which has better availability of forage.

7.2 Assumptions and Food Security Prognosis

Assumptions

- The onset of the long rains season will be delayed to the end of March and have a below normal performance as predicted by the Department of Meteorological Services.
- Incidences of insecurity will be few and of low magnitude.

Prognosis

- The level of food security has been deteriorating for the past three months facilitated by the below normal performance of the short rains season, which was depressed both temporary and spatially. The long rains are expected towards the end of the following month with the season likely to perform below average.
- Livestock production contributed a greater proportion of the food available across the livelihood zones. Animal productivity is currently stable but the worsening forage condition has affected livestock productivity leading to gradual deterioration of all-species body condition and milk produced.
- Crop production was relatively poor in majority of farms blamed on the poor rainfall performance which resulted into below average harvests and below normal recharge in water sources. In that regard, the available water may fail to last until end of the dry spell likely to affect small-scale irrigation schemes key in provision of fresh foods and fruits to the county fresh produce market. Incomes from crop production were low and may reduce further before significant water recharge is realized during the long-rains season.
- 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 insecurity lapses.
- 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 productivity in the absence of sufficient forage and water respectively.
- 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 has led to increased distances to sources over the dry spell.
- There was increased competition over rangeland resources within the county as pressure from neighboring counties (whose forage situation is poor) increase with heavy in-migration reported. The scenario may continue fueling resource-based conflicts hence make forage search and utilization a problem and thus affect the pastoral livelihood.
- The overall food security situation remains in the stressed phase (IPC 2) and on a worsening trend.

8. RECOMMENDATIONS

- Involve and support local grazing committees in managing community grazing patterns so as to ensure the fairly available forage resources in dry grazing reserves are sustainably utilized and with minimal or no resource-based conflicts.
- Activation of county drought response and contingency plans mainly in enabling marketing of livestock to control population of livestock and diversification of livelihoods.
- Promote commercial destocking initiatives mainly targeting cattle and sheep while they are in good to fair body condition to ease pressure on available forage resources and for livelihood diversification purposes.
- Support response interventions against Rift valley Fever (RVF) disease outbreak both in human and livestock.
- Sensitize caregivers on disease and malnutrition identification in children under five years of age to enhance surveillance during the prevailing period where public health measures have been enforced to control spread of COVID-19. This will help formulate new and monitor existing nutrition interventions.
- Promotion of hygiene and sanitation
- 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.
- Sensitize the community on safety precautionary measures to stem spread of coronavirus disease (COVID-19).
- 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.