



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

May 2021 EW Phase

Drought Status: ALERT



Maandalizi ya Mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- The month's weather conditions were dominated by sunny days with few rainy days. Onset of dry spell is evident with start of strong winds during the day and night.
- Vegetation condition remained at moderate vegetation deficit.
- A great proportion of accessible forage was poor triggering migration to dry season grazing reserves though insecure.
- Water availability was fair due to poor recharge while distances to sources increased considerably.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Majority of animals' body condition especially goats, sheep and cattle was fair and deteriorating in all livelihood zones.
- Household milk production was low and expected to deteriorate further into the long dry spell.

Access Indicators

- Livestock prices stabilized in all markets as body conditions and demand remained relatively fair compared to April. Food commodities prices stabilized too with consistent supply.
- Household milk consumption was low due to low availability caused by the fair to poor production.

Utilization Indicators

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

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)	8.4mm	>10.7mm
VCI-3month (Isiolo)	22.88	>48.2
State of Water Sources	4	5
Production Indicators	Value	Normal
Livestock Body Condition	Fair to poor	Fair to Good
Milk Production	1.75 Litres	>2.23 Litres
Livestock deaths (from drought)	None	No deaths
Livestock Migration Pattern	Internal migration	Normal
Access Indicators	Value	Normal
Terms of Trade (ToT)	62.3	>56.8
Milk Consumption	1.1 Litres	>1.27Litres
Return distance (water sources to households)	3.0 km	<2.2 km
Cost of water at source (20 litres)	Ksh 2.00	<Ksh. 5.00
Utilization indicators	Value	Range/Value
Moderately malnourished	7.3 percent	<3.1 percent
Severely malnourished	3.1 percent	<1.6 percent
Coping Strategy Index (CSI)	11.54	13.9
Food Consumption	44.26	>41.2

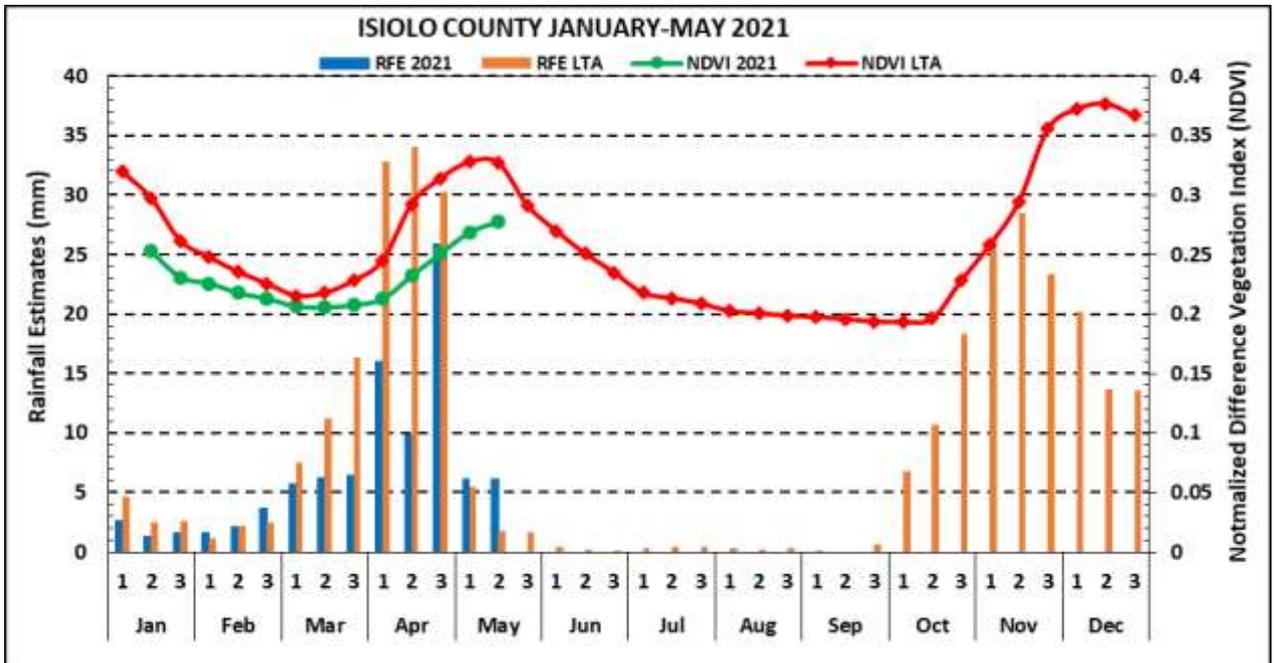
Seasonal Calendar

<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 RFE averages.
- Generally, current dekadal rainfall amounts had a normal trend for the two dekads of the period under review with significantly similar rainfall amounts compared 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 8.4mm of rainfall in the period under review poorly distributed spatially and temporally. It was almost similar to the amount received in bad season.
- In the larger pastoral livelihood zone, only Kinna and a selected parts of Oldonyiro received some shower as the rest remained dry.
- The period’s rain was poorly distributed as only selected parts of Burat and Bulapesa and Kinna received significant amount of rains in the few showers experienced.

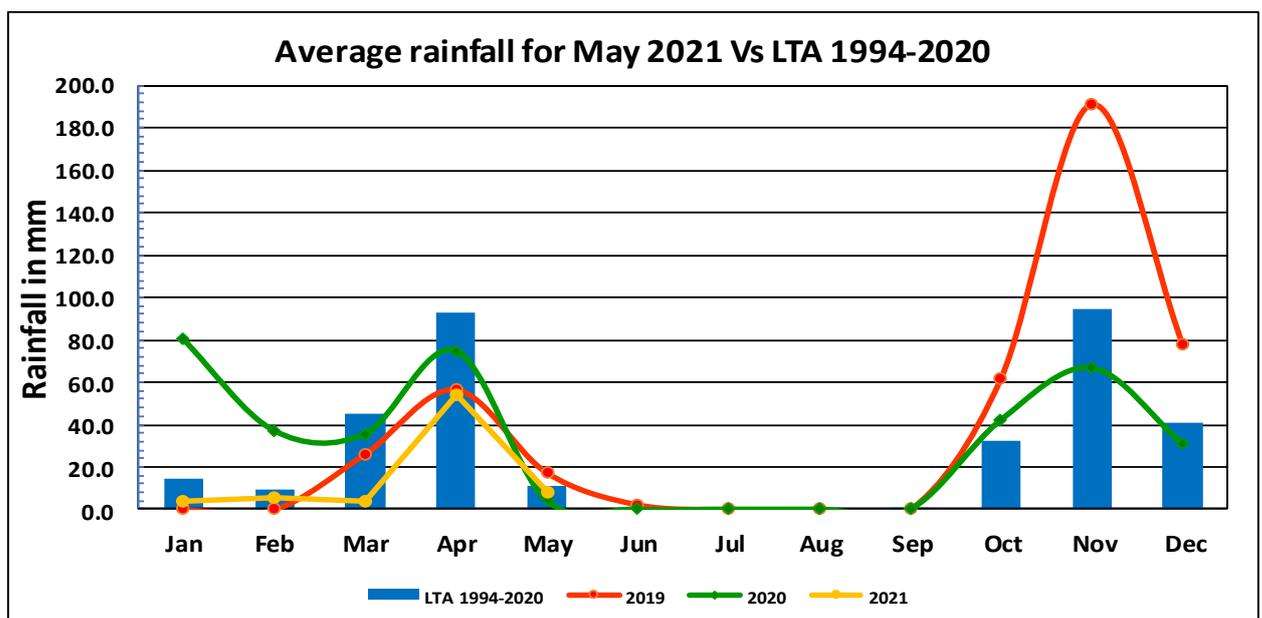


Figure 1: Average amount of rainfall (station data)

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The matrix below illustrates May 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.

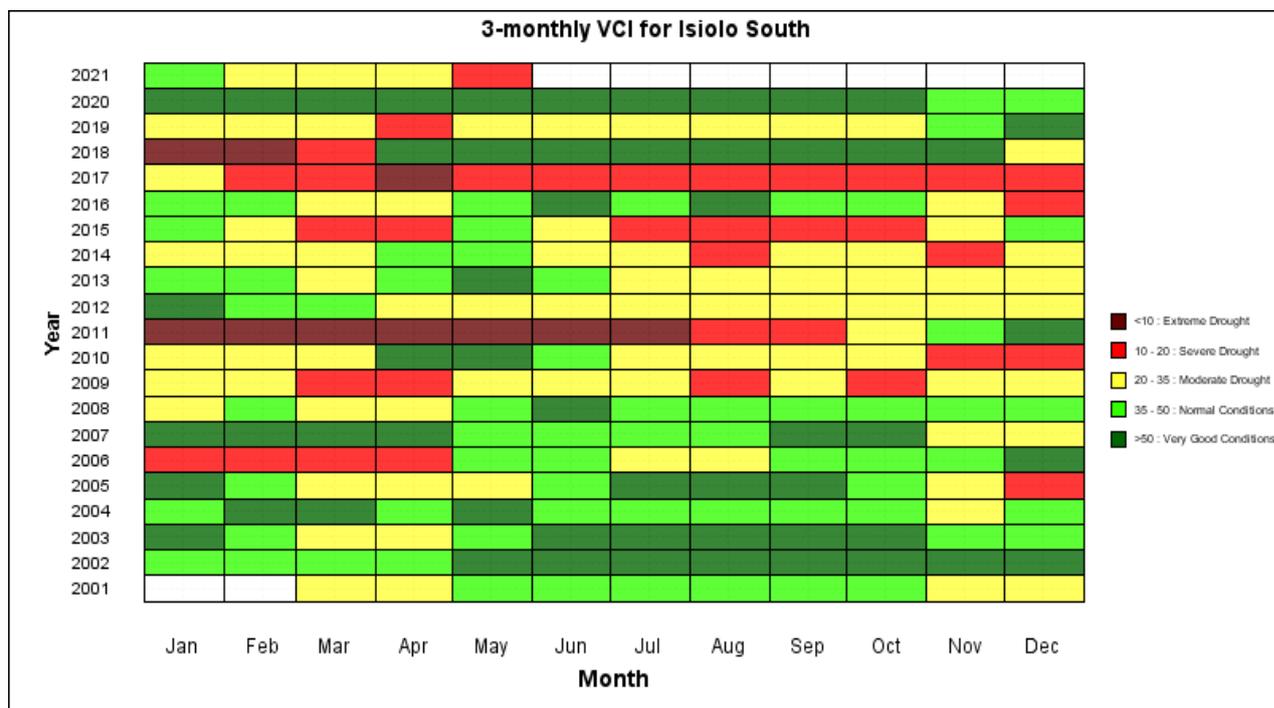


Figure 2: Vegetation Condition Index for Isiolo South Sub-County

- The county had a VCI value of 22.88 thereby remaining in the moderate vegetation deficit band.
- The overall 3-month vegetation condition for Isiolo South sub-county deteriorated to the severe vegetation deficit, signifying conditions of a severe drought which have been confirmed by the situation on the ground.
- The index has been declining, a phenomenon that was attributed to the impacts of the poorly performed rainy season, having a delayed onset and poor distribution.
- The vegetation condition is expected to deteriorate further in the following month, an impact of the poor performance of the long rains season.

2.1.2 Pasture

- Almost of half of the county's accessible grazing lands had poor pasture condition, attributed to poor regeneration of natural vegetation as an impact of the poor performance of the long rains season. The condition has also been worsened by depletion of palatable grass species and accidental bush fires.
- The amount of pasture in traditional grazing areas is very poor left to sustain lactating herds though expected to last just less than three months. However, significant amounts of pasture are available in dry season grazing reserves such as Kom, Yamicha and neighboring areas where majority of livestock have migrated to.
- Areas experiencing heavy livestock concentration are Kulamawe-Kinna stretch, River Ewaso Nyiro flood zone, Kom-Nyachis area and Laikipia ranches (hosting livestock from Oldonyiro).
- Overall pasture condition in the month under review was poor, being worse than the reported status at a similar period in the previous year and in the long-term.

2.1.3 Browse

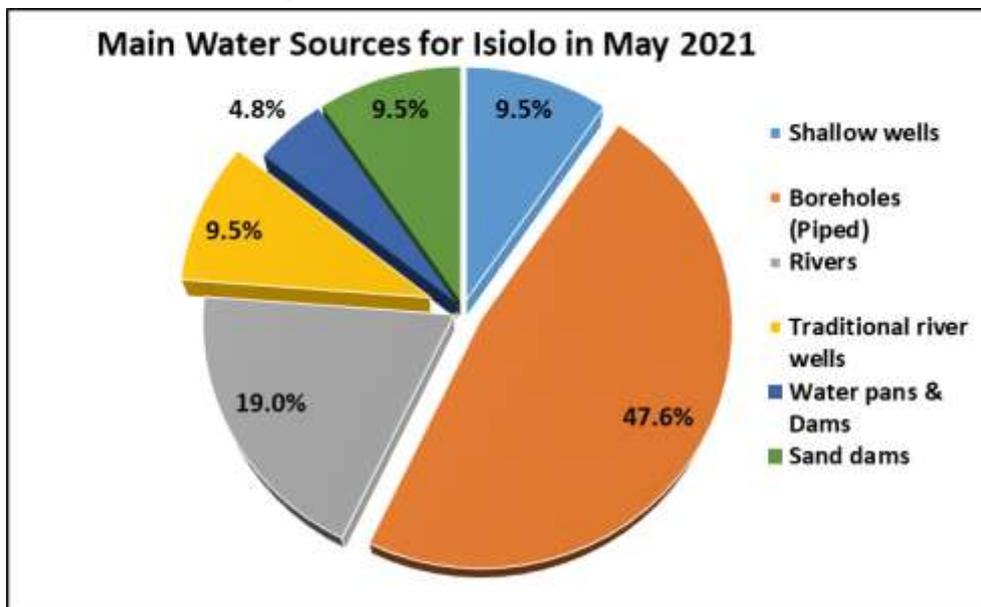
- Majority (55%) of browse was poor in the pastoral and agro-pastoral livelihood zones as a result of poor regeneration and depletion through consumption as well as bush fires. The situation has

been aggravated by the poor performance of the just long rains season which has led to poor regeneration of vegetation.

- Lot of browse resources are available in the dry season grazing reserves where majority of the livestock are grazing though there are challenges of insecurity and scarce water sources.
- General browse condition in the month under review was poor, actually worse than the reported condition at a similar period in the previous year and in the long-term.
- Areas with considerable amounts of browse include Kinna-Kulamawe stretch, Kom-Nyachis and along the River Ewaso Nyiro flood line and a small part of Burat ward.

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 sources included water pans and pipes.
- Water volumes in majority of the sources have been dropping steadily as flow in rivers cease upstream. A growing number of temporary rivers have dried upstream leaving residents to dig wells along river beds to obtain water for domestic utilization and livestock watering.
- The proportion of boreholes on normal usage increased to 45 percent in the month under review. However, the proportion of boreholes reporting no use was 27 percent while the fraction of offline ones was 17 percent. (source Kenya RAPID)



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 stabilized at an average of 3.0km during the period under review. The distanced remained relatively high as a result of the poor performance of the rains received.
- A large proportion of households accessed water from boreholes. Households depending on water pans turned to boreholes for considerably long distances.
- Water volumes in shallow wells, water pans and sand declined due to consumption and evaporation a situation that is attributed to poor recharge in the ongoing rainy season.
- 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.
- The cost of water in Modogashe has risen extremely following acute water shortages in the area as a 20 litre jerrican went for KES 50.00.
- Waiting time at main sources in the pastoral livelihood zones increased slightly to range between 10 and 25 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 0.1km was recorded in the casual-waged labour livelihood zone where households' access water from household/community access taps.

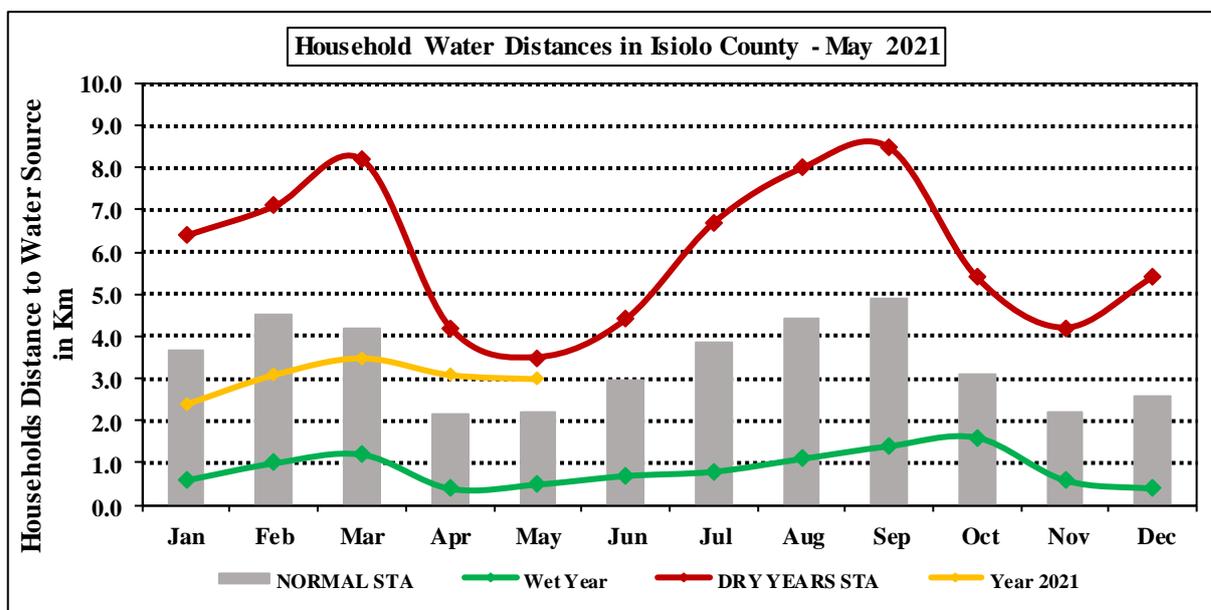


Figure 3: Household distance to water sources

2.1.6 Livestock Access

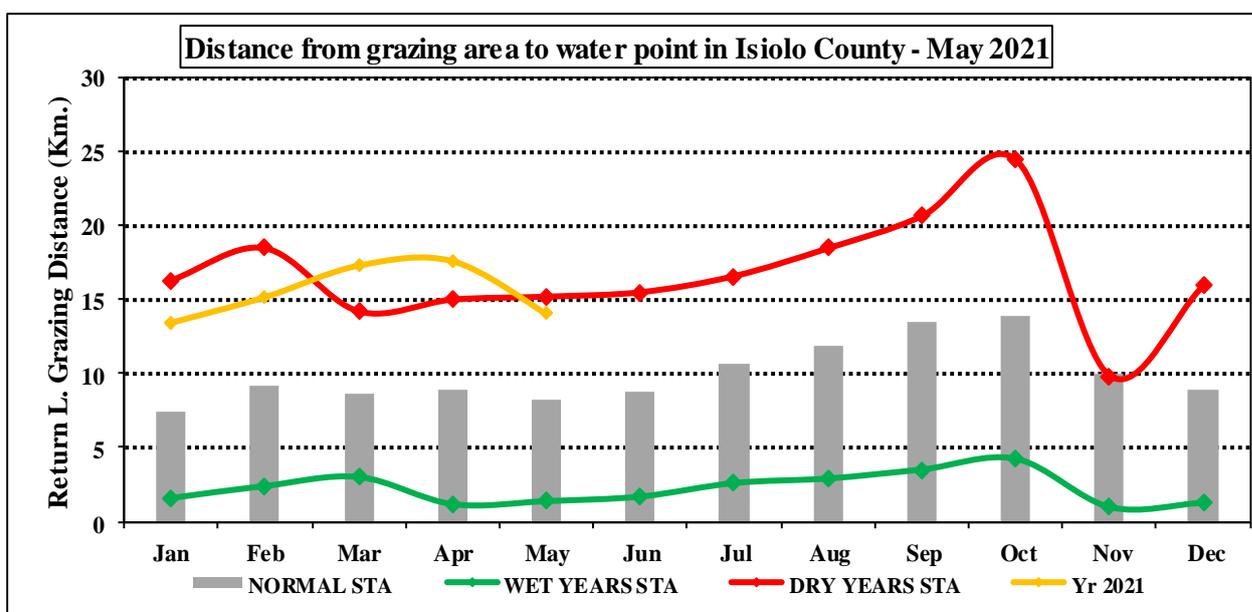


Figure 4: A graph of distance to grazing areas from water points

- The average distance to water sources from the grazing areas reduced considerably to 14.1km in the month under review from 17.6km recorded in the previous month.
- The reduction was attributed to the minor improvement in forage condition, though its availability will be short-lived due to poor regeneration of natural vegetation thus expected to deplete quite fast.
- The maximum distance to water sources was 15km to water points mostly in Charri, Sericho and Garbatulla wards as forage shortage deepened.
- The long distance being experienced in livestock watering distance was attributed to the diminishing availability of forage as well as poor water availability.
- The month's livestock watering distance was 72 percent higher than the long-term average of 8.2km at a similar period of the year and slightly lower than the highest recorded for the period.
- The distance is expected to increase considerably due to expected fast depletion of available forage and as herders move deeper into the grazing reserves with better forage quantities.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The general body condition for most of all livestock species was fair in the pastoral and agro-pastoral livelihood zones. However, a considerable proportion of cattle, goats and sheep in areas with poor availability of forage have displayed deteriorating trend in their health status.
- The livestock body condition is expected to worsen significantly over the next two to three months after the cessation of the rainy season.
- The current livestock body condition was relatively better compared to a similar period in the long-term though the situation could worsen due to the poor performance of the current long rains season.

3.1.2 Milk Production

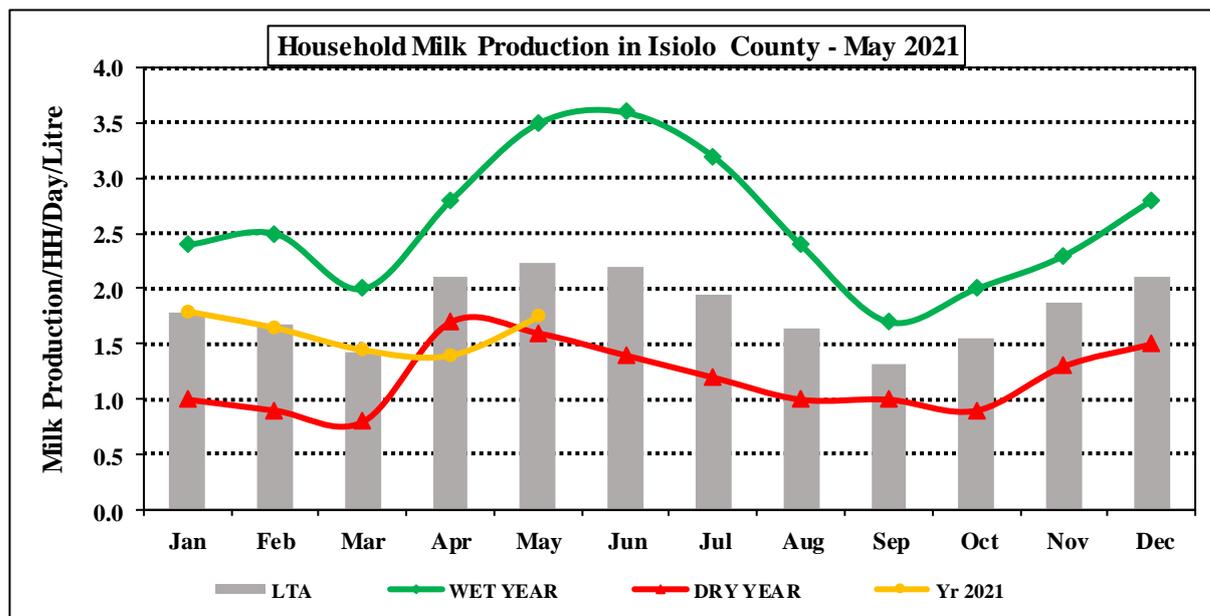


Figure 5: A graph of average milk production in litres

- Milk produced in milking households increased marginally to 1.72 litres in the month under review from 1.40 in the previous month.
- The slight increase in production can be termed as a minor impact of the long rains and therefore expected to be for a short while following the generally poor performance.
- Households depended on cattle and goats for milk which produced slightly more than one litre. Camels were the major producers with minor increment in production and were mainly in Kinna and a few parts of Garbatulla and Charri wards.
- The amount produced is expected to decline slightly in the following month as availability of forage is poor and hence long distances to grazing areas.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

- Condition of majority of food crops under pure rainfed system is poor due to the prevailing poor soil moisture availability as rains perform poorly in the second month of the season
- However, its important to note that legumes such as beans were at flowering/podding stages in isolated farms in Burat, Kinna and Bulapesa where farmers planted in late March when the onset was experienced.
- Small-scale irrigation continued actively along permanent rivers which are still flowing with water. Majority of farms along the rivers have horticultural crops such as onions, kales and tomatoes.

4.0 MARKET PERFORMANCE

4.1 Livestock Marketing

Cattle Prices

- Cattle price reduced marginally to record an average of Ksh.26,500 during the month under review hence displaying a continued stability since the beginning of the year.
- Cattle's moderate price was partly attributed to the prevailing fair to poor body condition in the wake of weak availability of pasture.
- The oncoming June-September dry spell is unique due to challenges of poor rainfall performance in this years' long rains season and is expected to affect health of cattle negatively and likely to influence a significant decline of the animal's price.
- The highest average price was recorded in Isiolo town market at Ksh.35,000 while the least was Ksh.24,500 in Merti market.
- The period's price was however 19 percent above the long-term average of Ksh.22,300 at the same period of the year.

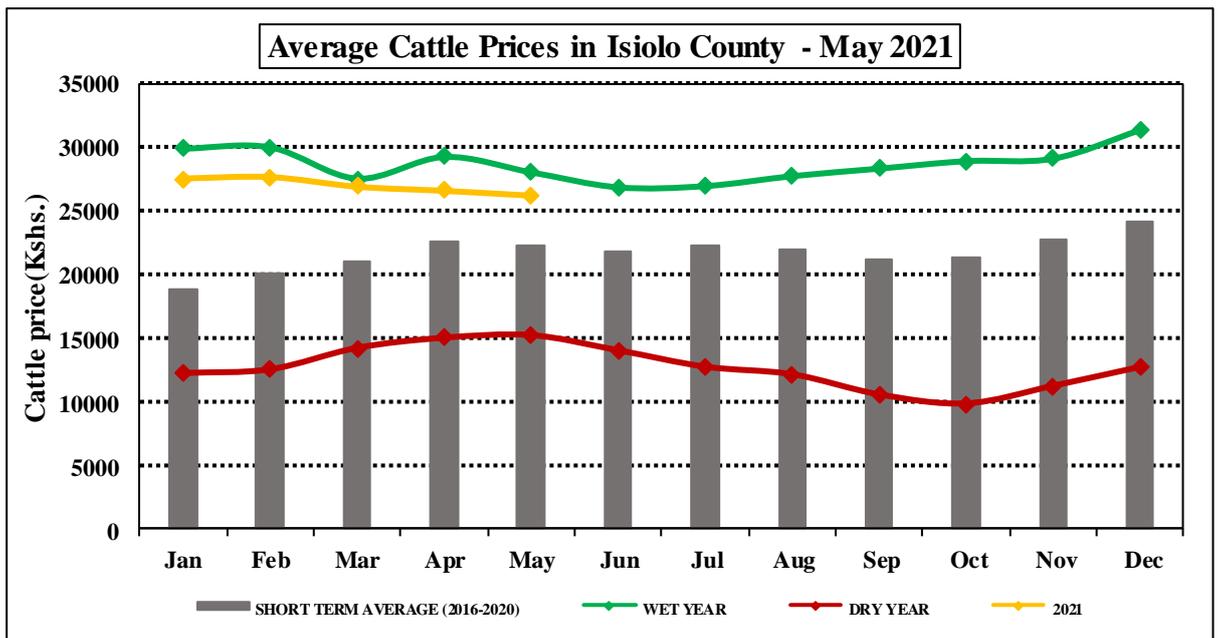


Figure 6: A graph of average market price of cattle

Small Ruminants Prices (Goat)

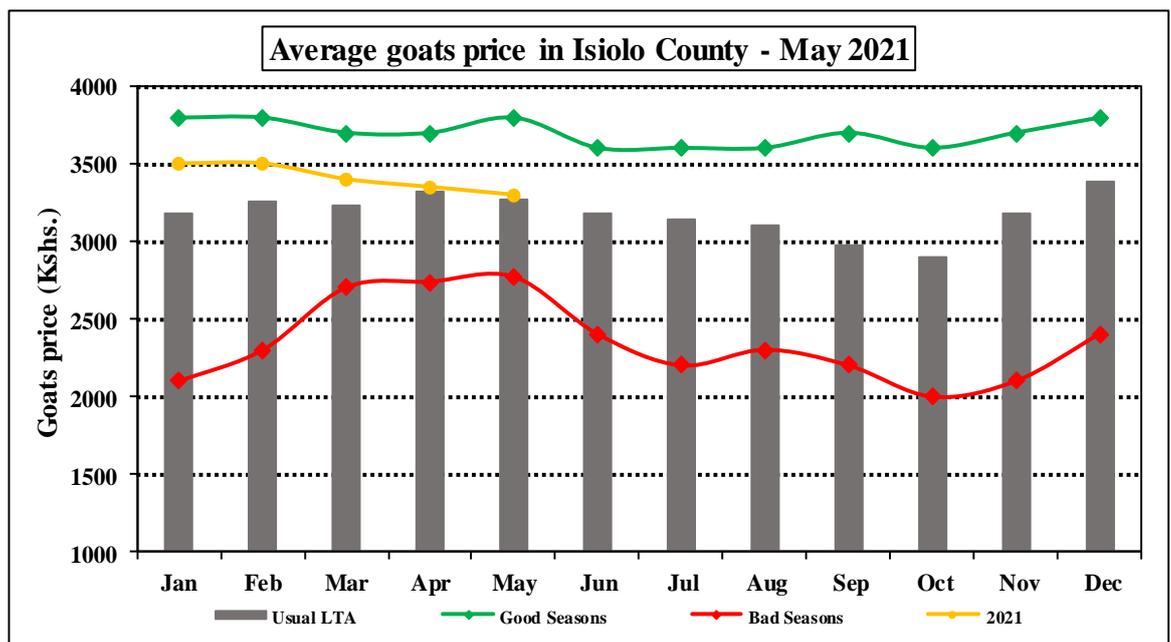


Figure 7: Average price of goats
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- Goat price maintained an average of Ksh.3,300 in the month under review.
- The moderate price recorded could be attributed to the relatively fair body condition of the species and some notable increases in supply of goats to the market.
- The least and highest market prices recorded were Ksh.3,100 and Ksh.4,100 in Modogashe and Isiolo town markets respectively.
- Average goat price for the period was 1 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 increased slightly to Ksh.54.00 in the month under review from Ksh.52.00 in the previous month.
- The cereal price stability was attributed to its steady supply to the markets from within and out of the county.
- Cereals lowest price was Ksh.40 in Isiolo town markets and highest in Merti at Ksh.60.00.
- The cereal's price in rural markets including Merti, Bisan Biliqo and Sericho was relatively high as supplies were low attributed to the long distances from Isiolo main market. It's demand is often low given that the cereal's preference is outweighed by rice.
- Average price of maize was 2 percent higher to the long-term average of Ksh.53.20 at a similar period of the year.

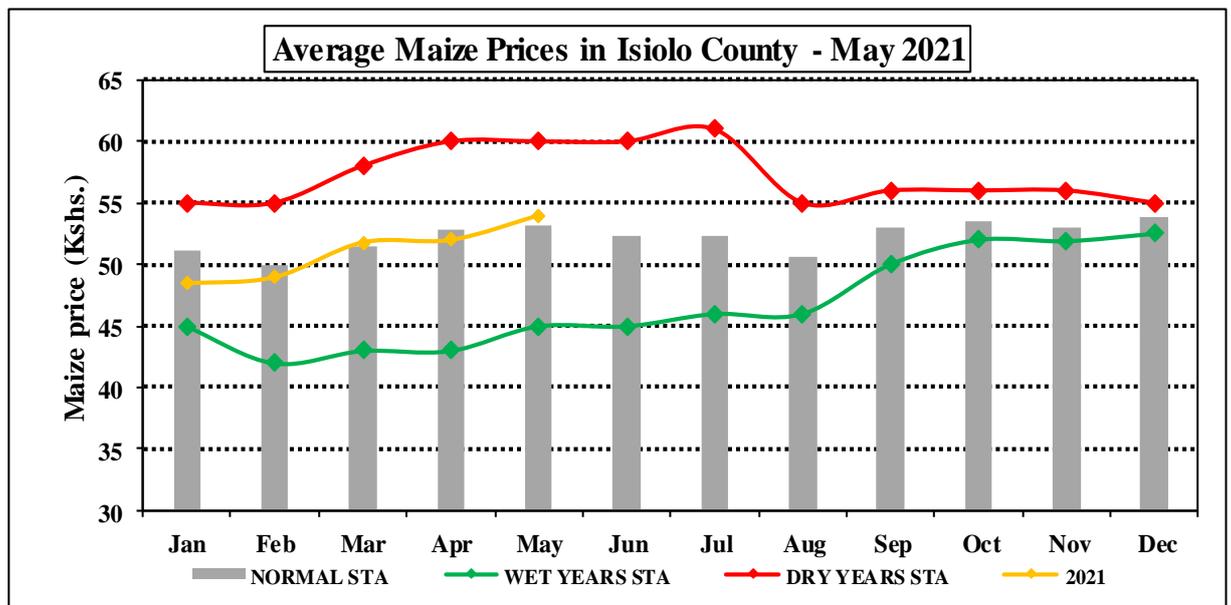


Figure 8: A graph of average maize (cereal) market price in the county

Beans

- Average price of beans increased significantly to Ksh.118 in the month under review from Ksh. 111 in the previous month. The stability is attributed to diminishing supplies of the pulse at farmers and trader stores.
- The pulse's price is expected to increase considerably during the dry spell spanning for four consecutive months due to poor supplies that are expected from the poor production in the current production 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.110 in Isiolo central market.
- The price was 9 percent higher than the long-term average price of Ksh.102.40 during a similar period of the year.

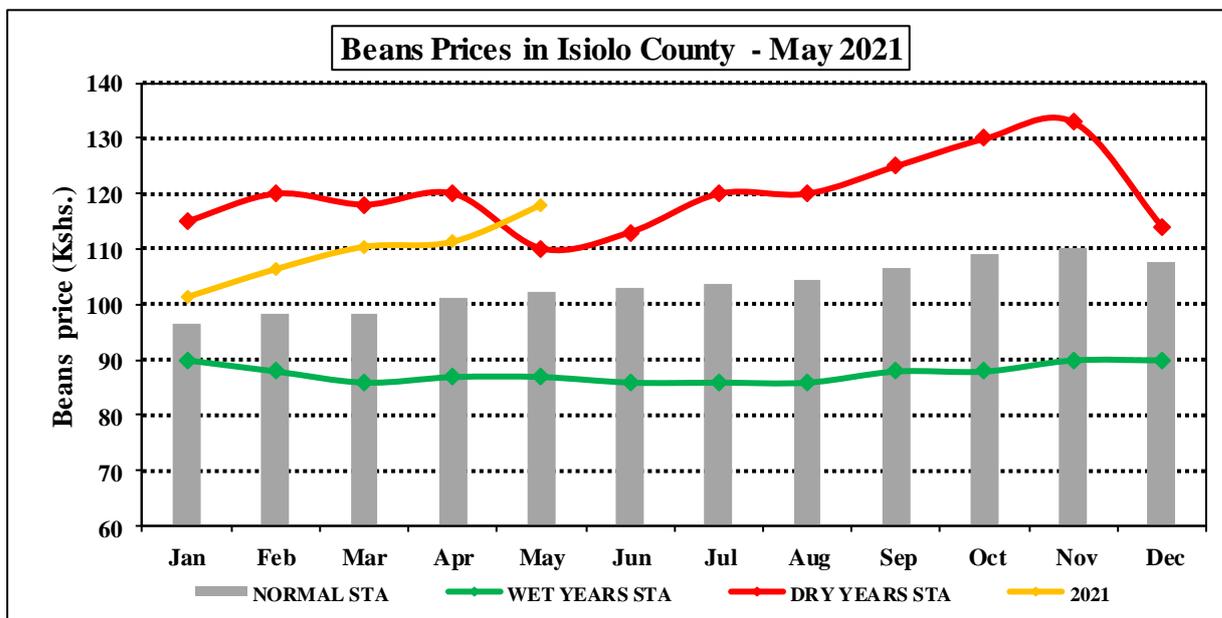


Figure 9: A graph showing average market price for pulses (beans)

4.3 Livestock Price Ratio/Terms of Trade

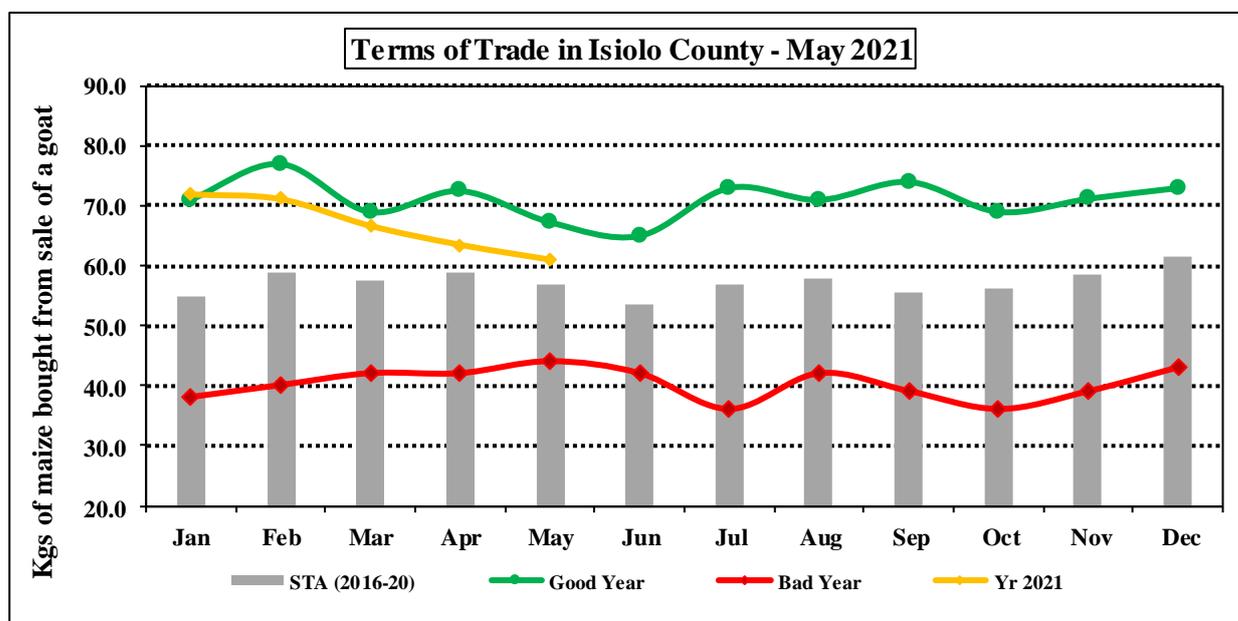


Figure 10: A graph showing the typical pastoralist households Terms of Trade in the county

- Terms of Trade (the number of kilograms of maize a farmer would purchase after a sale of one goat) reduced slightly to 61.10 kg/goat in the period under review from 63.5 in the previous month.
- The ratio was nine percent higher than the long-term average of 56.9kg/goat at a similar period of time in a year.
- The reduction in the households' Terms of Trade reflected a slight decline in an average household's purchasing power attributed to a weakening performance of livestock markets.
- The measure of purchasing power in the county is expected to reduce substantially during the four-month dry spell that will be characterized by poor animal productivity due to the already prevailing scarcity of livestock feed.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

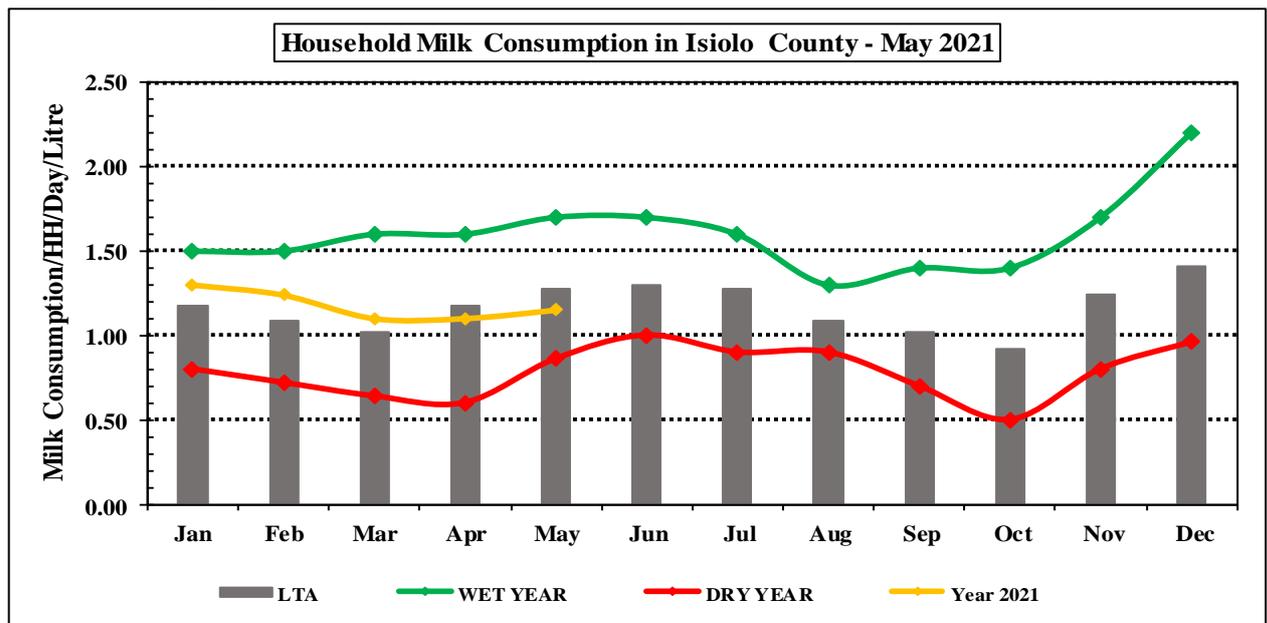


Figure 11: Average milk consumption in litres

- Milk consumption per household stabilized at an average of 1.15 litres in the month under review, an amount maintained for three months in a row.
- The little amount of fresh milk consumed was attributed to the poor production in all livestock species and is expected to reduce significantly along the 4 months of severe dry spell.
- Average consumption was 9 percent lower than the long-term average of 1.27 litres during a similar period of the year.
- Consumption remained relatively higher in the pastoral livelihood zone 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 5.2 percent and 20.1 percent of households had poor and borderline food consumption respectively.

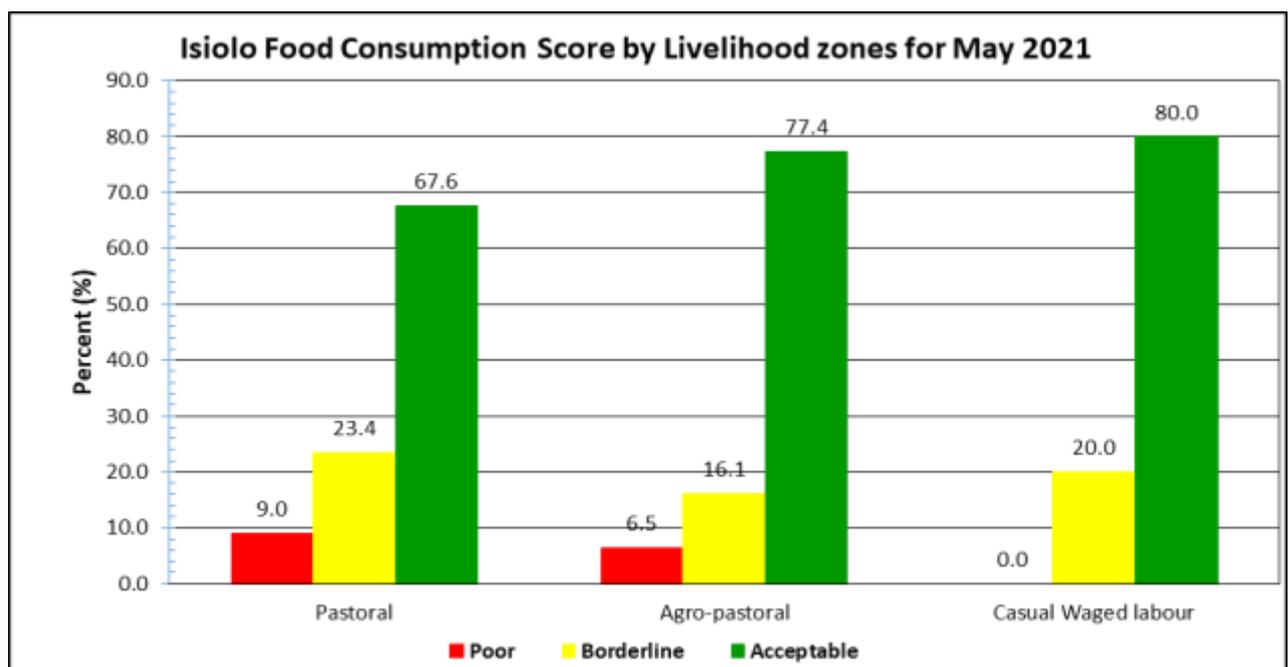


Figure 12: Households' food consumption score

- Households that had poor food consumption were mainly concentrated in the pastoral and agro-pastoral livelihood zones. The casual-waged labour/employment 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 next three months onwards as food availability and access may be a challenge due to poor production in the major livelihoods.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- During the period under review, 3.1 percent and 7.3 percent of children were severely malnourished and moderately malnourished respectively.
- The proportion of malnourished children increased slightly depicting that there was an increase in cases of malnourished children during the period under review.

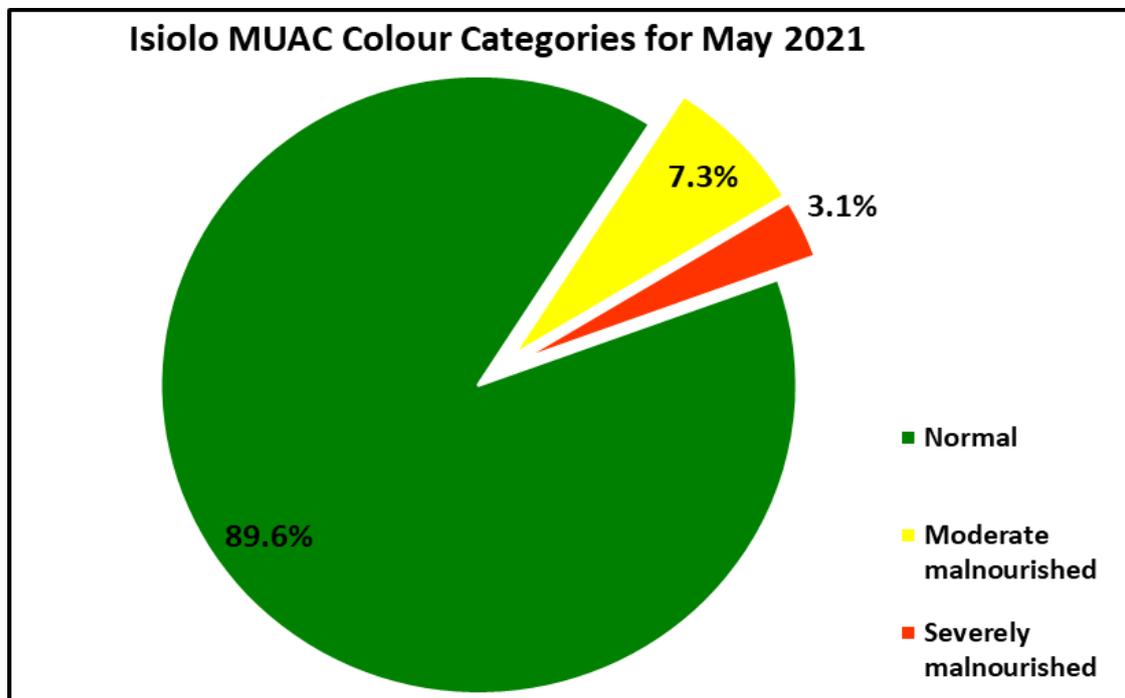


Figure 13: Proportion of under five-year children who are moderately and severely malnourished

- The proportion of children who were moderately malnourished increased slightly 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. Increased cases of morbidity following a surge in diarrhea could also have contributed.
- 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

- Health seeking behavior was good amid fluctuating recurrence of Covid-19 cases.
- 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

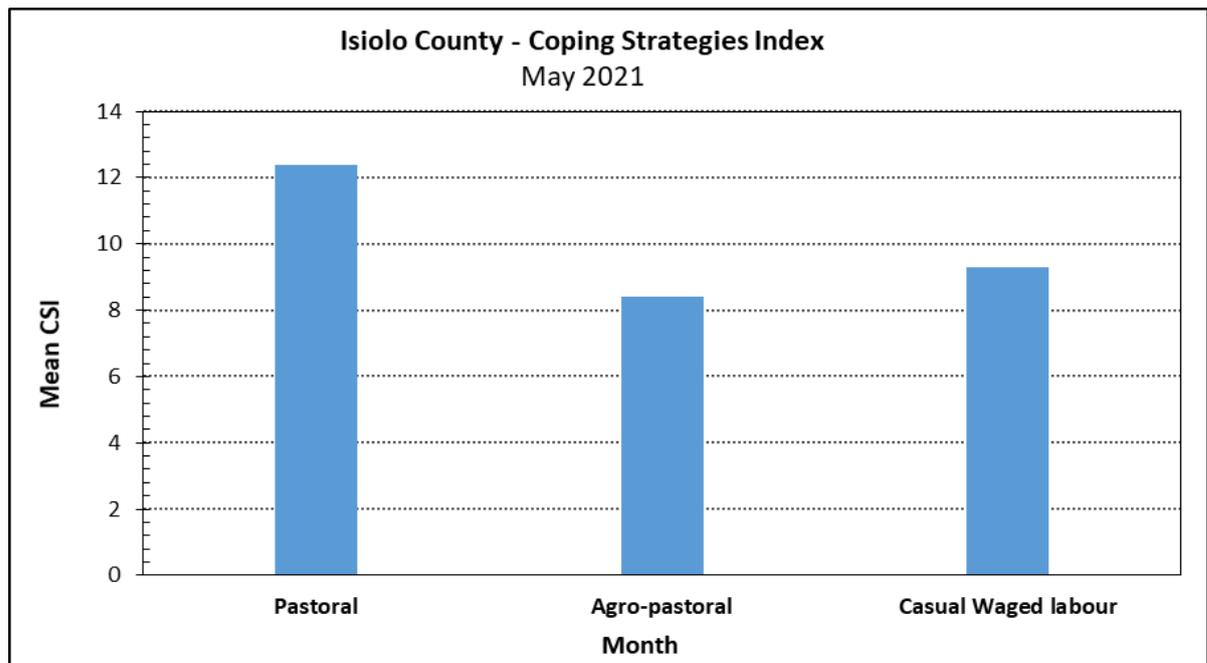


Figure 14: Household Reduced Coping Strategies Index

- Coping Strategy Index (CSI) increased marginally to 11.54 during the month under review from 11.3. This implies that households maintained the food-based coping strategies they employed in the previous month.
- The moderate rate of employment of coping strategies could be attributed to a poor food availability state at the household level across the livelihood zones. Food availability difficulties in the pastoral livelihood zone were attributed to migrations by herding families in search of forage and poor access to livestock markets.
- Households without a stable source of income either from keeping of livestock, petty trading or casual labour have bore the brunt of the economic hardships attributed to the Covid-19 pandemic 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.

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 vulnerable HHS	Burat, Oldonyiro and Kinna	Isiolo North Isiolo South	WFP	6,600 HHS
	Oldonyiro and Cherab	Isiolo North	Action against Hunger(ACF)	1,150 HHS
	Ngaremara ward Cherab ward	Isiolo North	CRS-NAWIRI	200HH Ngaremara 400HH Cherab
Livestock Vaccination against CCPP and PPR	Kinna ,Oldonyiro and Cherab	Isiolo North and Isiolo South	RPLRP and Kenya Climate Smart Agriculture	90,000 Shoats
Livestock disease surveillance	All wards	All sub county	RPLRP and VSF Suisse	All wards
Rehabilitation of 8 Boreholes in the County	Lenguruma, Chumvi yare, Boji, Taiboto, Daaba, Bisan Biliqo, Korbesa, Duse	Isiolo North Isiolo South	Action against Hunger (ACF)	5,427HHS

7. EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- Fears of attacked continued to loom in the resource-based conflict stricken Kom area where recent conflicts occurred and lives lost.
- There was moderate tension along the Garissa-Isiolo south borderline and into the Isiolo South mainland after resurgence of resource-based conflicts in the month of April.

7.2 Migration

- Movements in search of forage were mainly internal with an increased number of herders considering migrations to Kom triangle following depletion of pasture traditional grazing areas occasioned by poorly performed rains.
- There were internal movements of herders deeper along the River Ewaso Nyiro flood zone where herders from Cherab and Sericho are grazing their livestock.
- Herders Isiolo South and Merti and Oldonyiro were also reportedly utilizing forage in Kuro Bisan Owo, and Kom, Dogogicha and Yamicha dry season grazing reserves.

7.2 Assumptions and Food Security Prognosis

Assumptions

- The period under review marked cessation of the long rains season and there are no more rains expected until October this year.
- Incidences of insecurity will be minimal and of low magnitude.

Prognosis

- The level of food security is frail and expected to worsen during the long dry spell owing to the poor performance of the MAM long rains season. The situation will exacerbate the already poor level of production and availability of food in all livelihoods.
- Livestock production contributed a greater proportion of the food available across the livelihood zones though its situation looks bleak following poor forage regeneration and availability in the pastoral livelihood zones.
- Crop production, especially purely rainfed has been poor from the initial development stages and thus poor harvests are expected after cessation was experienced in mid-May. Consequently, the below normal rainfall season led to insignificant recharge to the rivers and other temporary water sources, a factor that will negatively affect the level of small-scale irrigation. The availability of food at farming households will be adversely low.
- There was normal access to livestock and food commodities markets where majority of households obtained their food supplies. Crop production and market supply is expected to be significantly low following the poor production season, a factor that may greatly affect prices of farm produce and their overall accessibility.
- Food consumption has been stable in all livelihoods zones as majority of households maintained acceptable food consumption. However, this is set to deteriorate with the poor productivity in livestock and crops.
- Food utilization was significantly boosted by the stable access to water sources across the three livelihood zones. However, its availability is expected to decline following the poor recharge in majority of water sources.
- There was increased competition over rangeland resources within the county as pressure from neighboring counties mounts following heavy in-migration for the last three months. The scenario is expected to continue fueling resource-based conflicts hence make forage access and utilization challenging, a factor that will negatively affect the pastoral livelihood.
- The overall food security situation remains in the stressed phase (IPC 2) and on a worsening trend.

8. RECOMMENDATIONS

- The livestock department and its partners need to actively promote and support voluntary commercial destocking initiatives mainly targeting cattle and sheep while they are in their fair body condition to enable them minimize the risk of losing the animals as well as ease pressure on available forage resources.
- Provision of feeds to milking and lactating herds to enhance continued supply of milk to households as other herds migrate to dry season grazing reserves.
- 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.
- Upscale and support water trucking interventions in water scarce hot spots such as Modogashe and Sericho in Sericho ward, Malkagalla, Saleti, Malkagala and other settlements in Cherab ward as well as some parts of Oldonyiro ward.
- 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 plan mainly in enabling marketing of livestock to control population and minimization of risk of losing the pastoral livelihood.
- Conduct ring vaccinations to protect livestock against disease outbreaks at such a time when frequency of movements in search of forage is high.
- Support active and continuous human and livestock disease surveillance for any possible outbreak for appropriate control mechanism following the One-Health Approach.
- There is need for peace building and conflict resolution in conflict hot spots including Kom, Mulango, Korbasa, and along Isiolo-Garissa borders.
- Promotion of hygiene and sanitation as well as sensitize communities on adherence to safety precautionary measures to stem spread of coronavirus disease (COVID-19) which is now in its third wave in the county.