



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

July 2021 EW Phase

Drought Status: ALERT



Maandalizi ya Mapema

Drought Situation & EW Phase Classification

Biophysical Indicators

- The month's weather conditions was dominated by intermittent sunny and cloudy weather accompanied by strong winds.
- Vegetation condition deteriorated for the second month in a row and maintained a severe vegetation deficit.
- A great proportion of accessible forage was poor a factor that led to 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

- Body condition for majority of livestock was fair for goats, sheep and cattle. All are on a deteriorating trend in all livelihood zones.
- Household milk production was low and expected to deteriorate further as forage and water shortage continue.

Access Indicators

- Livestock market performance was above LTA but deteriorating steadily while food commodities prices remained relatively high attributed to low stocks held.
- Household milk consumption was poor due to its low availability as a result of the reduced production.

Utilization Indicators

- Proportion of households with poor and borderline food consumption increased marginally.
- 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)	0.0mm	>0.9mm
VCI-3month (Isiolo)	18.97	>42.9
State of Water Sources	3	5
Production Indicators	Value	Normal
Livestock Body Condition	Fair to poor	Fair to Good
Milk Production	1.50 Litres	>1.95 Litres
Livestock deaths (from drought)	None	No deaths
Livestock Migration Pattern	Internal migration	Normal
Access Indicators	Value	Normal
Terms of Trade (ToT)	58	>57
Milk Consumption	1.0 Litres	>1.28 Litres
Return distance (water sources to households)	3.6 km	<3.9 km
Cost of water at source (20 litres)	Ksh 2.00	<Ksh. 5.00
Utilization indicators	Value	Range/Value
Moderately malnourished	8.9 percent	<3.5 percent
Severely malnourished	2.7 percent	<0.5 percent
Coping Strategy Index (CSI)	12.07	12.2
Food Consumption	46.89	>40.2

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.

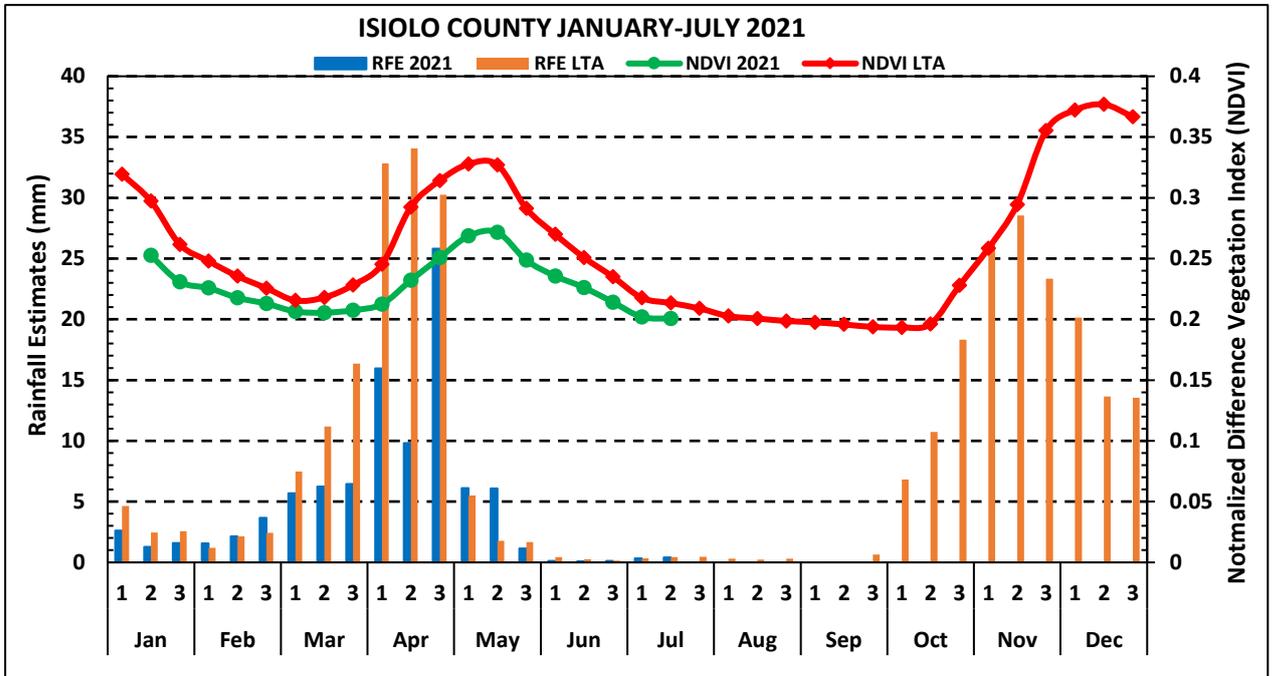


Figure 1: Average NDVI and RFE Estimates

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- The county did not receive any amount of rainfall during the period under review.
- The long rains season performed poorly, both spatially and temporarily. The next rainy season is expected in mid-October later in the year.

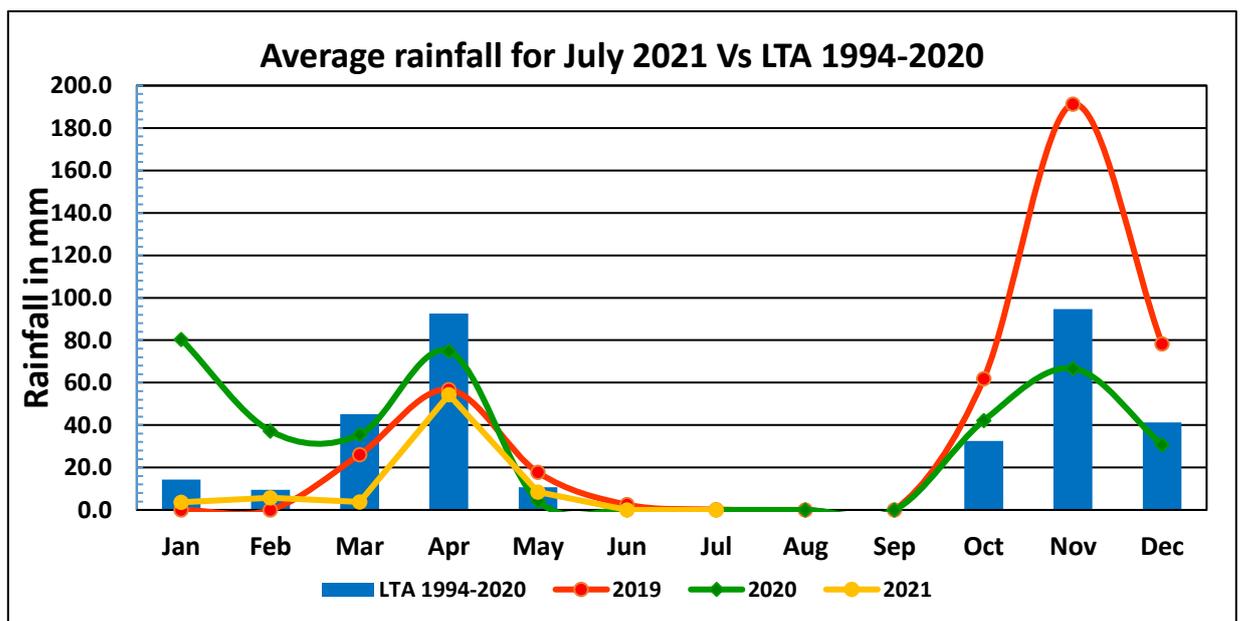


Figure 2: Average amount of rainfall (station data)

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The matrix below illustrates July 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.

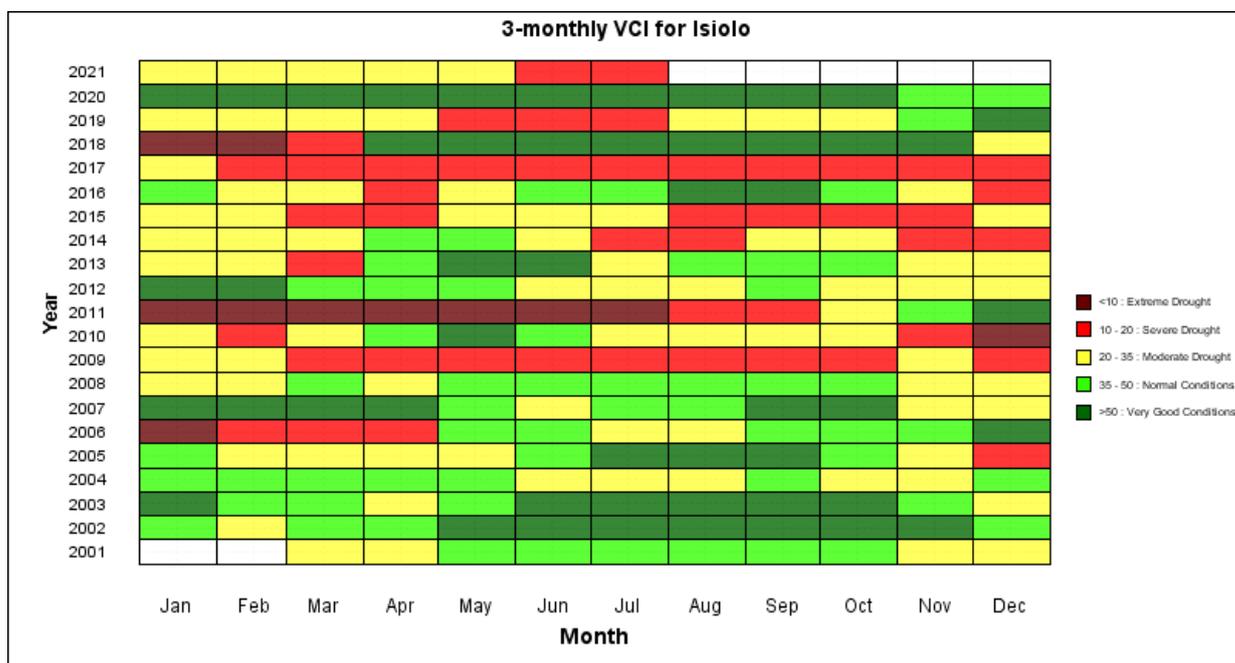


Figure 3: Vegetation Condition Index for Isiolo South Sub-County

- The county had a VCI value of 18.97 implying that the county remained at the severe vegetation deficit band.
- The overall 3-month vegetation condition for the entire county deteriorated to the severe vegetation deficit status, signifying conditions of severe drought which have been confirmed by the reports and observations on the ground.
- The index has been declining, a phenomenon that was attributed to the impacts of the poorly performed rainfall season.
- Vegetation condition is expected to deteriorate further in the following month, as an impact of the prevailing dry weather conditions whose average temperature is expected to be higher than the current month.

2.1.2 Pasture

- Majority of county's accessible grazing areas had poor pasture, attributed to meager regeneration due to the poor performance of the long rains. The condition has been worsened by depletion of palatable grass species and accidental bush fires.
- The condition of pasture in traditional grazing areas is very poor and unable to sustain lactating herds until the next rainy season.
- Significant amounts of pasture that could last about one-to-two months are available at dry season grazing areas are found Dare Dima-Belgesh and Duma, Yamicha, Urura, Macharo, Dogogicha Cherab and Nyachis, Kom, Kuro bisan Owo in Charri ward. Others are patches in Kinna ward.
- The dry season grazing reserves are experiencing heavy livestock concentration a factor that could speed up the rate of depletion than projected.
- 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 of browse was poor in the pastoral livelihood zones due to poor regeneration, shedding of leaves, and depletion by livestock and bush fires in some areas.

- There are significant amounts of browse resources available in dry season grazing reserves and a few other parts in Garbatulla and Kinna wards where quite a significant fraction of livestock are grazing amidst scares by prevailing insecurity and acute water shortage.
- General browse condition in the month under review was poor, 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, Yamicha, Urura and lower parts of Ewaso Nyiro swamps in Oldonyiro.

2.1.4 Water Sources;

- Main water sources during the period under review were boreholes, rivers, springs, shallow wells, traditional river wells and sand dams. Over 95% of water pans have dried up.
- Water volumes in majority of the sources have been dropped significantly except boreholes. This mostly experienced in rivers which are gradually drying upstream while yield in shallow wells diminished. Households at the lower R. Ewaso Nyiro are obtaining water in traditional river wells.
- Areas facing acute water shortage in the county are Modogashe, Badana and Iresaboru in Sericho ward and Malkagalla, Dadachabasa, Korbasa and Lakole in Cherab ward.

- 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 30 percent while the fraction of offline ones was 23 percent. (*source Kenya RAPID*).

Households in permanent 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 manageable rationing interruptions.

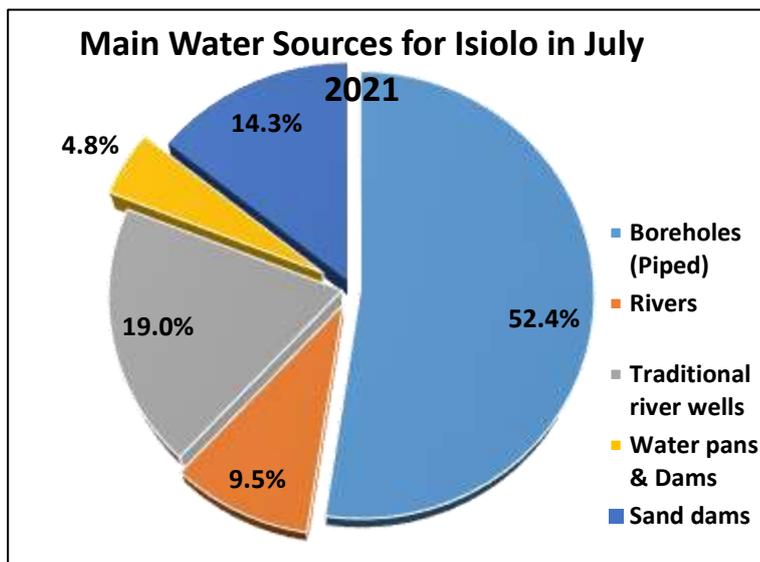


Figure 4: Main water sources

2.1.5 Household access and Utilization

- Household water access distance to main sources increased to an average of 3.6km during the period under review from 3.4km in the previous month. The distance remained relatively high as a result of the poor recharge of water sources, both ground and underground, seven percent below the LTA distance of 3.9 km.
- A large proportion of household's accessed water from boreholes and traditional river wells dug along sandy river beds and sand dams.
- Water volumes in shallow wells, water pans and sand declined due to continued withdrawal amid poor recharge during the long rains 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 is exceptionally high due to the prevailing water shortage in the area resulting into high costs of water where a 20 litre jerrican costed households Ksh 20.00.
- Waiting time at main sources in the pastoral livelihood zones ranged between 15 and 30 minutes.
- The longest one-way distance was in Cherab ward where household walked an average of 4.0km (one way) to River Ewaso Nyiro traditional river wells.
- 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.

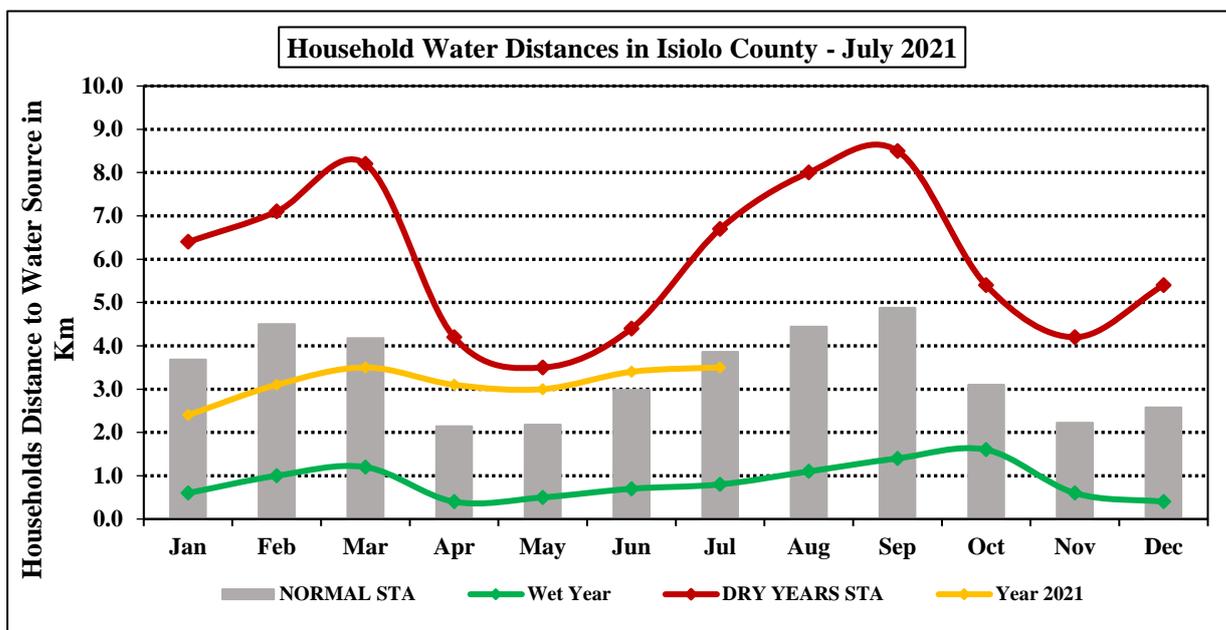


Figure 4: Household distance to water sources

2.1.6 Livestock Access

- The average return distance to water sources from the grazing areas increased considerably to 16.6km in the month under review from 15.5km recorded in the previous month.
- The increment was attributed to depletion of forage resources prompting herders to move deeper into the grazing areas away from the boreholes, springs, traditional river wells and shallow wells.
- The distance to water sources was alarming especially in Charri, Cherab, Sericho and Garbatulla wards as forage shortage deepened.
- The month's livestock watering distance was 55 percent higher than the long-term average of 10.7km at a similar period of the year and equal to the highest distance recorded at a similar period of the year.
- The distance is expected to increase considerably due to gradual depletion of available forage thereby forcing herders to move farther away from the watering points.

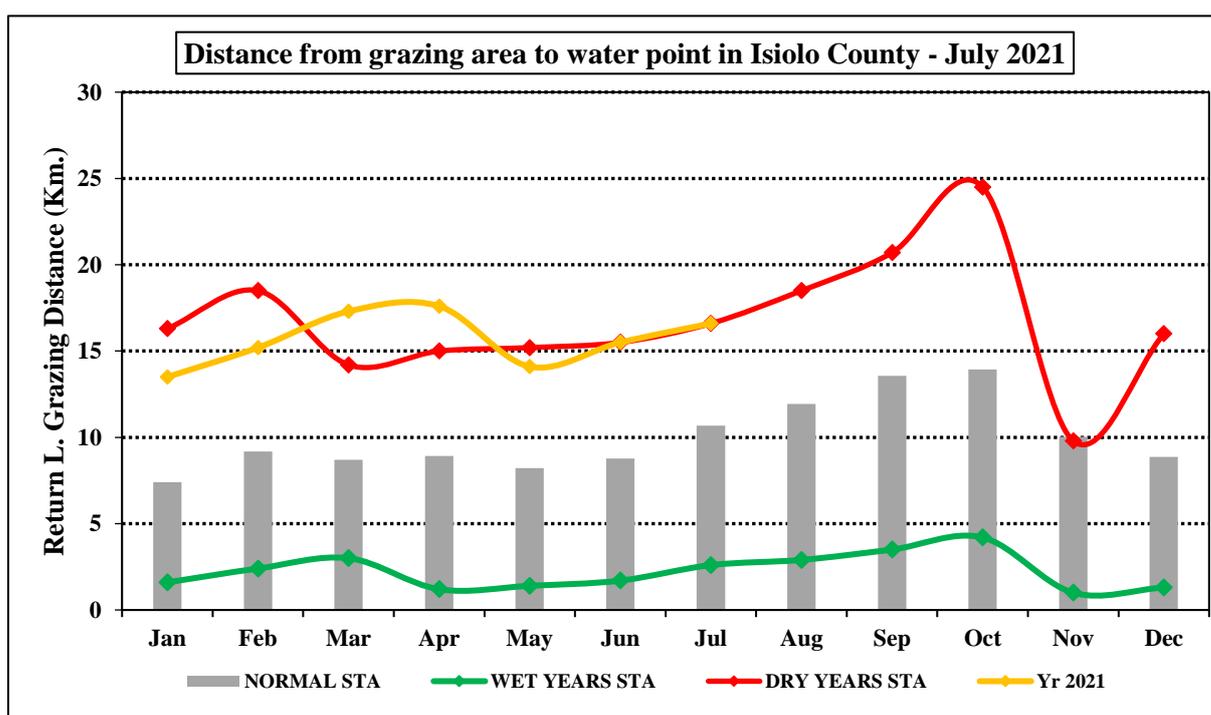


Figure 5: A graph of distance to grazing areas from water points

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- The general body condition for all livestock species was fair in all livelihood zones. However, a considerable proportion of cattle, goats and sheep in areas with poor availability of forage has displayed gradual signs of general weakness.
- The body condition is expected to worsen considerably over the next three months which are expected to be characterized high temperature and shortage of forage and water.
- The current livestock body condition was better compared to a similar period in the long-term though the situation could worsen as availability of livestock feed and water diminish incessantly.

3.1.2 Milk Production

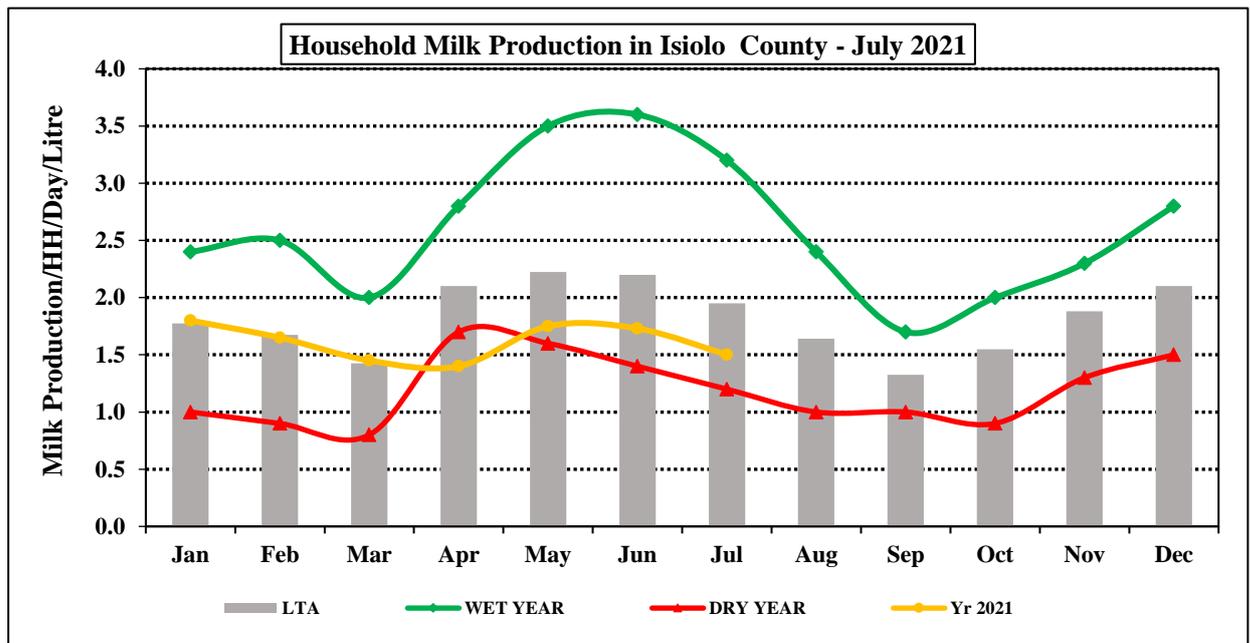


Figure 6: A graph of average milk production in litres

- Milk produced in milking households decreased slightly to 1.50 litres in the month under review from 1.72 litres in the previous month.
- The decrease in production could be attributed to poor pasture availability and increasing water distances from grazing areas.
- Households depended on cattle and camel milk as their production was slightly more than one litre for the few milking households.
- Camels were the major producers of milk with a stable production and were mainly grazing in Kinna, Garbatulla and Charri wards.
- The amount produced is expected to exhibit a further decline as the dry spell conditions continue to prevail.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of Food Crops

- There are no crops in the farms under pure rainfed system and the planting season is expected to kick-off in September shortly before expected onset of short rains in October.
- Small-scale irrigation actively continued along permanent rivers, River Isiolo, River Ewaso Nyiro and River Bisanadhi. Majority of farms along the rivers have horticultural crops such as onions, kales and tomatoes.
- However, reported attacks on irrigation equipment along R. Isiolo is set take back the small-scale irrigation activities along the main vegetable basket for isiolo town and its environs.

4.0 MARKET PERFORMANCE

4.1 Livestock Marketing

Cattle Prices

- Cattle price reduced marginally to record an average of Ksh.25,800 during the month under review hence displaying stability since the beginning of the year.
- Cattle's reducing price was partly attributed to the prevailing weak marketing environment all over the country although the fair body condition also affected the prevailing price.
- The highest average price was recorded in Isiolo town market at Ksh.31,300 while the least was Ksh.24,000 in Merti market.
- The period's price was however 16 percent above the long-term average of Ksh.22,320 at the same period of the year.

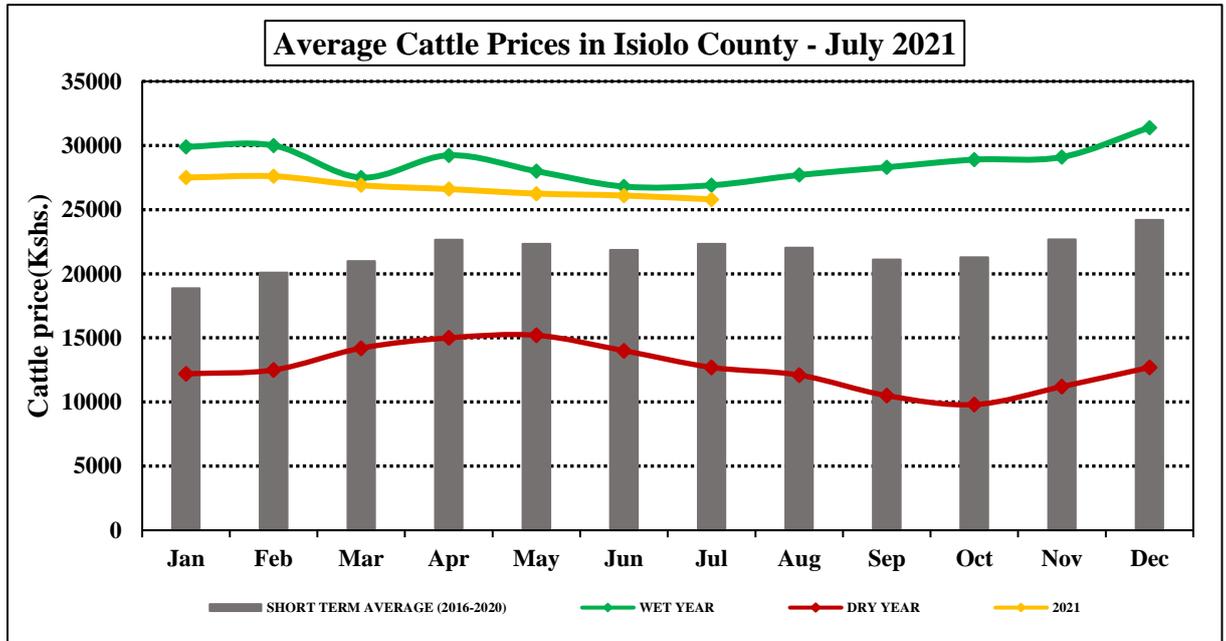


Figure 7: A graph of average market price of cattle

Small Ruminants Prices (Goat)

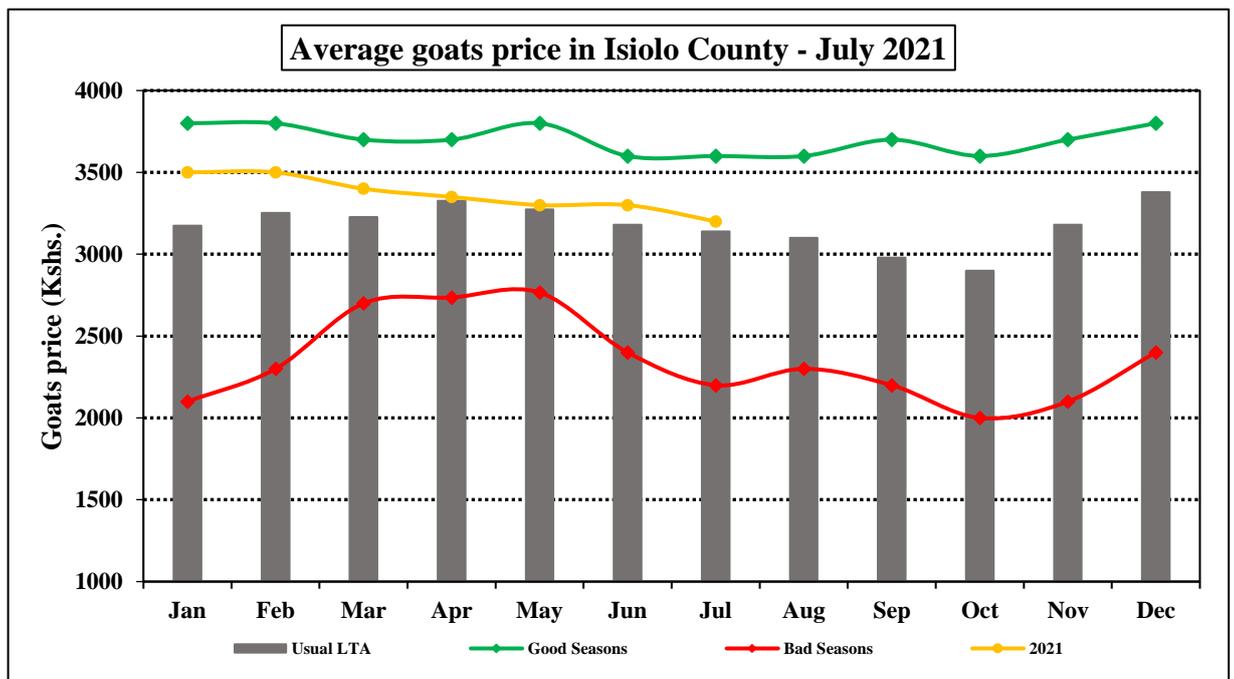


Figure 8: Average price of goats

- Goat price reduced slightly to Ksh.3,200 from an average of Ksh.3,300 in the month under review.
- The reduction in the goat market price recorded could be attributed to the deteriorating body condition facilitated by prevailing weak marketing environment. The body condition of the small stock was also fair and thus attracting the moderate price ranges.
- The least and highest market prices recorded were Ksh.3,000 and Ksh.3,900 in Modogashe and Isiolo town markets respectively.
- Average goat price for the period was two 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 stabilized at Ksh.55.30 in the month under review.
- The cereal's high price could be attributed to reducing stocks of the cereal in the markets from within and out of the county.
- Cereals lowest price was Ksh.50 in Isiolo town market 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 6 percent higher to the long-term average of Ksh.52.20 at a similar period of the year.

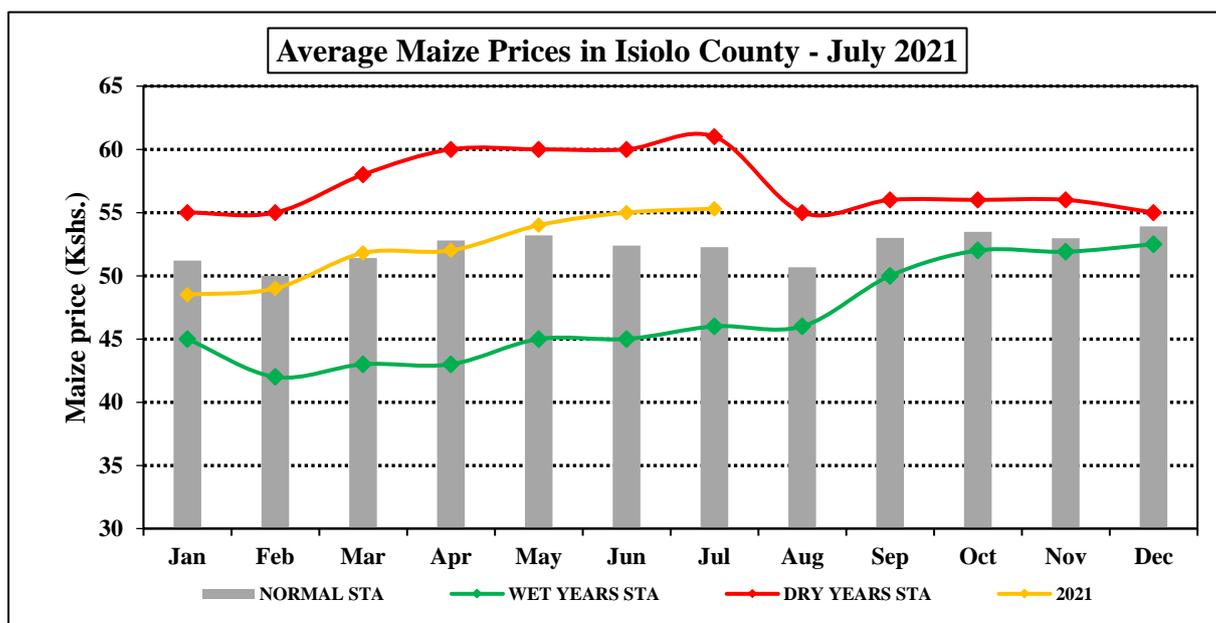


Figure 9: A graph of average maize (cereal) market price in the county

Beans

- Average price of beans increased slightly to Ksh.120 in the month under review from Ksh.118 in the previous month. The price has significantly risen in the last two months mainly due to diminishing supplies of the pulses with farmers and traders.
- The pulse's price is expected to increase further during the ongoing dry spell as supplies diminish following depressed production during the long rains season.
- The highest price was recorded in Merti market in the pastoral livelihood zone at an average of Ksh.130 while the lowest price was in Isiolo at Ksh.100 in Isiolo central market.
- The pulse price was also equal to the highest average ever recorded in a period of five years.
- The price was 15 percent higher than the long-term average price of Ksh.104 during a similar period of the year.

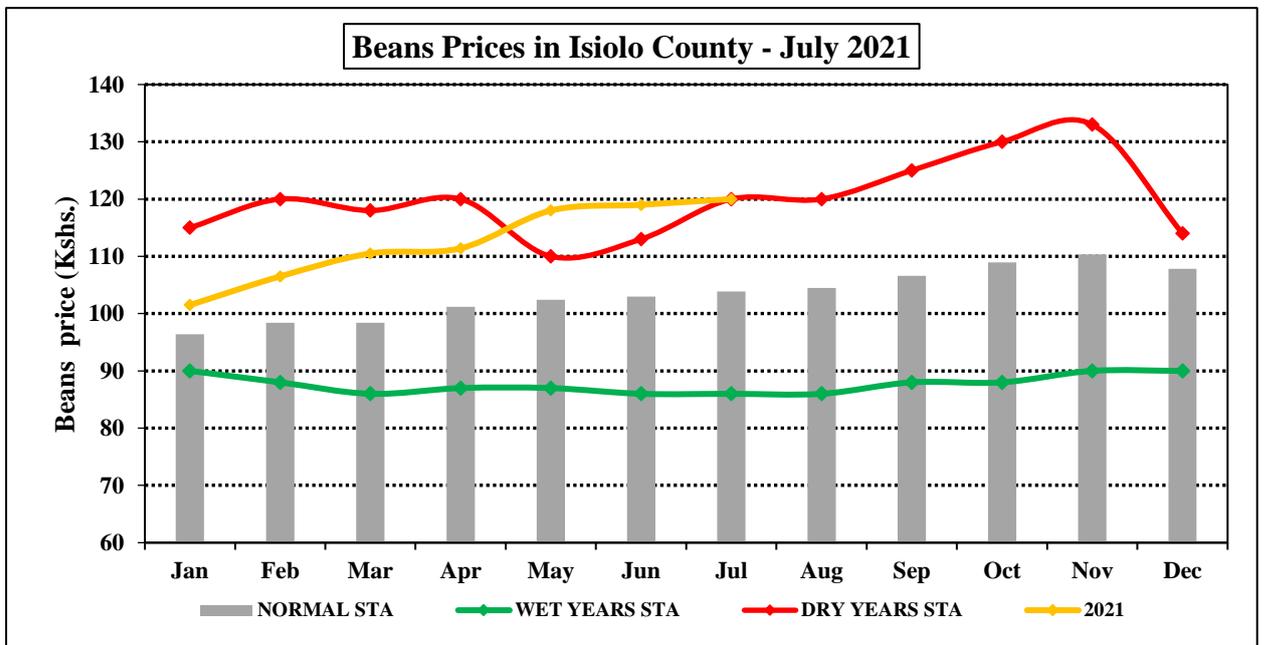


Figure 10: A graph showing average market price for pulses (beans)

4.3 Livestock Price Ratio/Terms of Trade

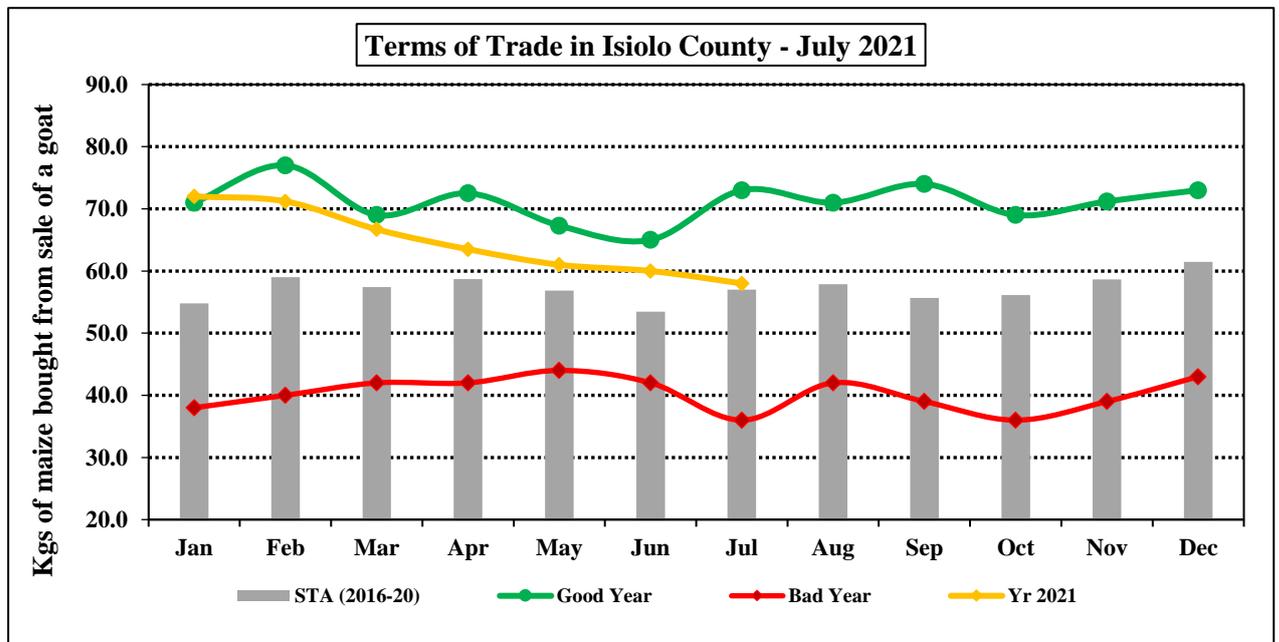


Figure 11: A graph showing the typical pastoralist households Terms of Trade in the county

- Terms of Trade (the number of kilograms of maize a farmer would purchase after a sale of one goat) reduced slightly to 58 kg/goat in the period under review from 60.0 kg/goat in the previous month.
- The ratio was 2 percent higher than the long-term average of 57kg/goat at a similar period of time in a year.
- The reduction in the households' Terms of Trade reflected a slight decline in their 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 towards the mid and end of the 3-month dry spell that is characterized by poor livestock feed availability.

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

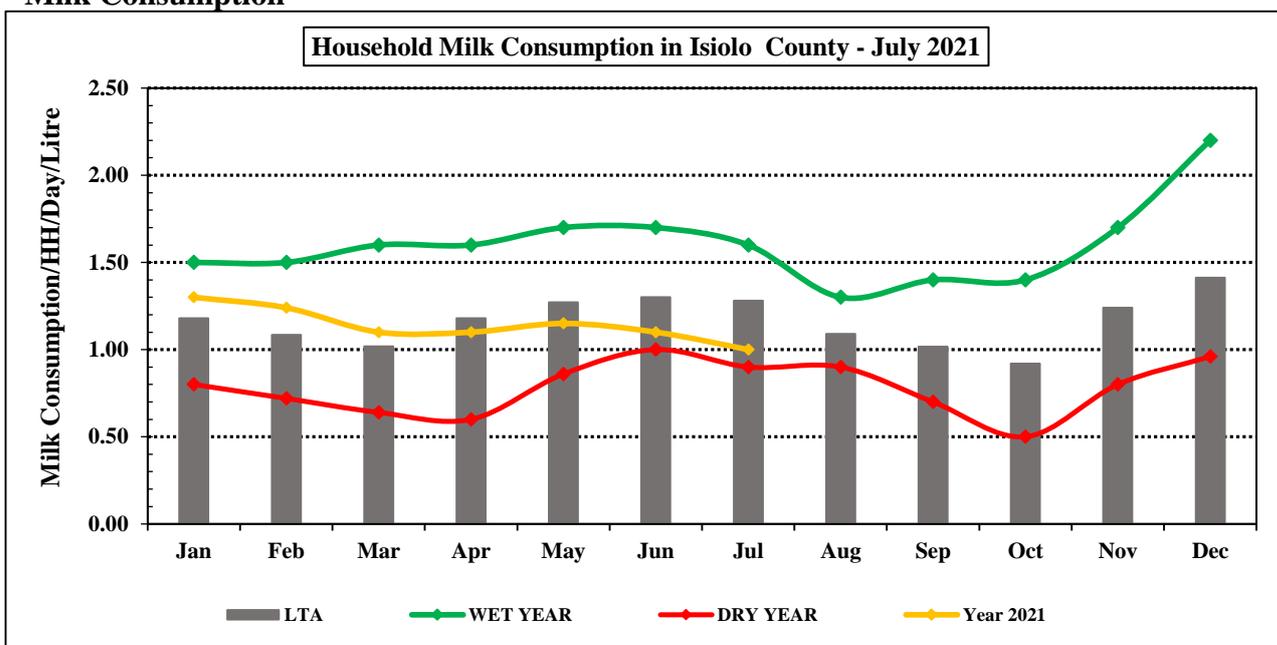


Figure 12: Average milk consumption in litres

- Milk consumption per household reduced to an average of 1.0 litres in the month under review, from 1.12 litres in the previous month.
- 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 3 months of severe dry spell.
- Average consumption was 22 percent below the long-term average of 1.28 litres during a similar period of the year.
- Milk consumption remained comparatively 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 12 where an estimated 5.3 percent and 22.9 percent of households had poor and borderline food consumption respectively.

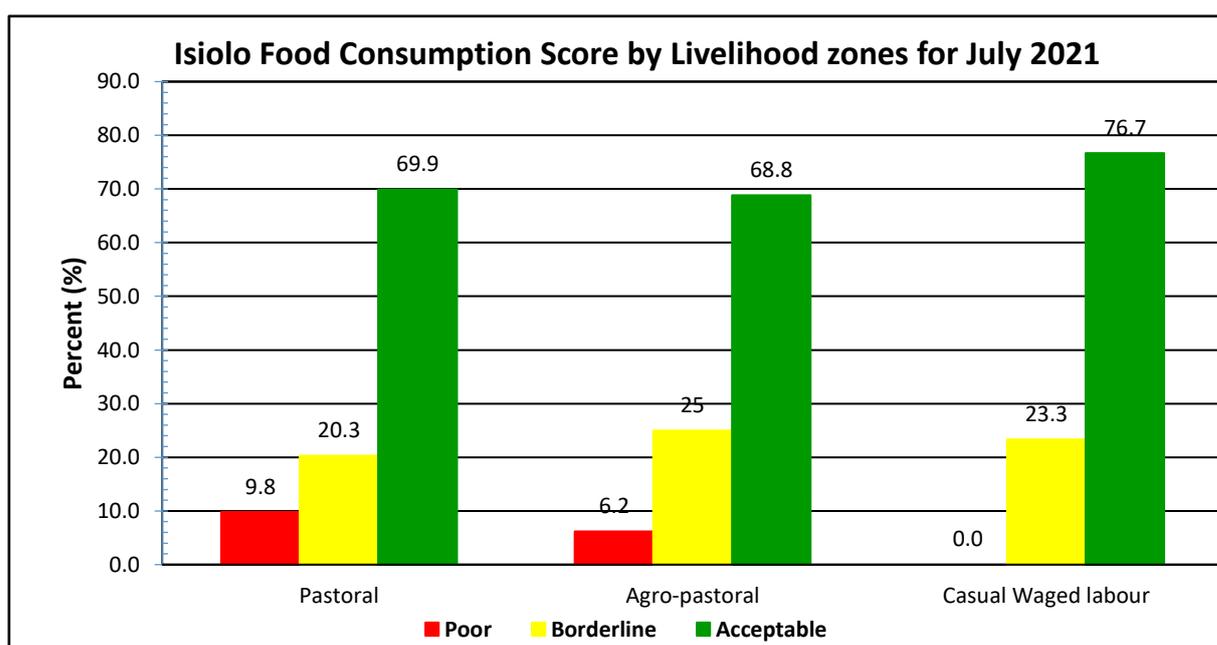


Figure 13: Households' food consumption score

- Households with poor food consumption increased slightly compared to the previous month mainly attributed to the diminishing purchasing power among pastoral households. In the agro-pastoral livelihood zone, households have a relatively poor access as they have no food stocks due to the poor harvests realized.
- The overall dietary diversity in the pastoral livelihood zone was poor, a situation that is partly attributed to limited availability of foods from across the required food groups and prevalence of certain food types. Low farming skills and opportunities and transport challenges also hinder consistent accessibility.
- Food consumption situation is expected to deteriorate considerably in the next three months as food availability and access may be a challenge due to poor production and deteriorating marketing environment.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- During the period under review, 2.7 percent and 8.9 percent of children were severely malnourished and moderately malnourished respectively.
- This implies that the proportion of malnourished children increased marginally which is an indication of an increase in cases of malnourished children during the period under review.

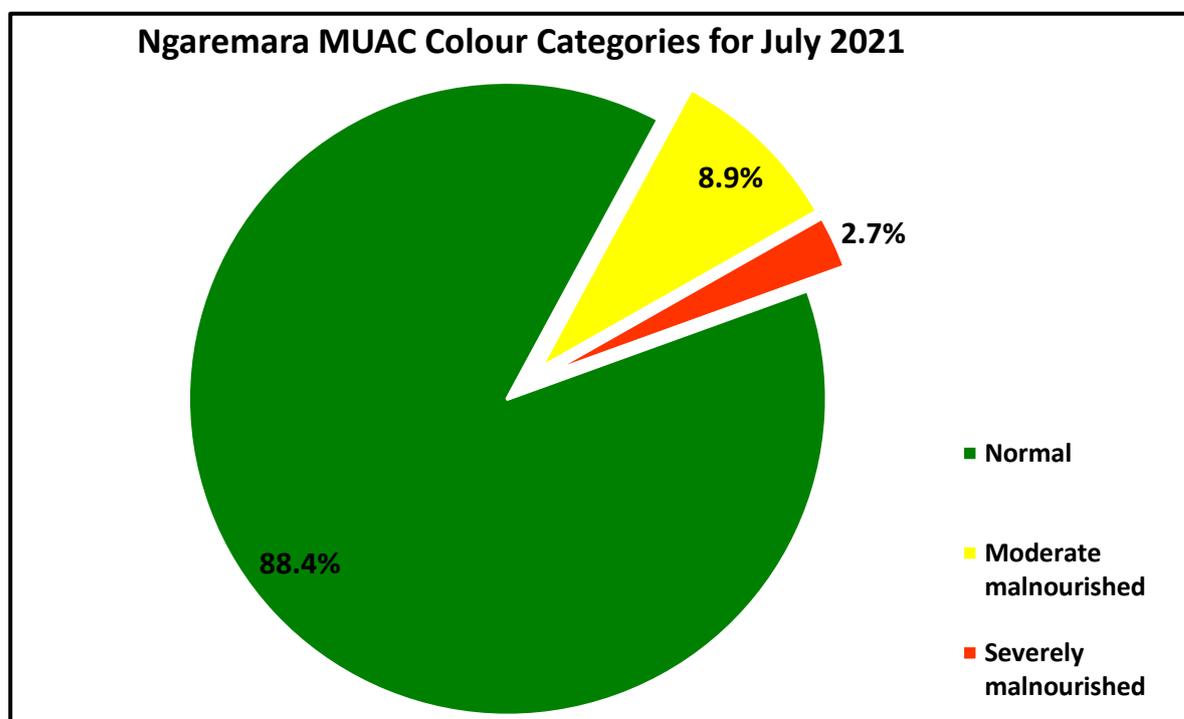


Figure 14: Proportion of under five-year children who are moderately and severely malnourished

- The proportion of children who were moderately malnourished increased slightly to 8.9 percent from 8.2 percent during the previous month. The proportion that were severely malnourished stabilized at 2.7 percent.
- The slight increment in the proportion of children who are getting malnourished 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

- Health seeking behavior improved compared to a similar time in the previous year when fear and stigma of Covid-19 crumbled people's initiative of seeking treatment in medical facilities.

- 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

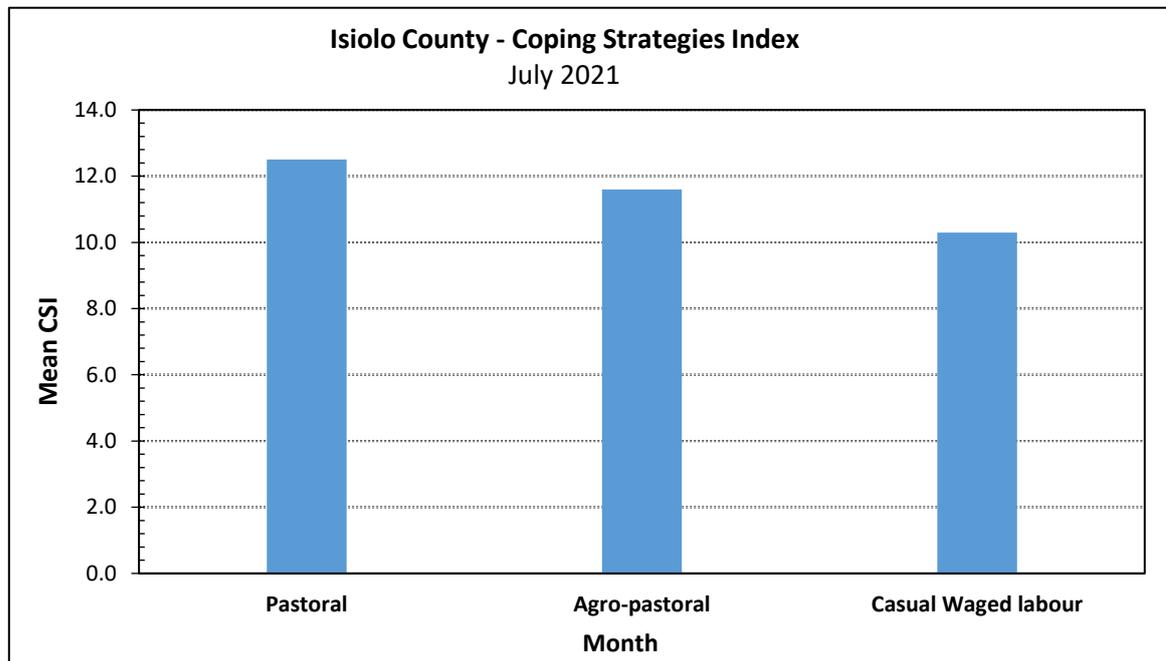


Figure 15: Household Reduced Coping Strategies Index

- Coping Strategy Index (CSI) increased marginally to 12.07 during the month under review from 11.81 in the previous month.
- The slight increase of the index depicts an increased employment of coping strategies that was attributed to a poor food availability especially in the agro-pastoral and pastoral livelihood zones.
- Food access challenges in the pastoral livelihood zone were attributed to deteriorating livestock production and the ensuing migrations by herding families in search of forage as well as shrinking access to livestock markets.
- Households without a stable source of income either from keeping of livestock, petty trading or casual labour bore the brunt of the prevailing economic hardships attributed to the impacts of Covid-19 pandemic. They were 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, reduction in portion or size of meals and borrowing. Other households spent their savings to buy food.

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
	Garbatulla, Sericho, Cherab and Burat	Isiolo North and Isiolo South	WFP	1,800HHs
	Oldonyiro and Cherab	Isiolo North	Action Against Hunger (ACF)	1,150 HHS
	Ngaremara ward Cherab ward	Isiolo North	CRS-NAWIRI	200HHs Ngaremara 400HH Cherab
	Cherab, Oldonyiro, Sericho and Charri	Isiolo North and South	FAO in partnership with MID-P	1000 HHs
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
Drilling of Borehole	Machessa in Kinna	Isiolo North	DRSLP	1,000 HHs
	Algani Girls Day Secondary school	Isiolo South	Isiolo South NG-CDF	500 students
Water trucking	Modogashe	Garbatulla	NDMA, County Govt. Department of water	2500 HHs
	Malkagalla, Korbesa, Lakole	Merti		1500 HHs
Rehabilitation of boreholes in Ngaremara and Burat	3 in Burat and 2 in Ngaremara	Isiolo	Action Aid	3,000 HHs
Installation of solar kits in 112 shallow wells	Burat and Ngaremara			3500 HHs

7. EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- There were cases of resource-based conflicts reported in the county that left scores of people dead and others badly wounded. Conflict hotspots included Alango in Cherab ward, Loruko, Lowa Loongishu in Burat Ward and Boji Dera, Gotu in Ngaremara ward, and Kom in Charri ward. Shooting of livestock was reported in Oldonyiro at Laikipia border.
- Tension prevailed among residents of Wajir- Isiolo North, Garissa-Isiolo South borderlines in fear of attacks characterized by revenge on previous resource-based conflicts early in the year.

7.2 Migration

- Movements in search of forage were internal as herders sought forage Kom, Urura and other dry season grazing areas due to depletion of forage in majority of other grazing areas.
- Oldonyiro herders retreated back from Laikipia ranches after eviction by ranch owners to preserve the remaining pasture for their livestock. This forced herders to return to traditional grazing areas though depleted as others migrated to Samburu and Baringo counties.
- A large section of herders from Cherab and Sericho are grazing their livestock in Hawaye grazing reserve while others moved out to Urura and surrounding dry season grazing areas.

7.2 Assumptions and Food Security Prognosis

Assumptions

- There will be no incidences of the off-season rains and thus a continued deterioration of forage until onset of the short-rains season in mid-October.
- Livestock migration result to increase in incidences of livestock disease outbreaks and resource-based conflicts where livestock congregate in large numbers.
- Acute malnutrition is expected to remain Critical due to reduced milk access during the anticipated longer dry period.

Prognosis

- The level of food security is frail and expected to worsen during the long dry spell owing to the poor performance of the long rains season. The situation will exacerbate the already poor level of production and availability of food in all livelihoods.
- Livestock production though seemingly resilient is under threat from the widespread poor access to quality feeds and water scarcity. Livestock body conditions are generally fair among the four main species but their condition is likely to be affected by the deteriorating access to sustainable amounts of forage.
- Crop production, especially purely rainfed was poor resulting into the meagre yields realized. Consequently, the below normal rainfall season led to insignificant recharge to the rivers and other temporary water sources, a situation that will derail the level of small-scale irrigation.
- There is normal access to livestock and food commodities markets where majority of households obtained their food supplies. Depressed crop production is likely to result in price hikes of major farm produce and thus affect their accessibility by households.
- Food consumption is good in all livelihoods zones as majority of households had acceptable food consumption. However, this is expected to deteriorate with the poor production realized in crops and the worsening situation in livestock production.
- Food utilization was boosted by the relatively good access to water but mostly in permanent settlement. Herding households are trekking long distances to obtain water for drinking and cooking with its availability expected to decline due to the poor recharge.
- There was increased competition over rangeland resources within the county as pressure from neighboring counties mounts following continued in-migration and intra-migration. 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

- 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.
- Support peace building and conflict resolution to enable the warring communities reach amicable resource sharing agreements and avert further conflicts as witnessed in various parts of the county. There should be full involvement of grazing committees and security management structures in the county.
- Promote and support voluntary livestock commercial destocking initiatives mainly targeting cattle, sheep and goats while they are in their current body condition to enable them minimize the risk of losing the animals as well as ease pressure on available forage resources.
- Provision of supplementary 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 water trucking interventions in water scarce hot spots such as Modogashe, Sericho Iresaboru in Sericho ward, Malkagalla, Saleti, Malkagalla and other settlements in Cherab ward as well as some parts of Oldonyiro ward.
- Support active and continuous human and livestock disease surveillance for any possible outbreak for appropriate control mechanism following the One-Health Approach.
- 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 fourth wave in the county.
- Promotion of agri-nutrition sensitive interventions to boost nutrition security especially among the pastoral and agro-pastoral households.