



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

June 2021 EW Phase

**Drought Status: ALERT**



**Maandalizi ya Mapema**

**Drought Situation & EW Phase Classification**

**Biophysical Indicators**

- The month's weather conditions were dominated by intermittent sunny and cloudy weather and strong winds.
- Vegetation condition worsened after drifting from moderate vegetation deficit to severe 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 May. Food commodities prices increased with reducing stocks.
- 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 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
<b>County</b>	<b>Alert</b>	<b>Worsening</b>
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	0mm	>0.7mm
VCI-3month (Isiolo)	18.72	>45.3
State of Water Sources	4	5
Production Indicators	Value	Normal
Livestock Body Condition	Fair to poor	Fair to Good
Milk Production	1.70 Litres	>2.20 Litres
Livestock deaths (from drought)	None	No deaths
Livestock Migration Pattern	Internal migration	Normal
Access Indicators	Value	Normal
Terms of Trade (ToT)	60	>53.5
Milk Consumption	1.12 Litres	>1.30 Litres
Return distance (water sources to households)	3.5 km	<3.0 km
Cost of water at source (20 litres)	Ksh 2.00	<Ksh. 5.00
Utilization indicators	Value	Range/Value
Moderately malnourished	7.5 percent	<4.3 percent
Severely malnourished	3.1 percent	<1.5 percent
Coping Strategy Index (CSI)	11.81	13.2
Food Consumption	41.39	>40.6

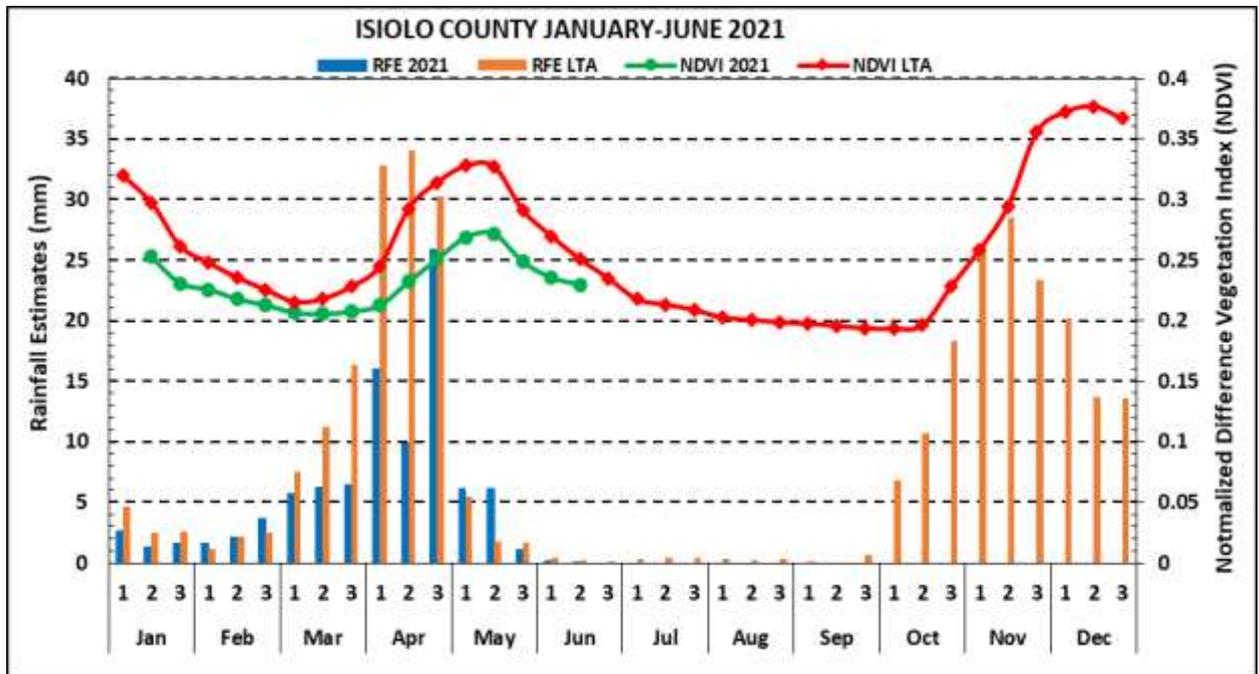
**Seasonal Calendar**

<ul style="list-style-type: none"> <li>▪ Short rains starts</li> <li>▪ Short dry spell</li> <li>▪ Reduced milk yields</li> <li>▪ Migration to dry season area</li> <li>▪ Land preparation</li> </ul>	<ul style="list-style-type: none"> <li>▪ Migration to wet grazing areas</li> <li>▪ Long rains</li> <li>▪ High Calving Rate</li> <li>▪ Milk Yields Increase</li> <li>▪ Reduced pasture/water stress (Normal Scenario)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Long rains harvests</li> <li>▪ A long dry spell</li> <li>▪ Increased distances to water and pasture</li> <li>▪ Reduced water levels</li> <li>▪ Kidding (Sept)</li> <li>▪ Community/HH coping measures taken</li> </ul>	<ul style="list-style-type: none"> <li>▪ Short rains</li> <li>▪ Planting in Agro-pastoral LZ</li> <li>▪ Migration from dry season area</li> <li>▪ Increased milk yield</li> <li>▪ Reduced pasture/water stress (Normal scenario)</li> </ul>								
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 did not receive any rainfall in the period under review.
- The long rains season performed poorly, both spatially and temporarily. The next rains are expected in mid-October later in the year.

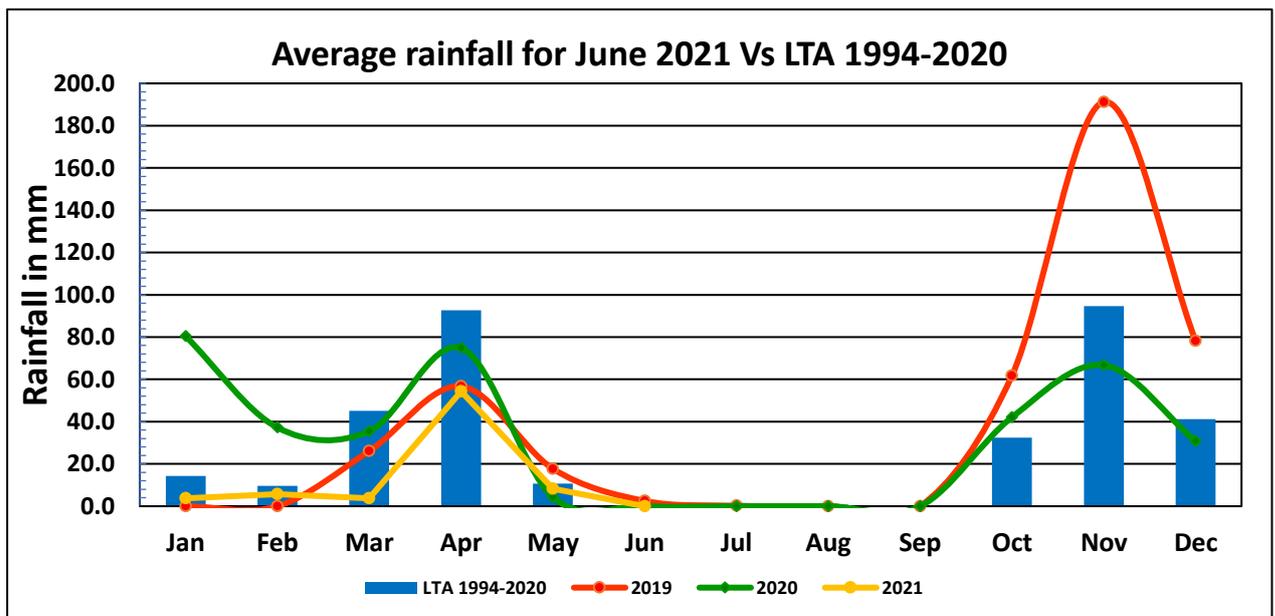


Figure 1: Average amount of rainfall (station data)

## 2.0 IMPACTS ON VEGETATION AND WATER

### 2.1 VEGETATION CONDITION

#### 2.1.1 Vegetation Condition Index (VCI)

- The matrix below illustrates June 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.

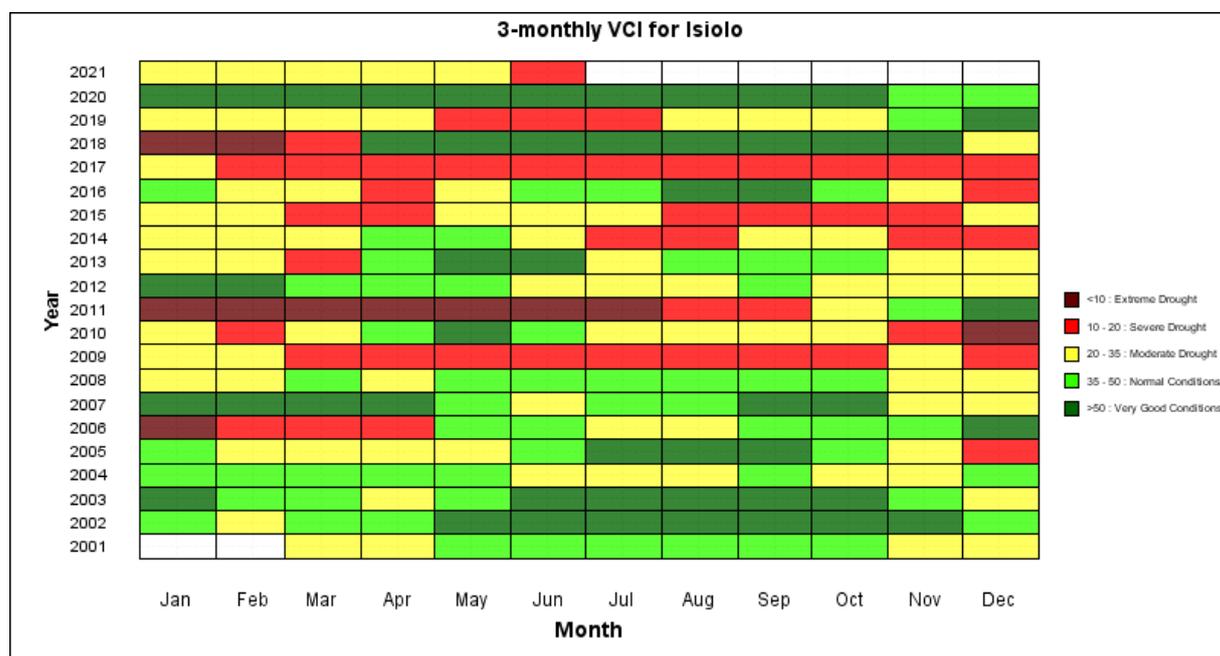


Figure 2: Vegetation Condition Index for Isiolo South Sub-County

- The county had a VCI value of 18.72 thereby drifting into the severe vegetation deficit band.
- The overall 3-month vegetation condition for the entire county deteriorated to the severe vegetation deficit, signifying conditions of severe drought which have been confirmed by the experience and observations on the ground.
- The index has been declining, a phenomenon that was attributed to the impacts of the poorly performed rainy season.
- The vegetation condition is expected to deteriorate further in the following month, as an impact of the ongoing depletion of the vegetation cover.

#### 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 season and short rains season 2020. The condition is worsened by depletion of palatable grass species and accidental bush fires.
- Amounts of pasture in traditional grazing areas are very low and only left to sustain lactating herds for a period of less than three months. However, significant amounts of pasture are available in dry season grazing areas such as Kom, Yamicha and some other parts in Isiolo south lying between Garbatulla and Belgesh but the limitation is access to water for livestock.
- Areas experiencing heavy livestock concentration are Kulamawe-Kinna stretch, Garbatulla-Belgesh section, River Ewaso Nyiro flood zone, Kom-Nyachis area and Laikipia ranches.
- 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 and ensuing depletion and bush fires.

- Significant amounts of browse resources are available in the dry season grazing reserves and a few other parts in Garbatulla and Kinna wards 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 and shallow wells cease upstream including R. Ewaso Nyiro whose flow is currently between Bisan Biliqo and Gotu. Herders as well as households are forced to dig wells along river beds to obtain water for domestic and livestock consumption.
- 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 26 percent while the fraction of offline ones was 21 percent. (*source Kenya RAPID*)

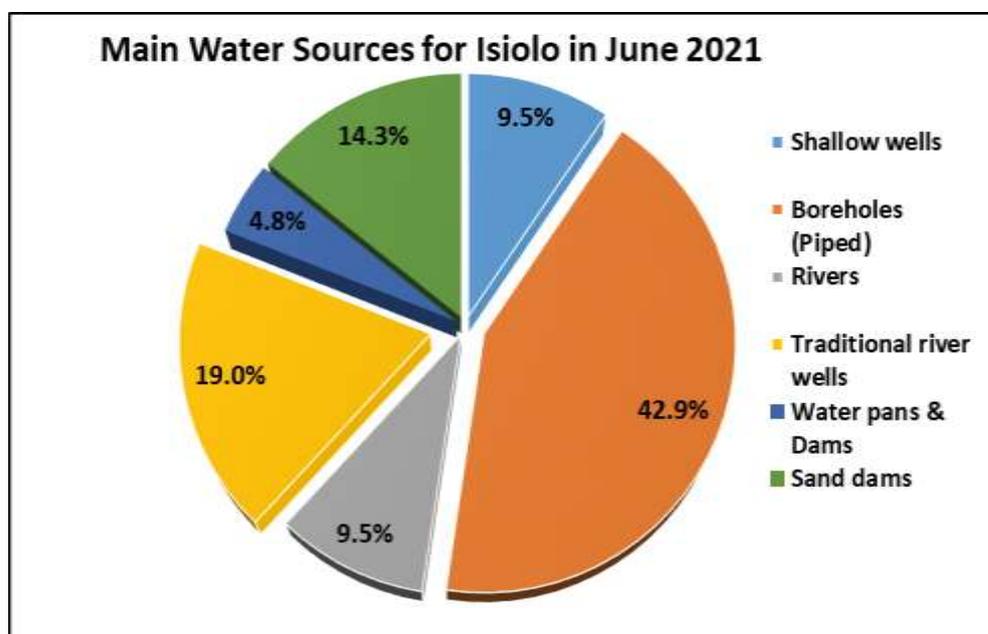


Figure 4: Main water sources

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.

#### 2.1.5 Household access and Utilization

- Household water access distance to main sources increased to an average of 3.4km during the period under review from 3.0km in the previous month. The distance remained relatively high as a result of the poor recharge of water sources, both ground and underground.
- A large proportion of household's accessed water from boreholes and river wells dug at sandy river beds.
- 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 50.00.
- Waiting time at main sources in the pastoral livelihood zones increased slightly to range between 15 and 30 minutes. The waiting time was more in boreholes where households queued to obtain the precious commodity.
- 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.

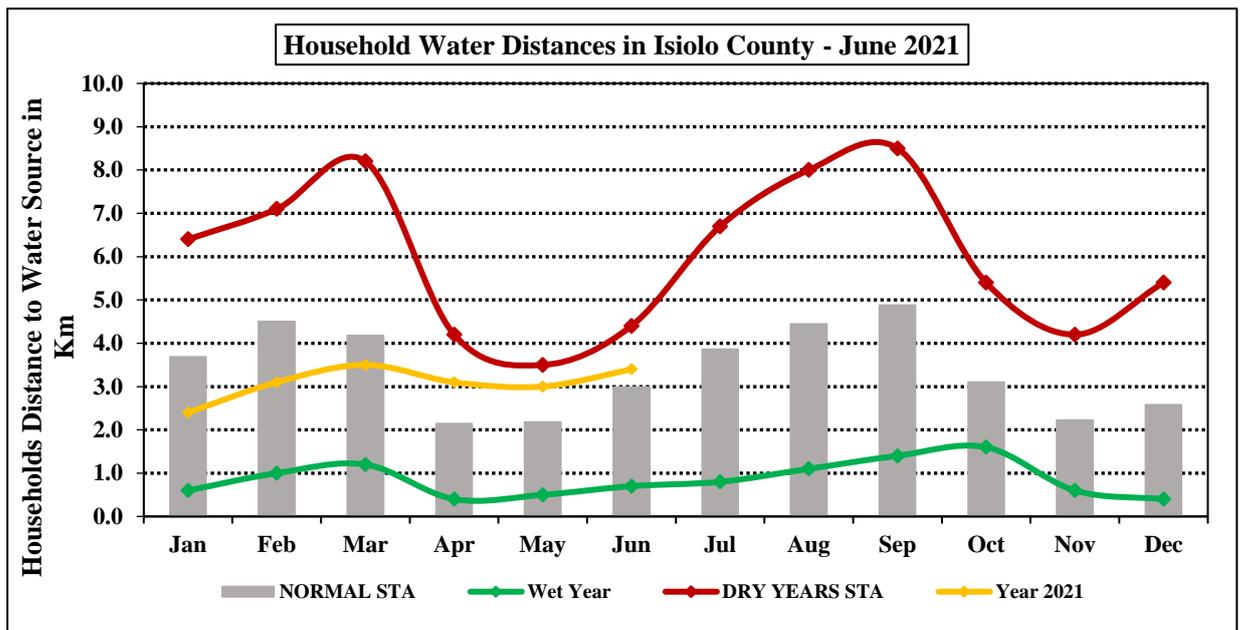


Figure 3: Household distance to water sources

### 2.1.6 Livestock Access

- The average distance to water sources from the grazing areas increased considerably to 15.5km in the month under review from 14.1km recorded in the previous month.
- The increment was attributed to a widespread depletion of forage resources at accessible grazing areas prompting herders to move further away from the water sources, most of which are 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 65 percent higher than the long-term average of 8.8km 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 dry season grazing reserves with better forage quantities.

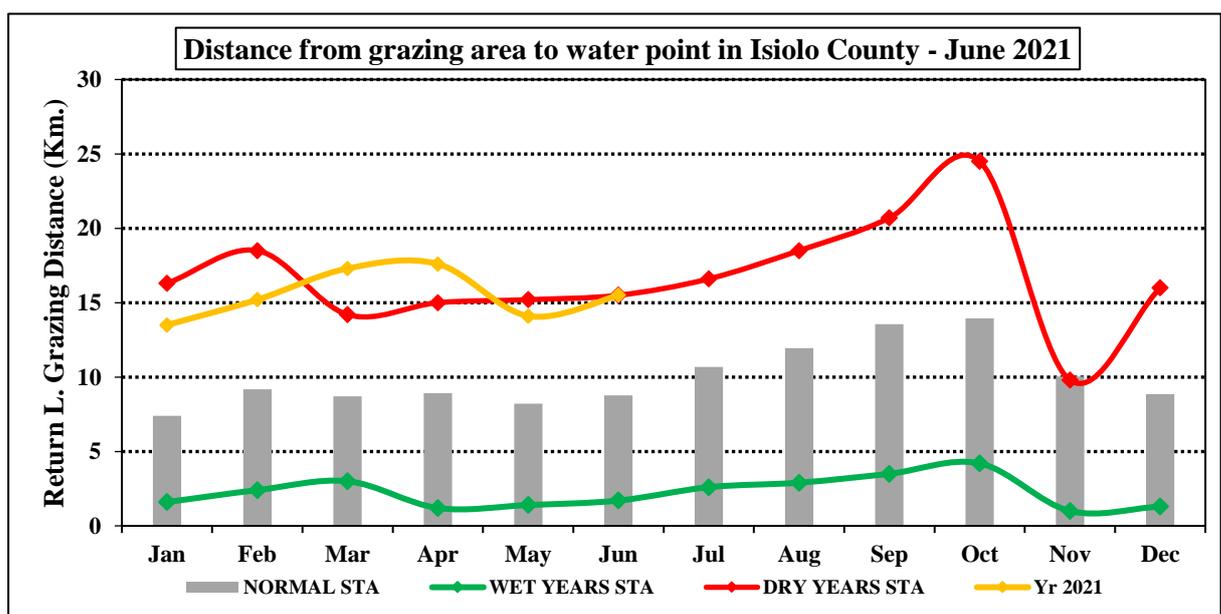


Figure 4: A graph of distance to grazing areas from water points

### 3.0 PRODUCTION INDICATORS

#### 3.1 LIVESTOCK PRODUCTION

##### 3.1.1 Livestock Body Condition

- The general body condition for 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 displayed a worrying deteriorating trend in their body condition.
- The livestock body condition is expected to worsen significantly over the next two to three months into the dry spell which is characterized by severe shortage of forage and water.
- 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 availability of feed and water in close proximity.

##### 3.1.2 Milk Production

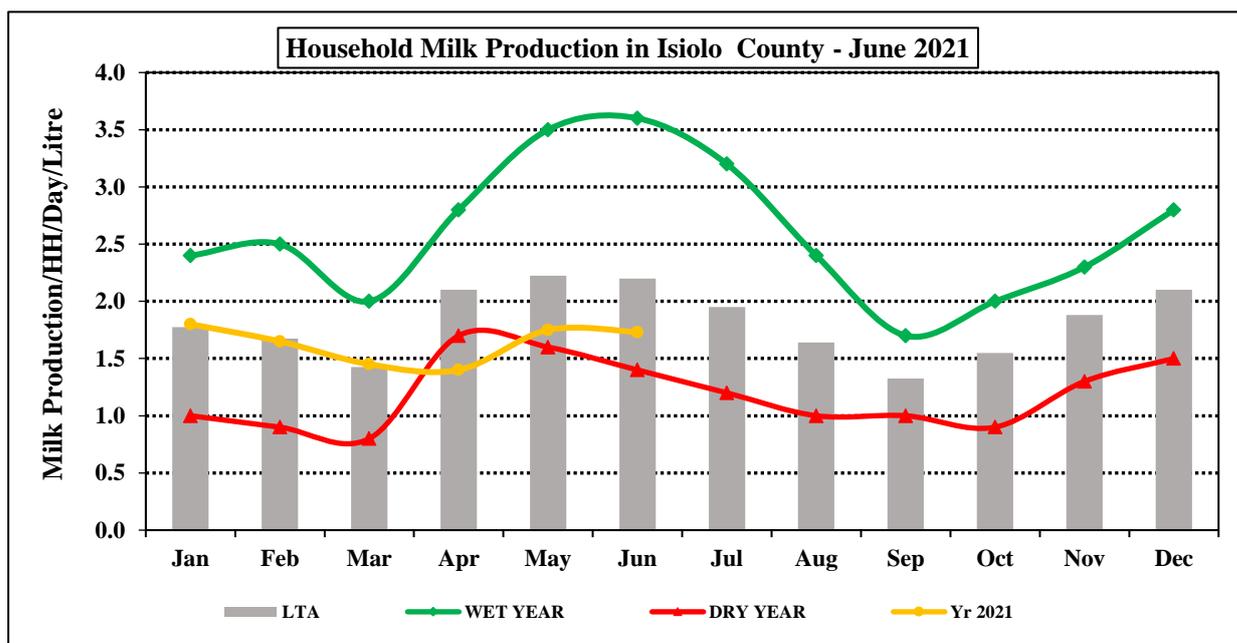


Figure 5: A graph of average milk production in litres

- Milk produced in milking households decreased marginally to 1.73 litres in the month under review from 1.75 litres in the previous month.
- The decrease in production could be attributed to deteriorating pasture availability and increasing water distances.
- Households depended on cattle and camel milk whose production was slightly more than one litre for the few milking families. 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 relatively sharp decline towards mid and end of the dry spell, mainly in August and September when forage availability is expected to worsen.

### 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 ended poorly due to the poor rainfall performance that characterized the long rains season.
- It's noteworthy that farmers obtained some substantial harvests of legumes (though below normal) in isolated farms in Burat, Kinna and Bulapesa where farmers planted in late March when the onset was experienced.
- Small-scale irrigation actively continued along permanent rivers, River Isiolo and Bisanadi. 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 irrigation activity 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.26,100 during the month under review hence displaying stability since the beginning of the year.
- Cattle's moderate 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.33,000 while the least was Ksh.24,000 in Merti market.
- The period's price was however 19 percent above the long-term average of Ksh.21,400 at the same period of the year.

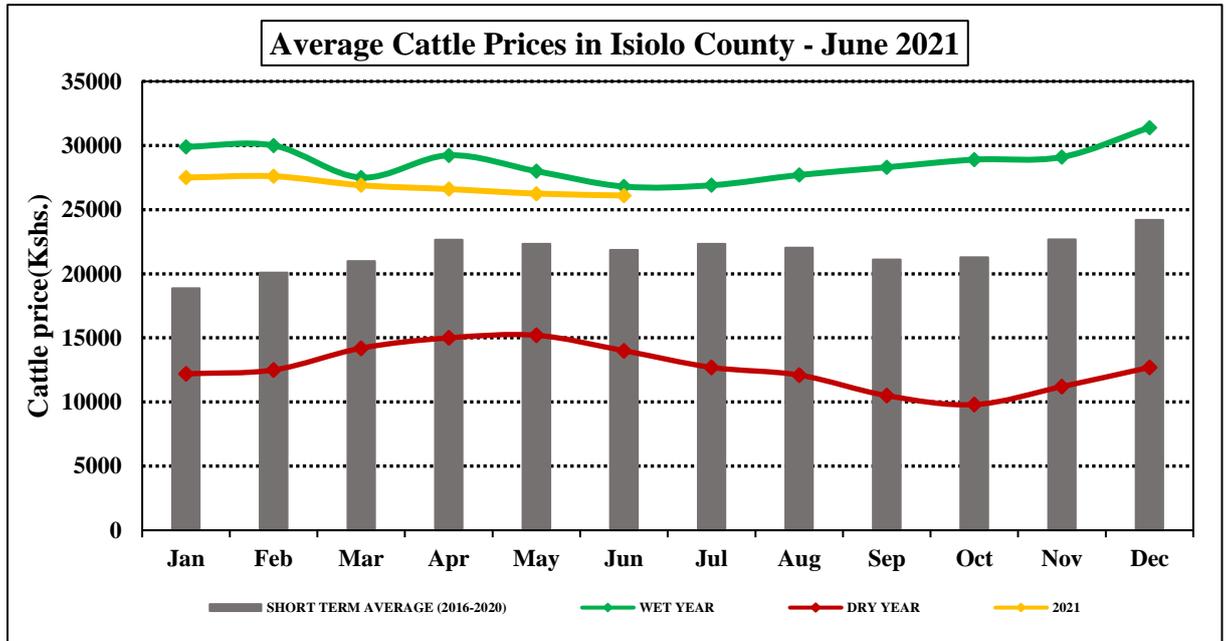


Figure 6: A graph of average market price of cattle

#### Small Ruminants Prices (Goat)

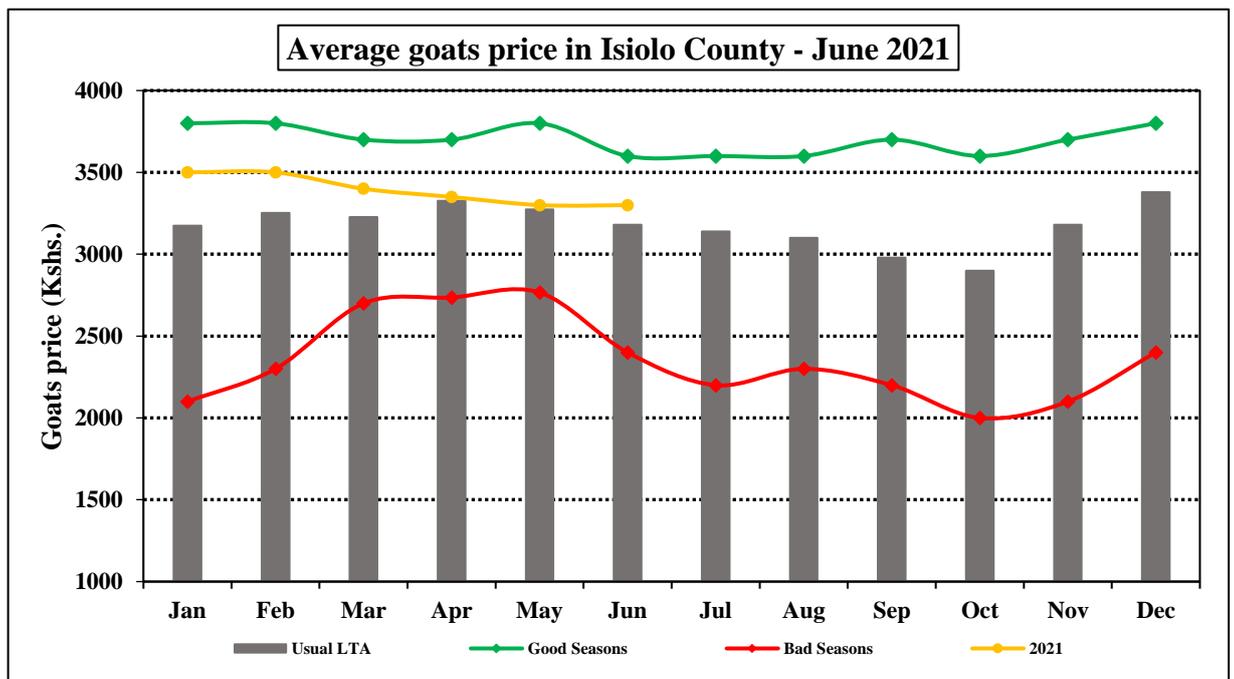


Figure 7: Average price of goats

- Goat price stabilized at an average of Ksh.3,300 in the month under review.

- The stability in goat market price recorded could be attributed to the relatively steady 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.4,000 in Merti and Isiolo town markets respectively.
- Average goat price for the period was 4 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 marginally to Ksh.55 in the month under review from Ksh.54.00 in the previous month.
- The cereal price increase could be attributed to reducing stocks of the cereal in 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 5 percent higher to the long-term average of Ksh.52.40 at a similar period of the year.

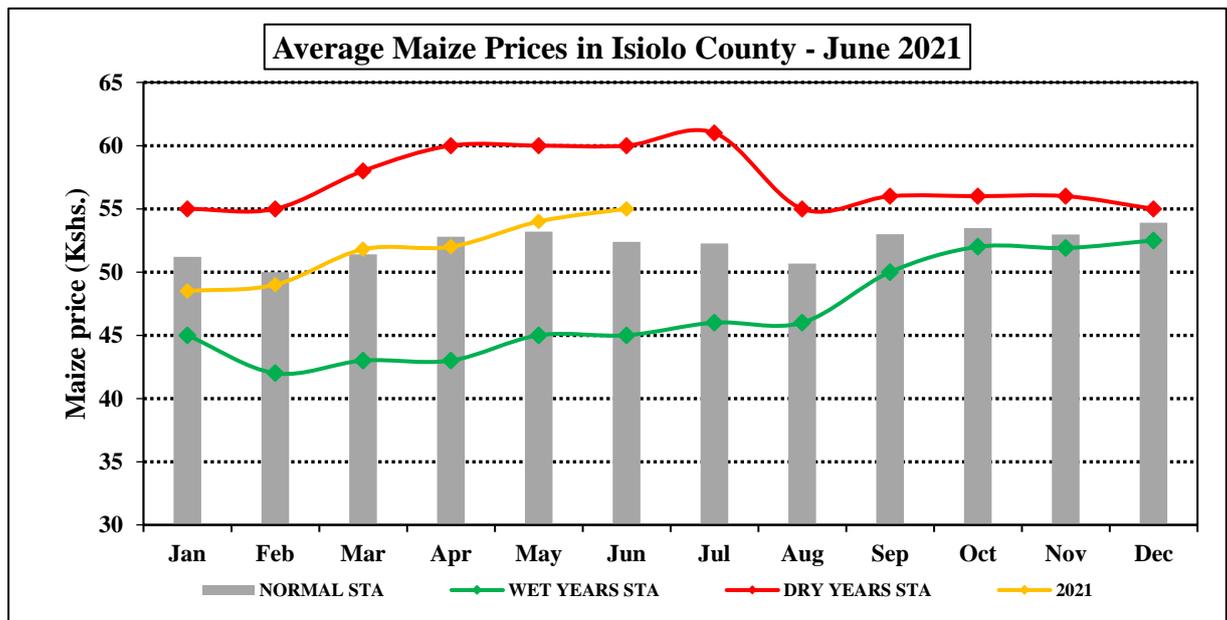


Figure 8: A graph of average maize (cereal) market price in the county

### Beans

- Average price of beans stabilized at Ksh.118 in the month under review. 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 steadily during the three-months dry spell as supplies will be curtailed by low stocks 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.120 while the lowest price was in Isiolo at Ksh.110 in Isiolo central market.
- The price was 14 percent higher than the long-term average price of Ksh.103 during a similar period of the year.

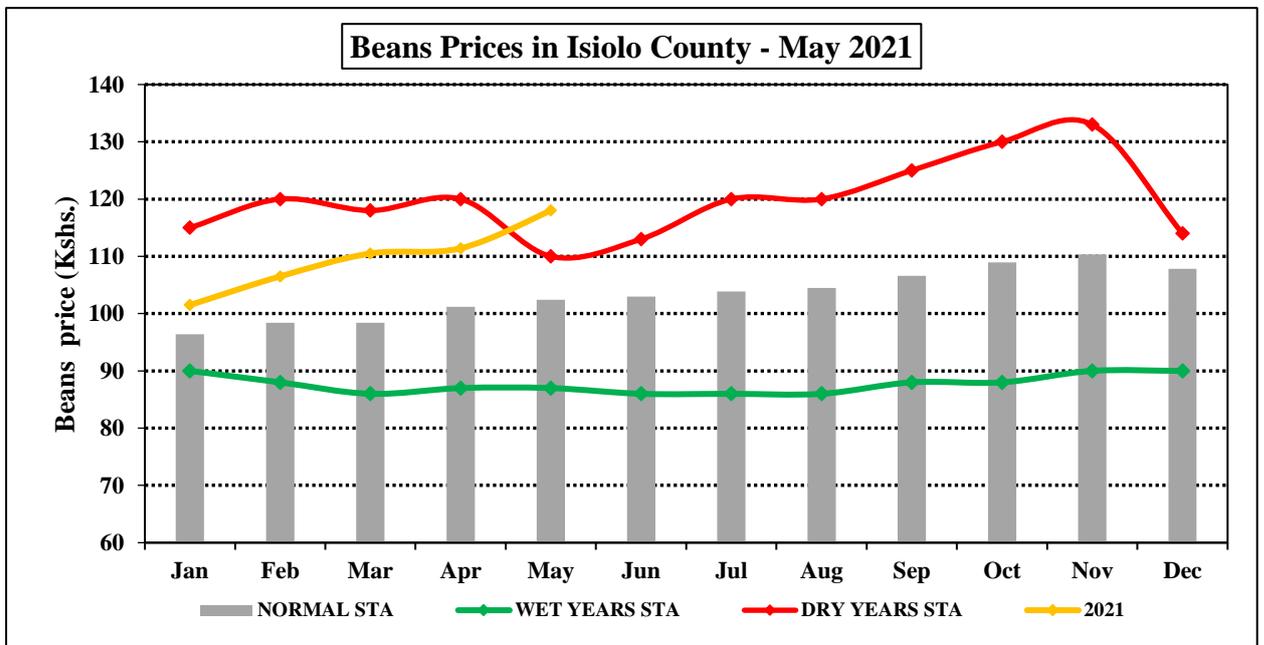


Figure 9: A graph showing average market price for pulses (beans)

### 4.3 Livestock Price Ratio/Terms of Trade

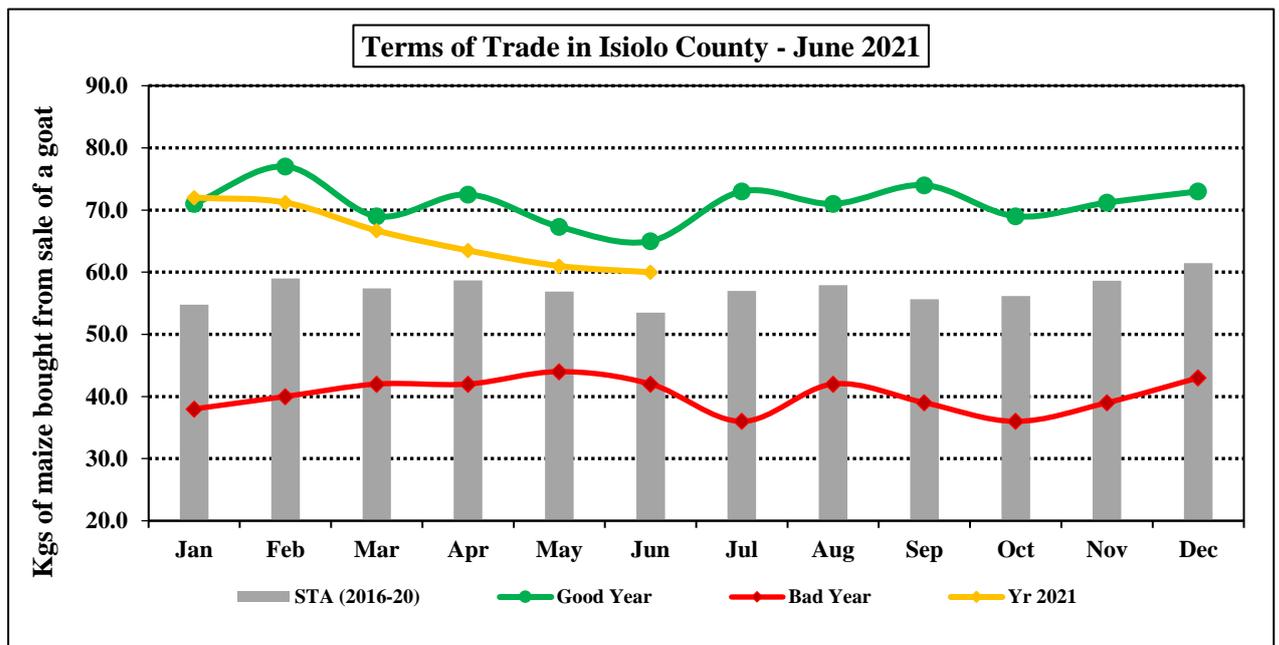


Figure 10: A graph showing the typical pastoralist households Terms of Trade in the county

- Terms of Trade (the number of kilograms of maize a farmer would purchase after a sale of one goat) reduced slightly to 60 kg/goat in the period under review from 62.1 kg/goat in the previous month.
- The ratio was 12 percent higher than the long-term average of 54kg/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 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

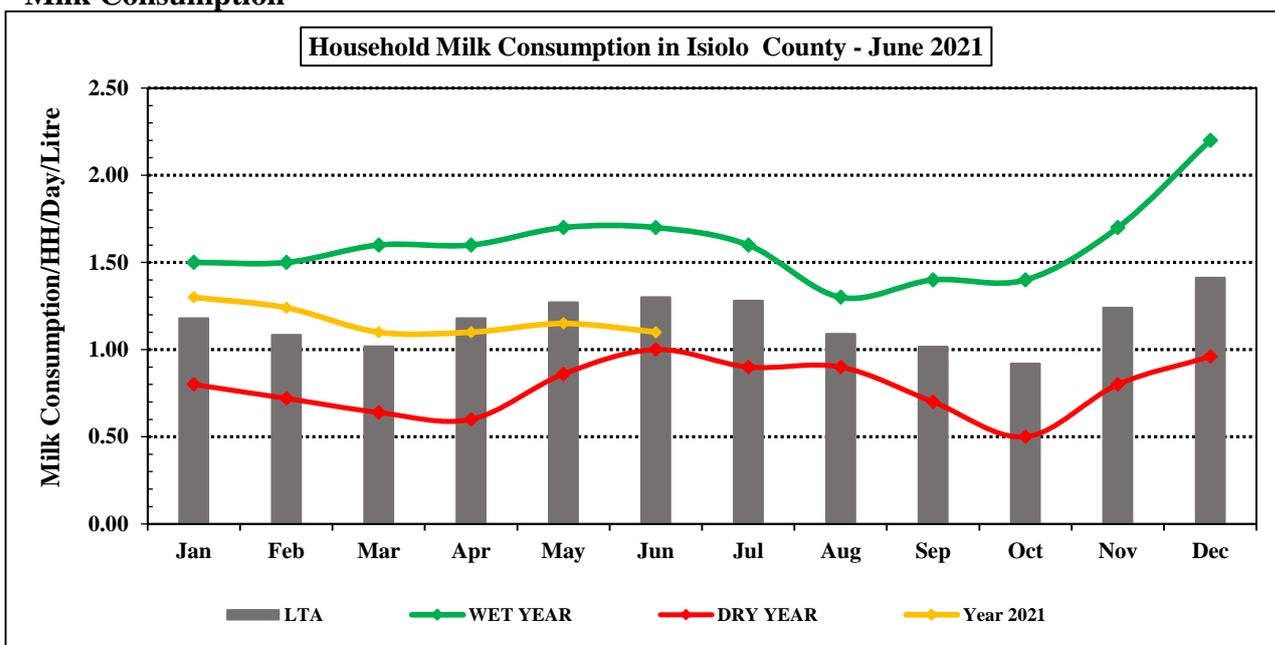


Figure 11: Average milk consumption in litres

- Milk consumption per household stabilized at an average of 1.12 litres in the month under review, with negligible fluctuations 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 14 percent lower than the long-term average of 1.30 litres during a similar period of the year.
- 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 4.5 percent and 22.3 percent of households had poor and borderline food consumption respectively.

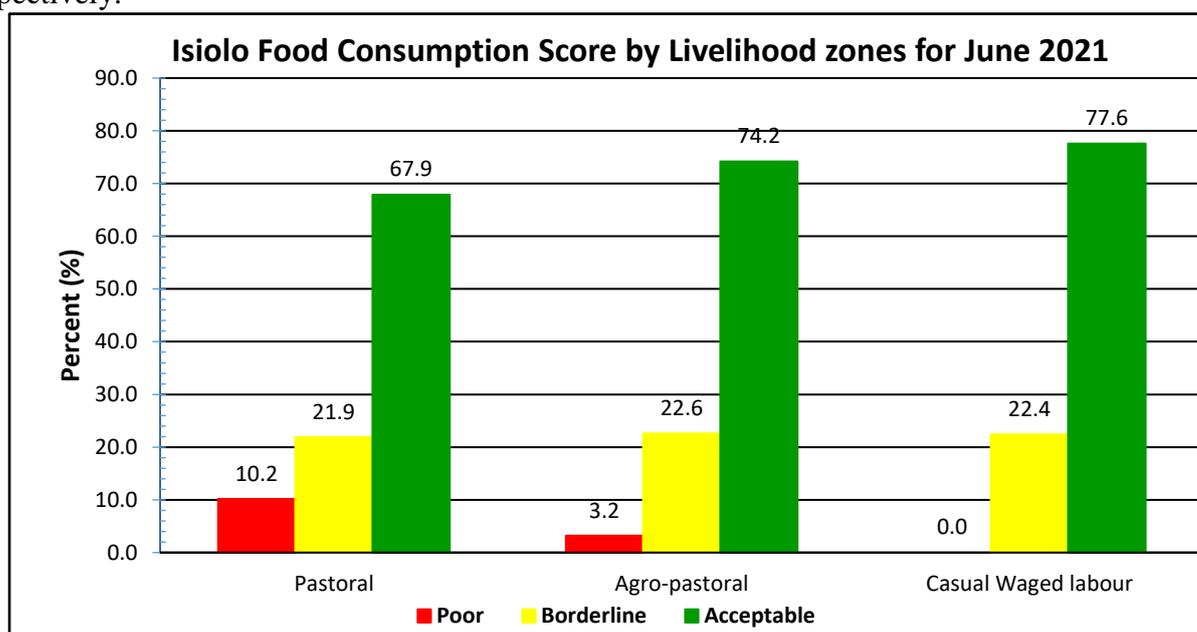


Figure 12: Households' food consumption score

- 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 higher access and consumption of fresh milk and pulses grown in the area.
- Dietary diversity especially in the larger pastoral livelihood zone remained poor, a scenario that is blamed on poor availability of a number of foods from across the required food groups as well as consistent prevalence of certain food types. Low farming skills and opportunities and transport challenges also 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 7.5 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.

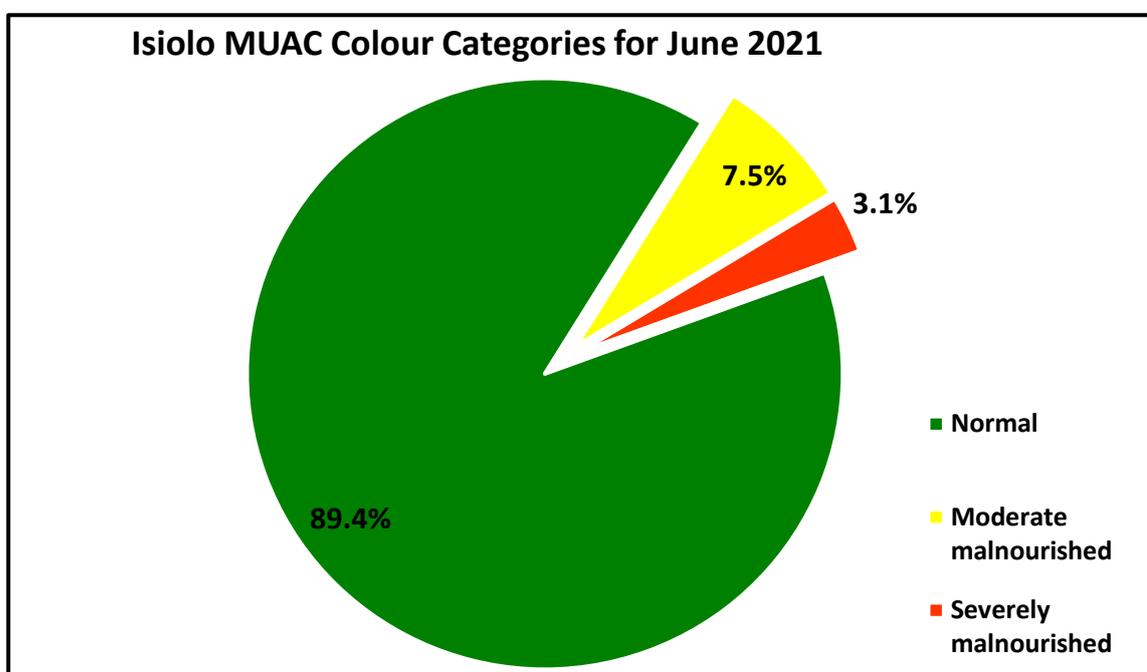


Figure 13: Proportion of under five-year children who are moderately and severely malnourished

- 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

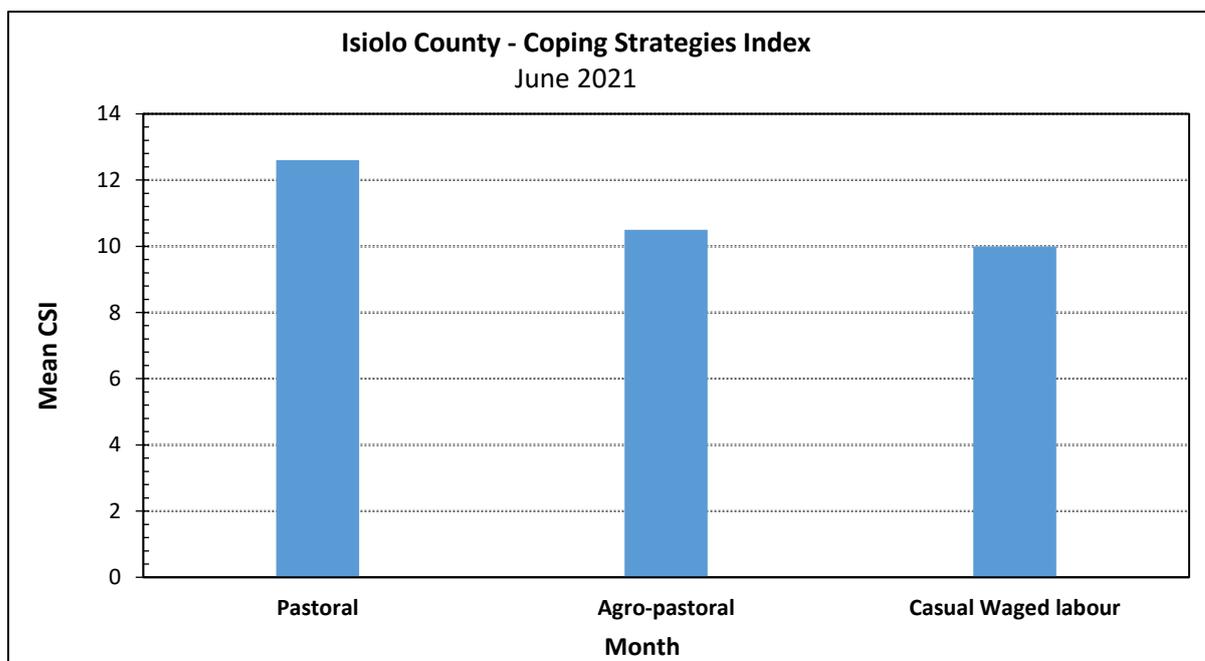


Figure 14: Household Reduced Coping Strategies Index

- Coping Strategy Index (CSI) increased marginally to 11.81 during the month under review from 11.54.
- The slight increase of the index shows that there was slow but gradual increase in 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 shrinking 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
	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 200HHs Ngaremara
	Ngaremara ward Cherab ward	Isiolo North	CRS-NAWIRI	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
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

## **7. EMERGING ISSUES**

### **7.1 Insecurity/Conflict/Human Displacement**

- There were increased 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.
- Tension prevailed among residents of Wajir- Isiolo North, Garissa-Isiolo South border section for fear of attacks characterized by revenge on previous resource-based conflicts early in the year.

### **7.2 Migration**

- Movements in search of forage were mainly internal where more herders moved to Kom, Urura and other dry season grazing areas following depletion of forage in traditional ones.
- Pastoralist in Oldonyiro majority have moved to Laikipia, Samburu Counties and it is reported that others are heading towards Baringo County
- Internal movements of herders along the River Ewaso Nyiro flood zone where herders from Cherab and Sericho are grazing their livestock although large sections of the grazing area was reported to be depleted and herders started moving out to dry season grazing areas.
- 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**

- There will be no rains until onset of short rains season in mid-October.
- 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 though seemingly resilient is under threat from the widespread poor access to quality feeds and water scarcity especially in dry season grazing reserves. Animal body conditions are generally fair among the four main species but their condition is likely to be affected by the deteriorating access to sustainable mounts of forage.
- Crop production, especially purely rainfed was poor and thus poor yields were realized. 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 affected.
- 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 has been stable in all livelihoods zones as majority of households maintained 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.
- The livestock department and relevant stakeholder need to actively promote and support voluntary 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.
- 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.
- 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.
- 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.
- 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.
- Promotion of agri-nutrition sensitive interventions to boost nutrition security especially among the pastoral and agro-pastoral households.