

National Drought Management Authority
ISIOLO COUNTY
DROUGHT EARLY WARNING BULLETIN FOR JULY 2018



A Vision 2030 Flagship Project



July 2018 EW Phase



Drought Situation & EW Phase Classification

Biophysical Indicators

- The month of July was characterized by cold weather, strong winds with intermittent occurrence of sunny and cloud intervals.
- The 3-Month Vegetation Condition Index (VCI) reduced significantly but still above the normal vegetation condition.
- Pasture and browse availability was good in the pastoral and agro-pastoral livelihood zones.
- Water availability in all sources was good following a significant recharge during the ended rainfall season. Water levels in rivers dropped significantly.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- Livestock body condition for all species was good in all livelihood zones.
- Milk production reduced slightly compared to the previous month.
- Crop yields, cereals and legumes, were good as the harvesting season came to an end. Vegetables under small-scale irrigated systems were doing well.

Access Indicators

- Livestock prices improved during the month while food commodities prices reduced.
- Household milk consumption reduced marginally over the period under review.

Utilization Indicators

- Malnutrition levels among children under five year's, shown a significant reduction as compared to the previous months' rate.

Early Warning Phase Classification

Livelihood Zone	EW PHASE	TRENDS
Pastoral-All Species	Normal	Improving
Agro-Pastoral	Normal	Improving
Casual Waged Labour /Charcoal	Normal	Improving
County	Normal	Improving
Biophysical Indicators	Value	Normal Range/Value
Rainfall (% of Normal)	0.0mm	>0.7mm
VCI-3month (Isiolo)	80.8	Above Normal
Water Sources	5	5
Production Indicators	Value	Normal
Livestock Body Condition	Good	Fair to Good
Milk Production	3.2 Litres	>1.8 Litres
Livestock deaths (from drought)	No deaths	No death
Livestock Migration Pattern	No migrations	Normal
Access Indicators	Value	Normal
Terms of Trade (ToT)	73	>65
Milk Consumption	1.60 Litres	>1.33 Litres
Return distance to water households	0.80km	<3.3km
Cost of water at source (20 litres)	Ksh 2.00	<Ksh. 5.00
Utilization indicators	Value	Range/Value
MUAC	14.5 percent	<16.8 percent
Coping Strategy Index (CSI)	7.8	>20.0
Food Consumption	60.5 Percent Acceptable	>80 Percent Acceptable

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

- The period was characterized by cold weather and strong winds in the night though with intermittent intervals of sunny and cloudy weather.
- The overall impact of the long rains whose cessation was experienced in the month of May were still intact in all livelihood zones.
- The rainfall season whose performance was above normal was a relief to the county's pastoral and agro-pastoral livelihoods.

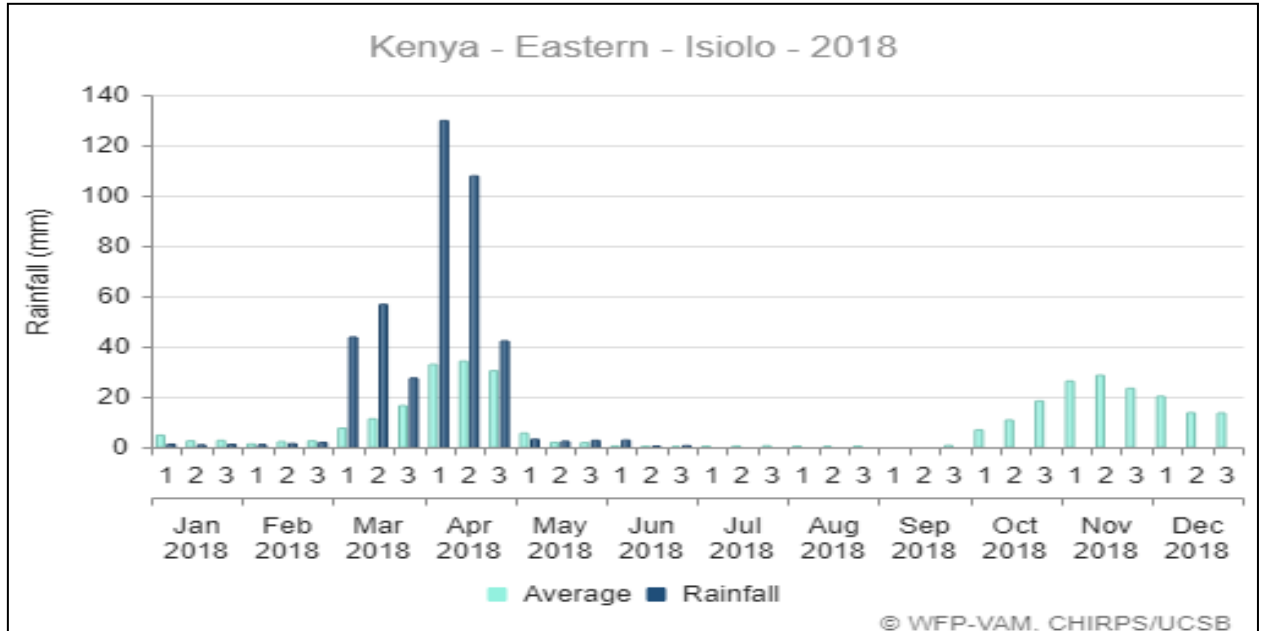


Figure 1: A graph showing the decadal distribution of rain received in the county

1.2 AMOUNT OF RAINFALL AND SPATIAL DISTRIBUTION

- There was no rainfall received in the month under review.
- Cessation of the long rains season was experienced in the second and last dekad of May.
- Light showers were experienced in Isiolo Central in the first week of July, mainly a spill over of the precipitation being experienced around the Mountainous zone of Mt. Kenya.

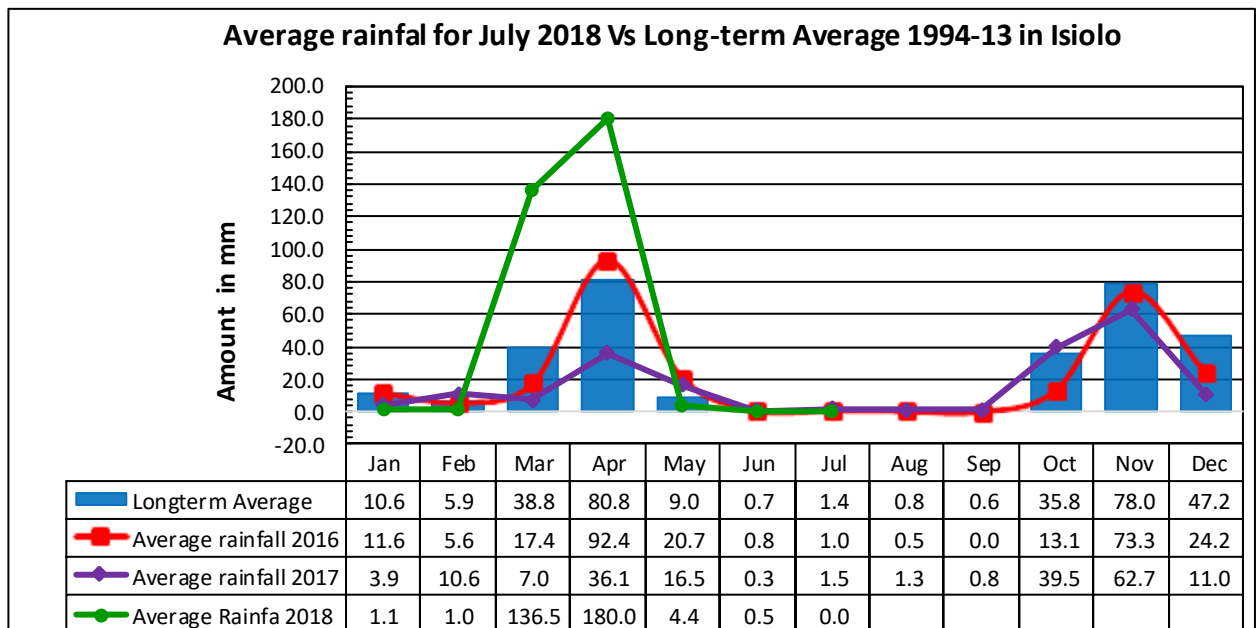


Figure 2: A graph showing monthly rainfall data for Isiolo County

2.0 IMPACTS ON VEGETATION AND WATER

2.1 VEGETATION CONDITION

2.1.1 Vegetation Condition Index (VCI)

- The matrix below illustrates July 2018, classified as agricultural drought based on VCI thresholds. The matrix shows a retrospective analysis of the vegetation condition as related to drought.

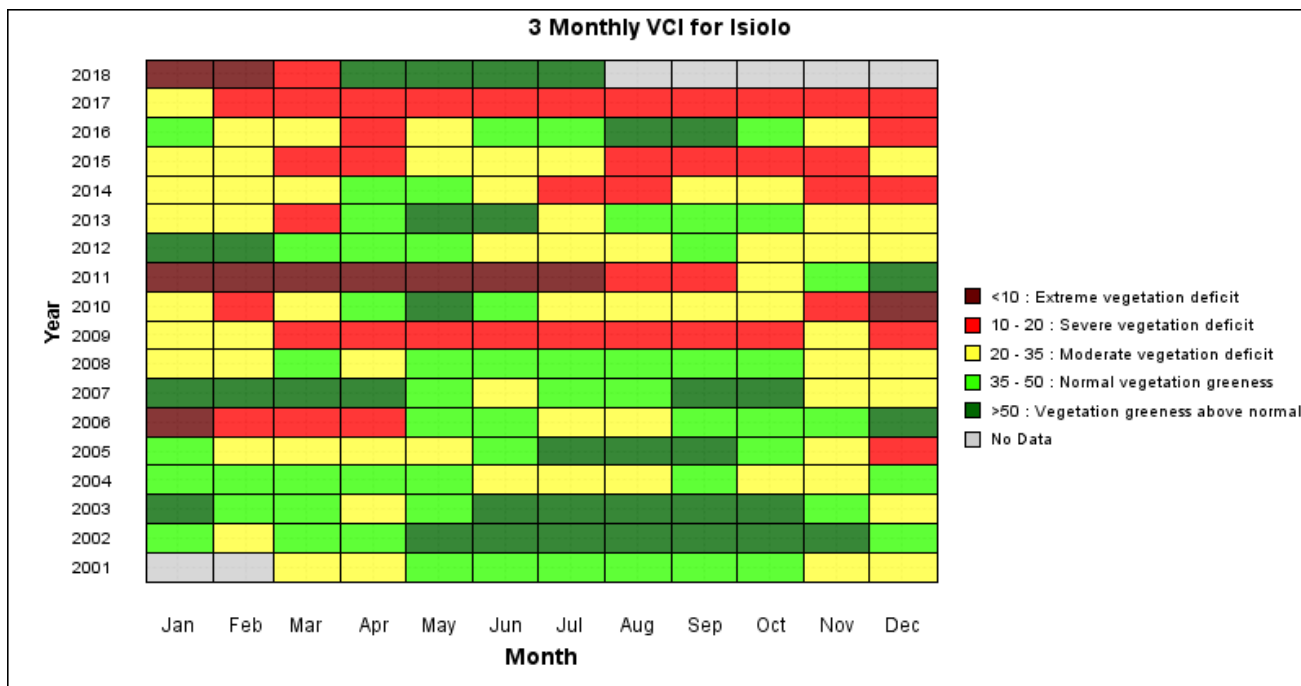


Figure 3: A matrix of 3-Monthly Vegetation Condition Index

- The county vegetation condition index reduced slightly but maintained an above normal greenness with a threshold of 80.8.
- The above normal greenness condition recorded implies an overall good condition of natural vegetation in the entire county having recovered significantly during the long rains (March-April-May) season.
- The decrease in the VCI value could be attributed to the drying of the herbs and the seasonal shedding of leaves of deciduous vegetation which are prevalent in Isiolo south sub-county.

2.1.2 Pasture

- There was abundant pasture in the two major livelihood zones following a significant regeneration of natural vegetation in the county's rangelands.
- The quantity and quality of pasture was good to above normal in most parts of the county attributed to the enhanced rains received in the county during the just ended season.
- All grazing areas that were bare in the beginning of March are currently covered with a mixture of dry and green tall grass and herbs.
- Pasture condition was above normal in all livelihood zones when compared to a similar period for this time of the year.

2.1.3 Browse

- All communities in the agro-pastoral and pastoral livelihood zones reported there was good availability and access to browse.
- The quantity and quality of browse was good in all parts of the county attributed to the enhanced rains received in the county during the long rains season.
- In a similar scenario to pasture, the significant regeneration has provided a great recovery to browse all over the county.
- Browse condition was above normal in all pastoral and agro-pastoral livelihood zones.

2.2 WATER RESOURCE

2.2.1 Sources

- Main water sources during the month were rivers, water pans and boreholes.
- Almost all communities especially in the pastoral and agro-pastoral livelihood zones reported accessing water from water pans, rivers, natural ponds and piped water sourced from boreholes or rivers.
- The water situation was stable in the month under review as most open water sources such as water pans were full to capacity and expected to last till onset of the October-November-December short rains season.
- Reliance on boreholes was moderate as communities relied on temporary sources such as water pans, rivers wells and shallow wells.

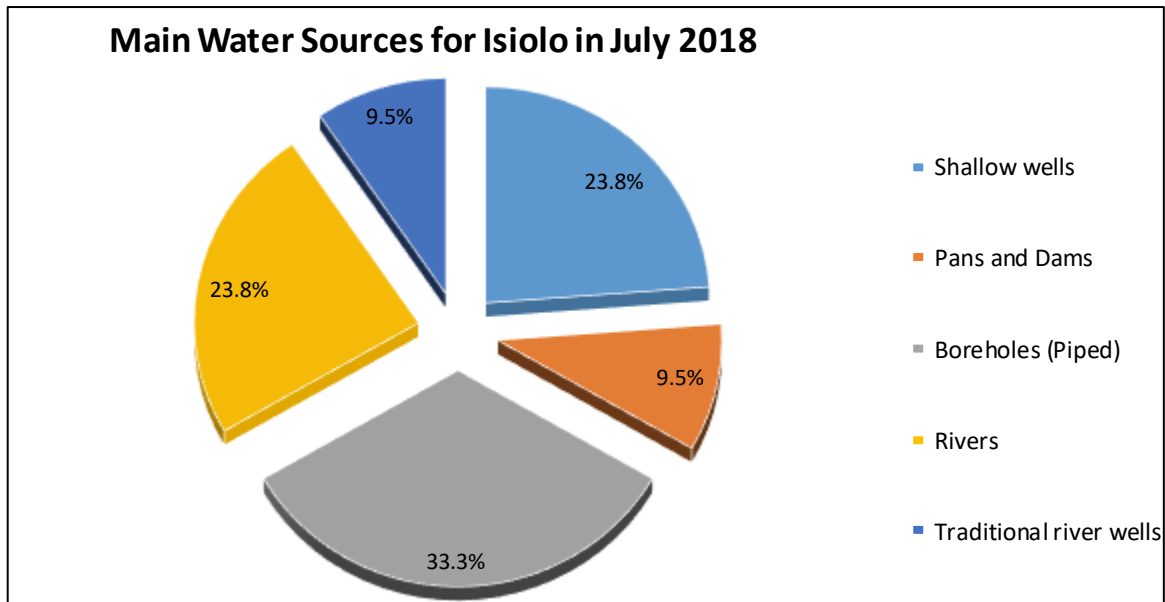


Figure 4: A chart of main water sources in the county

2.2.2 Household access and Utilization

- Household water access distance to the sources increased insignificantly to an average of 0.80km over the period under review from 0.70 km in the previous month.
- This was attributed to availability of water in most temporary water sources in addition to the permanent ones across the county.
- A great proportion obtained water from taps at kiosks and homestead pipes sourcing water from rivers and engine powered boreholes
- The cost of water from piped systems remained low. Households were charged a fee of Ksh. 2.00 per 20 litre jerrican.
- The waiting time remained relatively low estimated at about 5 to 10 minutes in all livelihood zones.
- The average water distance in the pastoral livelihood zones was 1.5km while the distance was 0.8km in the Agro-pastoral livelihood zone. The lowest distance of less than 0.4km was recorded in the casual-waged labour livelihood zone.

2.2.3 Livestock access

- The average distance to water sources from grazing areas increased to 2.6 km over the period under review from 1.9 km in the previous month.
- The grazing distances are expected to have a marginal increase in the before the dry spell sets in August and September as herders utilize water resources within their traditional grazing areas.
- Short distances to water points from grazing areas were mainly attributed to the adequate water available as well as abundant pasture and browse availability.
- Livestock watering received a big boost, returning to normal where animals accessed water daily where they are trekking at a distance ranging from few meters to less than 3.0km.

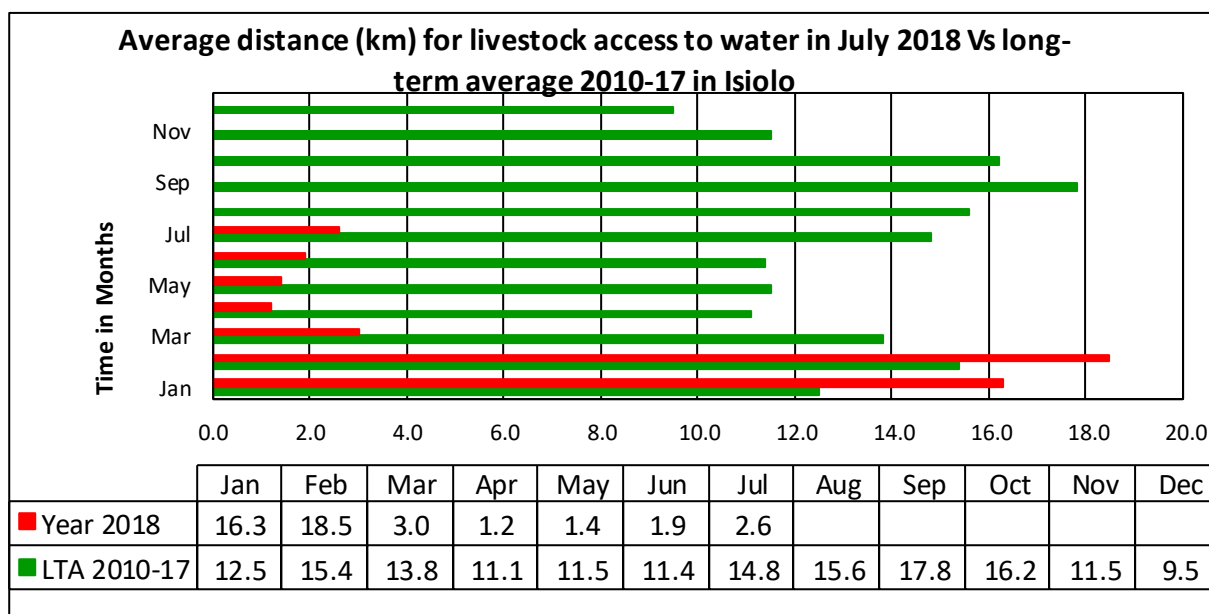


Figure 5: A graph of average distance for livestock water access

2.3 IMPLICATION TO FOOD SECURITY

- The recovery of the county’s rangelands have had a significant recovery following the enhanced rainfall performance in the March-April-May rainy season.
- The increased availability of browse and pasture and water in the agro-pastoral and pastoral livelihood zones is projected to last until onset of the next rainy season implying that animal productivity will be enhanced for a significant period of time.
- Improved animal productivity directly impacts on pastoral households’ incomes and eventually higher terms of trade for the pastoralists hence improved food security.
- Similarly crop production under rainfed system has been improved when compared to several seasons in the previous years.
- The enhanced harvests realized have increased the amount of food reserves at the household level especially in the agro-pastoral livelihood zones and a significant drop in market prices of legumes, cereals and vegetables.

3.0 PRODUCTION INDICATORS

3.1 LIVESTOCK PRODUCTION

3.1.1 Livestock Body Condition

- Livestock body condition for all species was good and expected to improve further in all the livelihood zones.
- The animals’ body condition improved significantly when compared to the previous month and a similar period in the previous year.
- All livestock species in all livelihood zones were observed and reported to be at a good recovery level attributed to enhanced access to better quality and quantity of forage resources and shorter trekking distances when accessing feed and water.

3.1.2 Livestock Diseases

- There were confirmed cases of Rift Valley Fever in several parts of the county most notably Sericho, Merti and Isiolo Central. The outbreak of the disease led to closure of all livestock markets and slaughter houses for a better part of the month under review.
- Massive vaccinations have been commissioned to counter spread of the dangerous disease.
- CCPP an endemic disease cases was also reported in Garbatulla, Oldonyiro and Kinna.

3.1.3 Milk Production

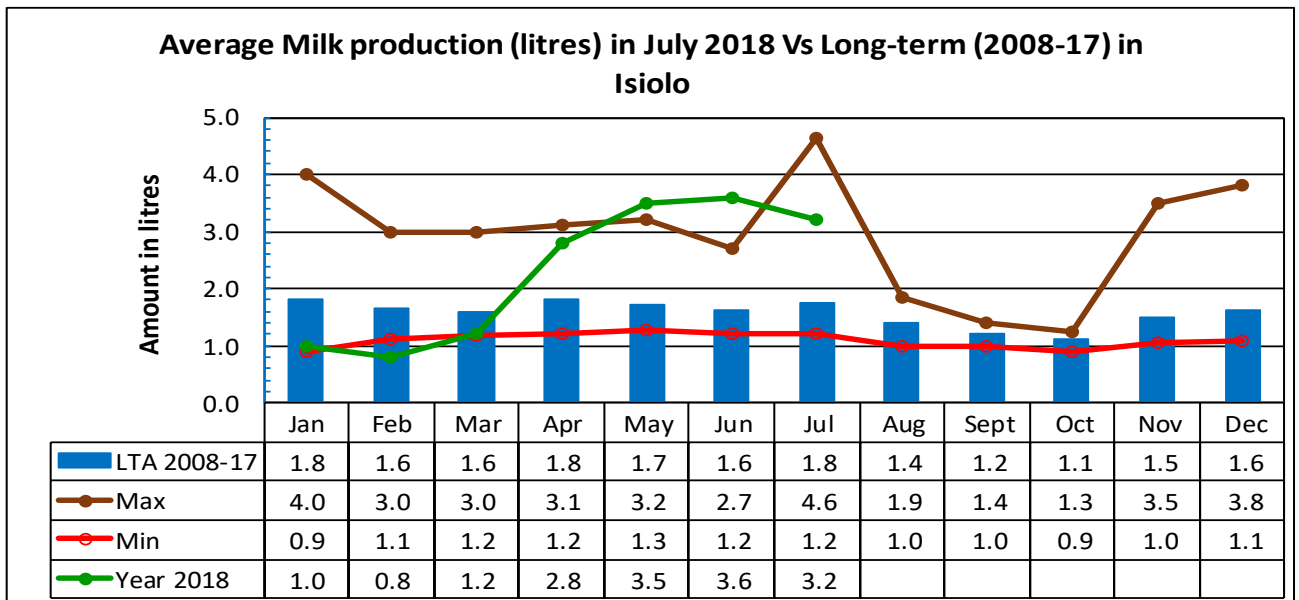


Figure 6: A graph of average milk production in litres

- The average milk produced reduced slightly to 3.2 litres per household down from 3.6 litres in the previous month.
- Milk production was good with a significant improvement since the beginning of the rainy season and expected to decrease slightly in the coming months as the dry spell sets in.
- Milk production per household was almost double the 10-year average amount of 1.8 litres.
- The overall improvement in milk production in the previous months could be attributed to the improved and better access to pasture and browse and water resources in all livelihood zones.

3.2 RAIN-FED CROP PRODUCTION

3.2.1 Stage and Condition of food Crops

- Crops planted include maize, beans, cow peas, green grams and horticultural crops such as onions, tomatoes, kales and capsicum.
- The period under review marked significant part of the harvesting season where cereals grown under rainfed conditions were harvested.

3.3 IMPLICATION OF THE ABOVE INDICATORS TO FOOD SECURITY

- The county's main livelihood, animal production, reached a substantial level of recovery a factor that boosted the socio-economic welfare of pastoralists due to improved animal productivity.
- Animal prices at the farm-gate and market levels have improved significantly over since onset of the long rains season to the end of the month under review, implying that farmers' income increased significantly, enabling a better purchasing power.
- Crop yields from both rain fed and irrigated systems improved significantly compared to previous years implying that farming households have more food reserves and thereby better accessibility. This has had a significant improvement in household food consumption.
- The improved animal and crop production eventually imply a better food accessibility and a higher purchasing power among pastoral households.
- However, temporary closure of livestock markets and butcheries in the county due to emergence of RVF disease in the county and in the North Eastern regions affected the socio-economic recovery of the pastoral communities.

4.0 MARKET PERFORMANCE

4.1 Livestock Marketing

4.1.1 Cattle Prices

- The average household cattle prices significantly increased to Ksh 26,800.00 in the month under review compared from Ksh 23,400.00 in the previous month.

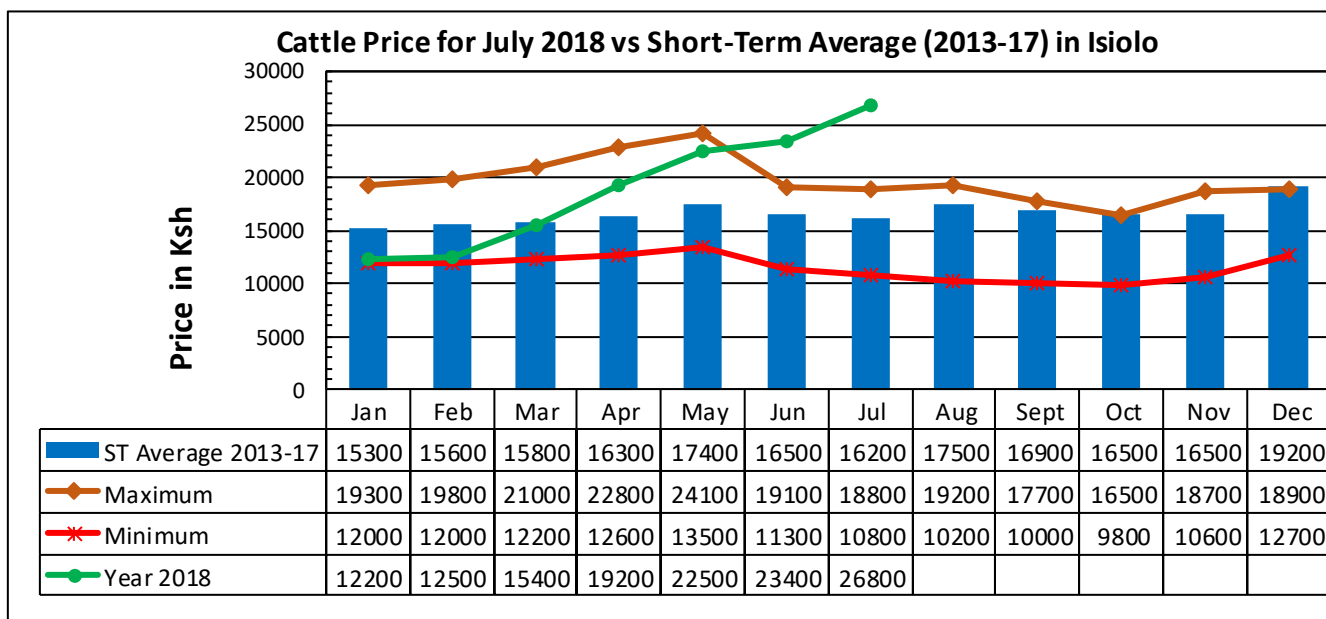


Figure 7: A graph of average farm-gate cattle price

- The highest average price was recorded in the pastoral livelihood zone at Ksh.35,000.00 and the least was Ksh 21,500.00.
- The increase in price was partly be attributed to the improved animal body condition and the low supply of cattle in the market as majority of the pastoralists sought to retain their herds for reproduction and fattening.
- The current price was above normal being 65 percent above than the five-year short-term average of Ksh.16,200.00 and significantly above the maximum price of Ksh 18,800.00.

4.1.2 Small Ruminants Prices (Goat)

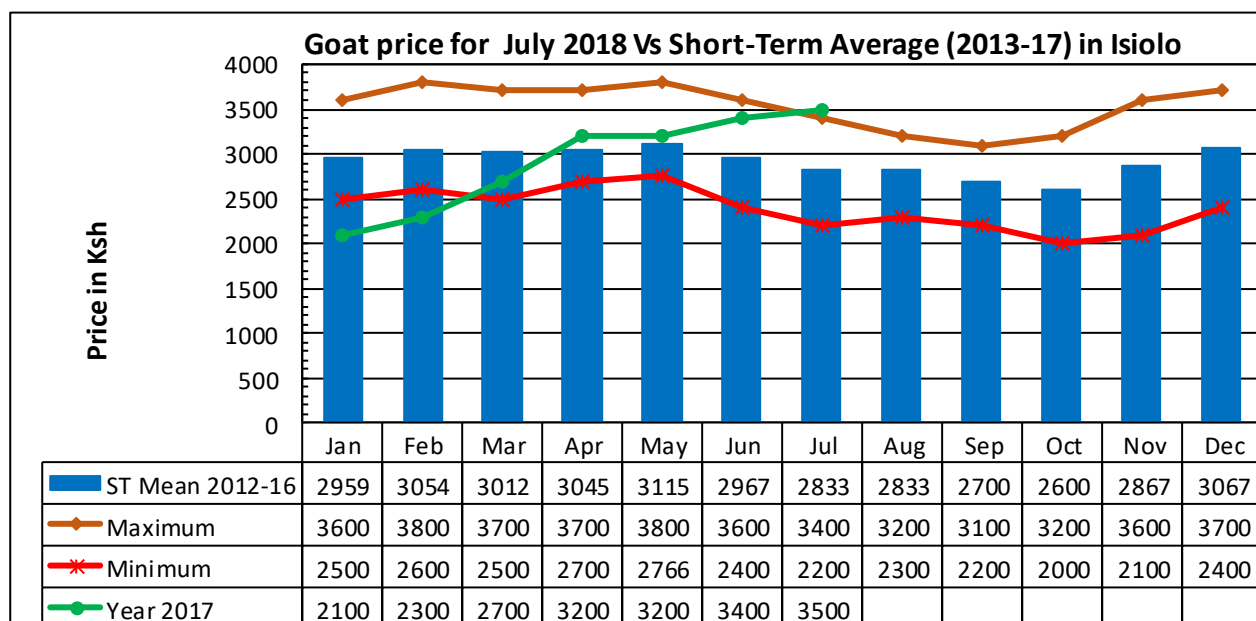


Figure 8: A graph of monthly average farm-gate goat price

- Goat prices increased marginally from Ksh.3,400.00 to Ksh.3,500.00 during the month under review.

- The increase in farm-gate and consequently market price was attributed to the improved body condition and a relatively stable demand.
- The pastoral livelihood zone recorded the highest average price of Ksh.4,500.00 as compared to the agro-pastoral livelihood zone price of Ksh. 5,000.00.
- The average goat price was significantly above the four-year average of Ksh.2,800.00 and slightly higher than the period's maximum price of Ksh. 3,400.00.

4.2 CROP PRICES

4.2.1 Maize

- The average market price of a kilogram of maize reduced slightly from Ksh 52.00 to Ksh 48.00 in the month under review.
- The price reduction of the dry cereal was partially attributed to the increased supply of the cereal following its increased availability during the harvest season.
- The average maize price was above normal for the period considering that it was 23 percent higher than the three-year average of Ksh.38.00 and slightly lower than the average maximum price ever recorded for the period in three years' time.
- The cereal was readily available in all major livelihood markets though in limited amounts in some markets attributed to low demand due to low preference over rice and wheat flour.

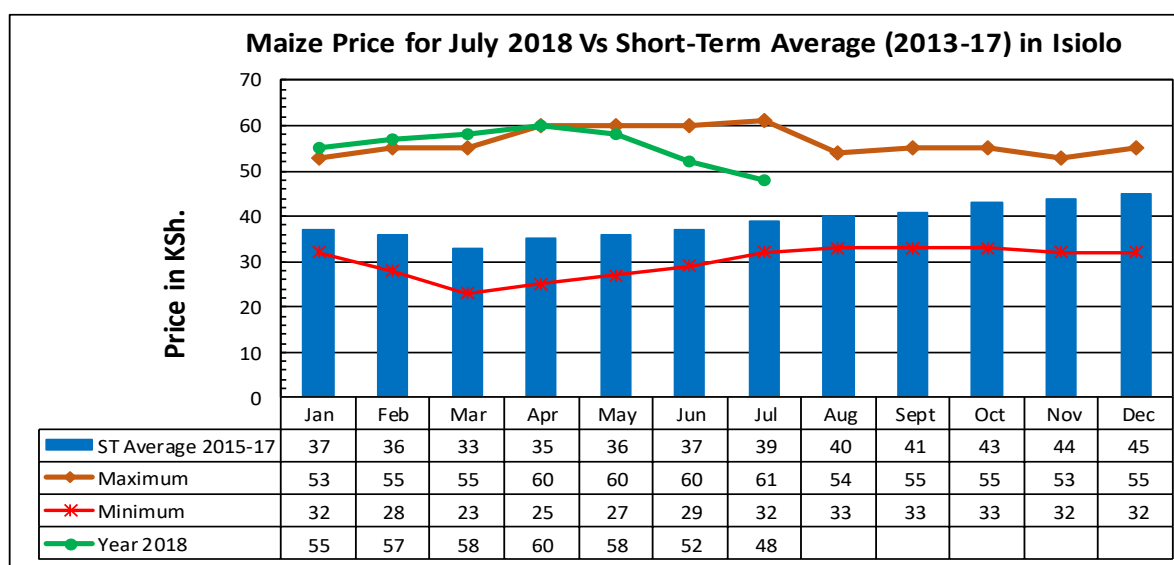


Figure 9: A graph of average maize (cereal) market price in the county

4.2.3 Beans

- The county average price of beans reduced significantly to Ksh 93.00 per kilogram during the month under review from Ksh. 105.00 in the previous month.
- The pulse's price stability was attributed to the consistent supply into the market from the neighbouring counties following significant improvement in amounts harvested.
- The highest price was recorded in the pastoral livelihood zones of an average of ksh 120.00 while the lowest price was in Isiolo Cetnral at Ksh. 80.00.
- The price was normal being 3.3 percent higher than the short-term average price of Ksh. 99.00 during the same period of the year.

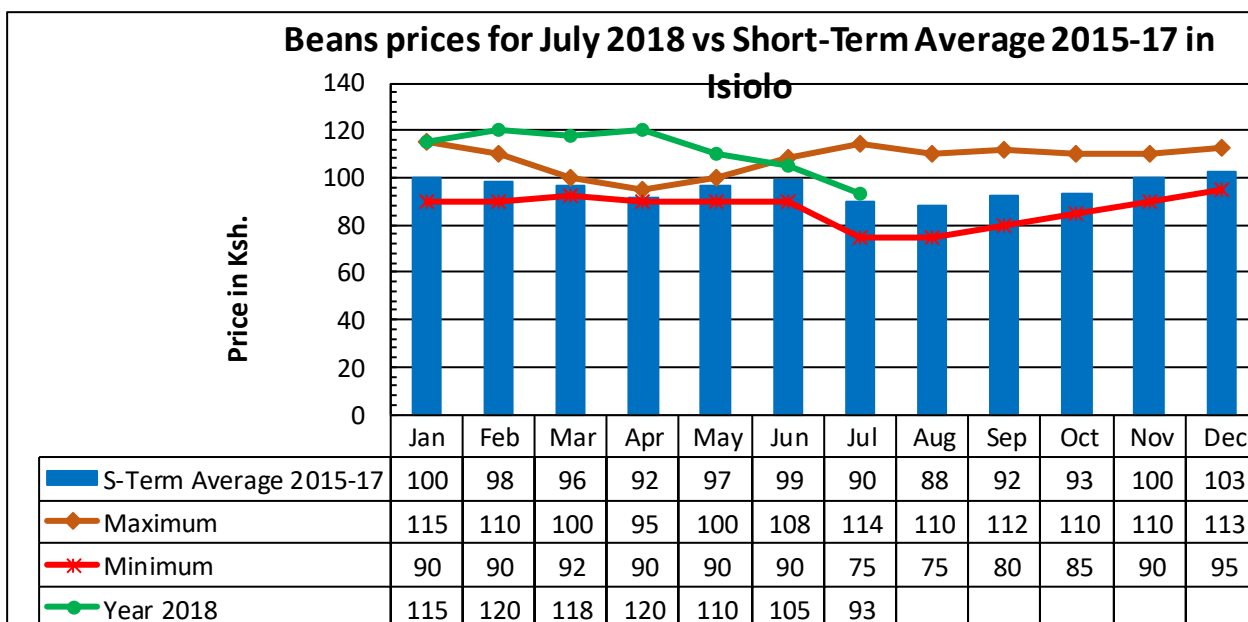


Figure 10: A graph showing average market price for pulses (beans)

4.3 Livestock Price Ratio/Terms of Trade

- The Terms of Trade (the number of kilograms of maize a household would purchase after a sale of one goat) increased significantly from 65kg of goat/maize to 73kg of goat/maize in the month under review.
- The ratio was higher in the pastoral livelihood zone at 73 as compared to 74 in the agro-pastoral livelihood zone.
- The livestock/cereal price ratio was 12 percent higher than the long-term average of 65 kg/goat.
- The improving livestock/cereal ratio has been occasioned by the improving livestock prices both at the farm-gate and market levels across all livelihood zones and a subsequent reduction in cereal prices.

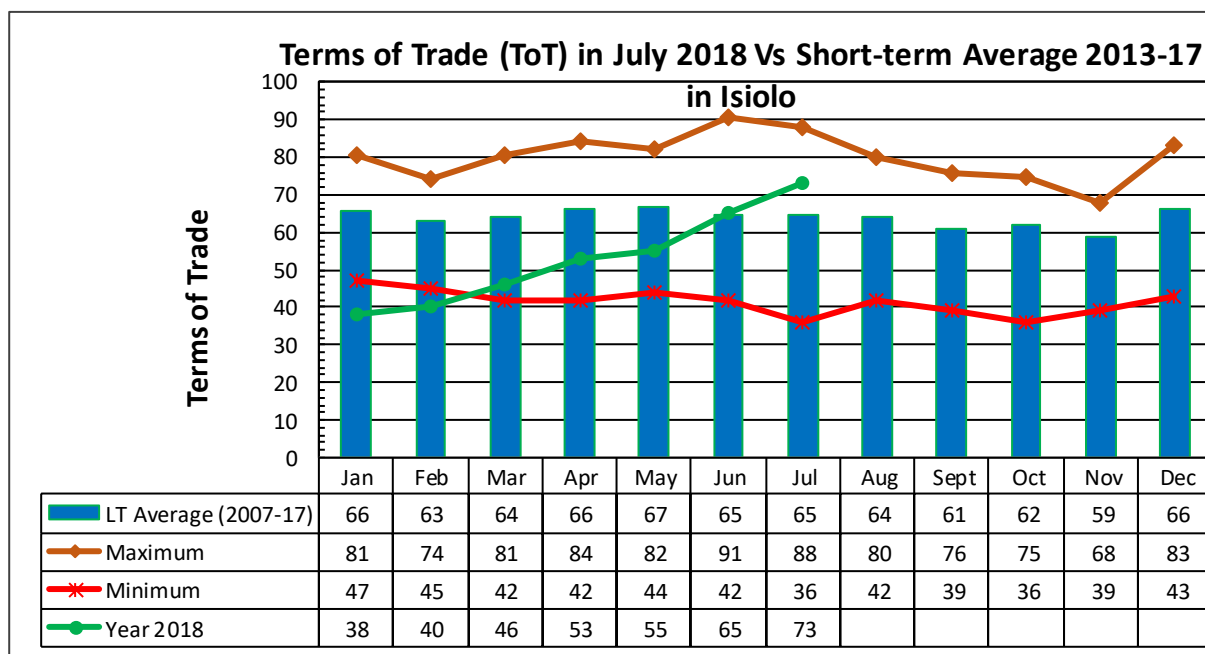


Figure 11: A graph showing the pastoralists' Terms of Trade in the county

5.0 FOOD CONSUMPTION AND NUTRITION STATUS

5.1 Milk Consumption

- The average milk consumption per household reduced slightly to 1.60 litres in the period under review from 1.80 litres in the previous month. The slight reduction was due to a slight decline in the amount produced.
- The average milk consumption improved over the last three months attributed to a significant improvement in milk production in the pastoral and agro-pastoral livelihood zones.
- The average consumption was 20 percent higher than the short-term average of 1.33 litres attributed to a relatively higher production in the milking households.
- Most of the milk consumed at the household level was from camels and goats.
- The consumption was high in the pastoral livelihood zone litres as compared to other zones.

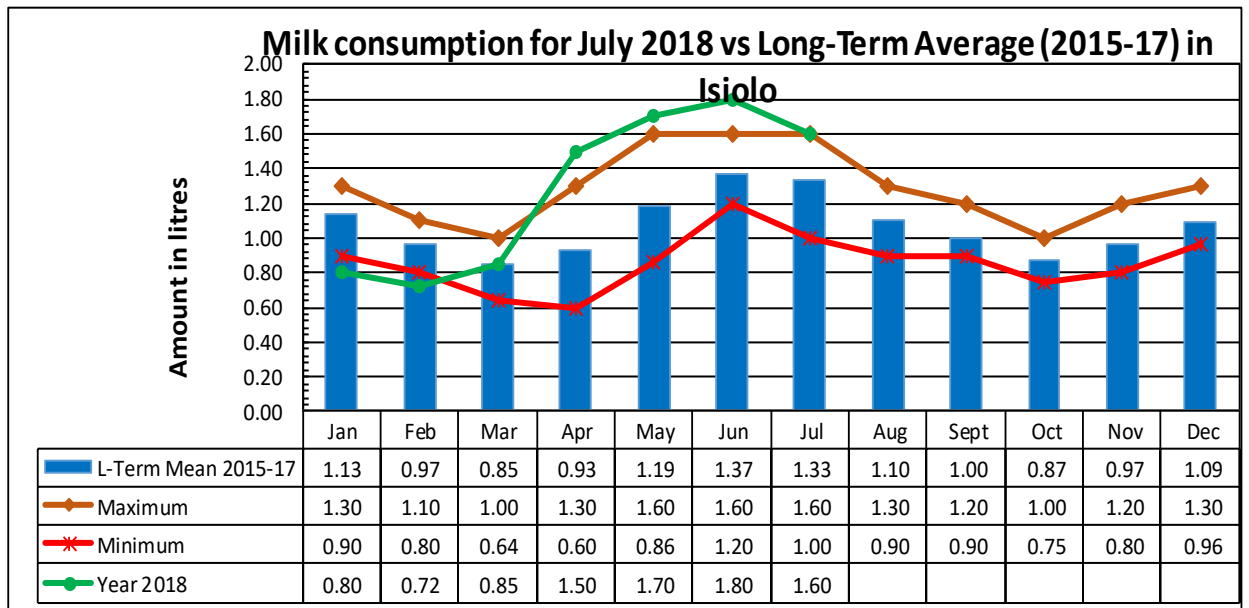


Figure 12: A graph showing the average milk production in the county

5.2 FOOD CONSUMPTION SCORE

- The proportion of households who were persistently food insecure decreased from 43.4 percent in the previous to 39.5 in the month under review. The trend is a positive indication of improving food consumption patterns at the household level due to increased food availability.

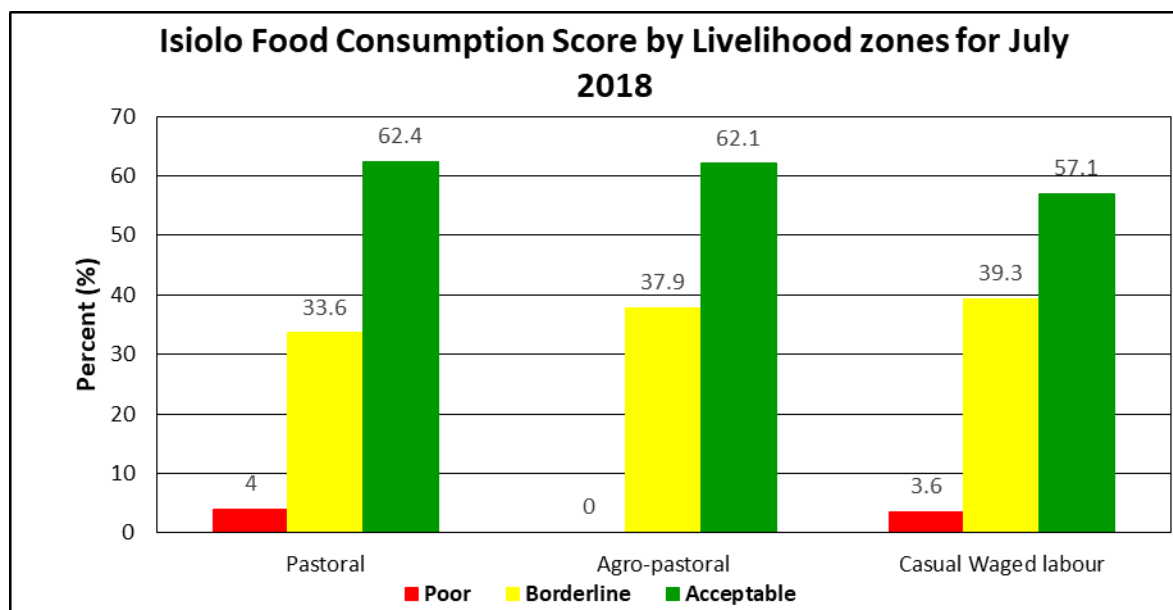


Figure 13: A graph showing the households' food consumption score

- The improving food consumption pattern was attributed to the improved animal and crop production which translated into better access to a diverse diet in any given day. For instance, there was an increased milk production favouring a subsequent increase in consumption.
- There was a significant increase in consumption of vegetables bought from the market and also from irrigated farms along rivers such as River Ewaso Nyiro.
- Further recovery of the pastoral and agro-pastoral livelihood zones is expected over the next few months with the prevailing conducive bio-physical conditions across the county.
- “A poor score implies households are consuming staples and vegetables every day and rarely consuming protein rich food while borderline FCS imply that households consumed staples and vegetables every day accompanied by oil and pulse a few times in a week while the acceptable imply that households are consuming staples, vegetables every day, and frequently accompanied by pulses and some meat and milk”.

5.3 HEALTH AND NUTRITION STATUS

5.3.1 Nutrition Status

- The proportion of children at risk of malnutrition (whose MUAC measurement was below 135.0mm threshold) decreased significantly from 16.7 percent in the previous month to 14.5 percent in the period under review.
- The improvement was partly attributed to the increased consumption of milk and active supplementary feeding interventions at the facilities countywide.
- The bulk of children at risk of malnutrition are victims of poor consumption, resulting from reduced amounts of food and low frequency in addition to a continued poor dietary diversity mainly due to the deprived household food availability and accessibility.
- The proportion of children at risk of malnutrition was slightly below the long-term average of 16.9 percent implying a relatively better nutritional situation as compared to the long-term mean during this time of the year.
- The level of nutrition is on an improvement trend due to a considerable improvement of production and access factors induced by the enhanced rains during the long rains season.

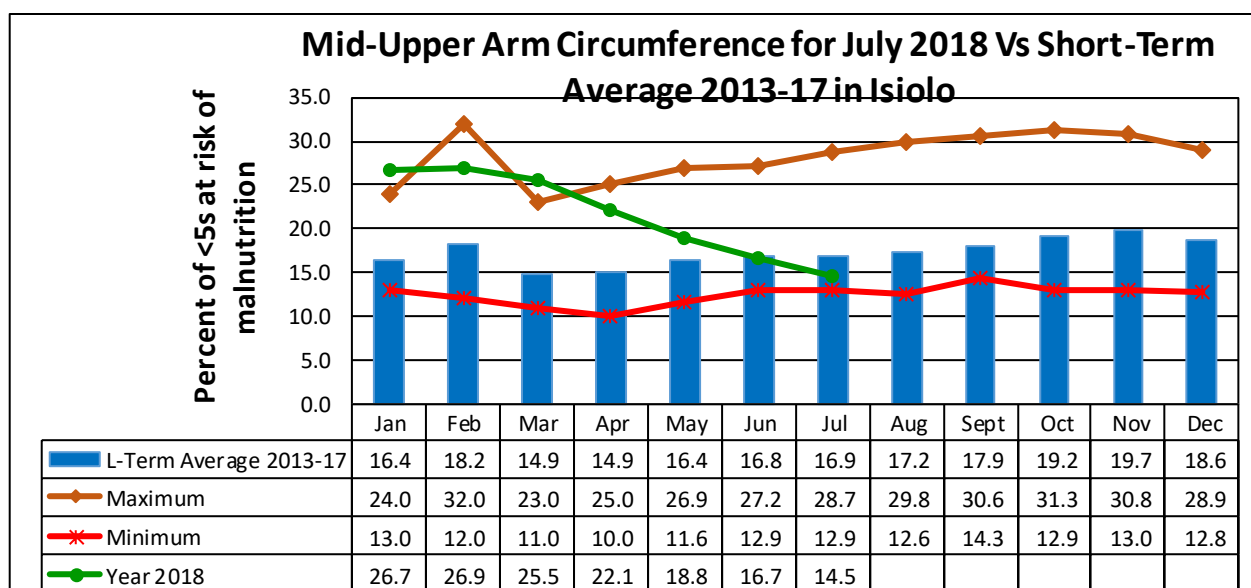


Figure 14: A graph showing the Mid-Upper Arm Circumference for children under 5 years of age

5.3.2 Health

- The general populations’ most prevalent diseases included acute upper respiratory infections (URTI), malaria, skin disease, urinary tract infections and rheumatism.
- Children under five years’ most prevalent diseases included the acute respiratory infections, pneumonia, malaria, intestinal worms and skin diseases.

5.4 COPING STRATEGIES

- The Coping Strategy Index (CSI) reduced significantly from 8.8 in the previous month to 7.8 in the month under review.
- The reduction in the coping strategy index was attributed to the recovery of production systems which have enabled better access to food commodities following a better terms of trade especially in the pastoral and agro-pastoral livelihood zones.
- The most commonly employed coping mechanisms over the period included reliance on less preferred and or expensive food, reduction of the number of meals, reduction in portion or size of meals.

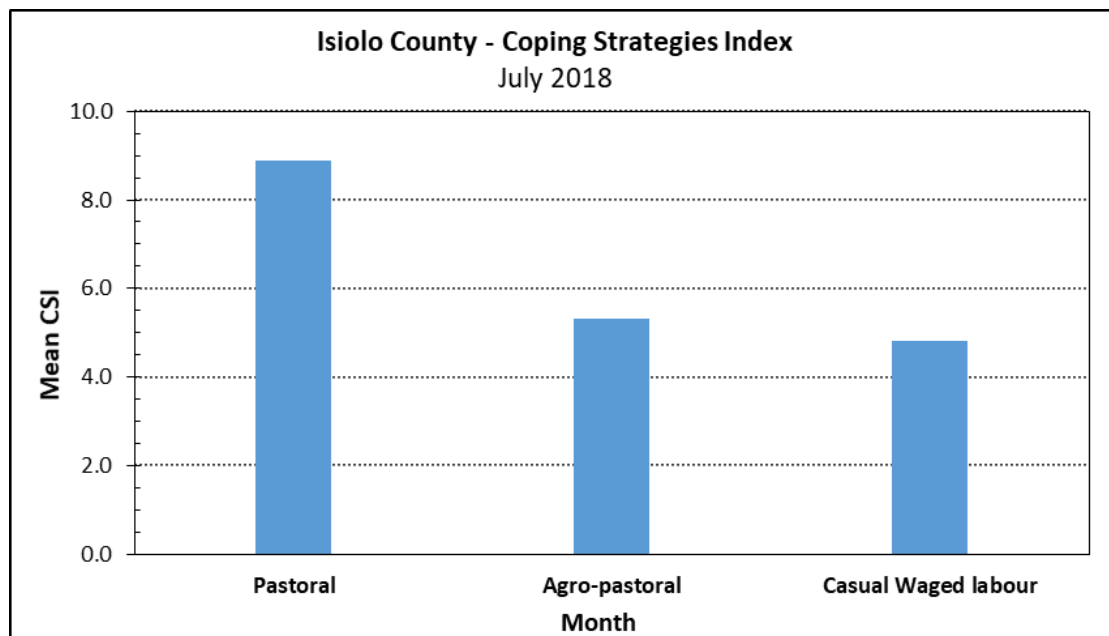


Figure 15: A graph showing the monthly reduced Coping Strategies Index

6.0 CURRENT INTERVENTION MEASURES (ACTION)

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
Peace Building	Burat	Isiolo North	Interior NDMA WVI NRT	Loruko
Provision of Water treatment Kits	All Wards	Merti Garbatulla Isiolo	NDMA MOH K-Rapid	Health Facilities
Vaccination of all livestock against Rift Valley Fever	All wards	All sub-counties	Department of Veterinary	All cattle and camel

6.2 FOOD AID

Table 2: A table showing the food interventions ongoing in the county

Type of Intervention	Ward	Sub-county	Implementer	Target/Amount
General Food Distribution	All	All sub-counties	County Government and National Government	All households affected by floods
Food for Assets (FFA)	Oldonyiro, Burat, GarbaTulla, Kinna	All sub-counties	National Govt, WFP, Action Aid Kenya	40,000 Beneficiaries
Supplementary Feeding	All	All sub-counties	Unicef, ACF and Ministry of Health	All children under five years

7. EMERGING ISSUES

7.1 Insecurity/Conflict/Human Displacement

- Border conflict is reported along Meru-Isiolo between Kenya defence force (KDF), Meru and Isiolo County. Kenya Defence Force (KDF) is claiming huge chunk of land between 78 tank battalion and Shaab area.

7.2 Migration

- All herders of the county have grazed their animals in the traditional grazing areas.
- No migration were reported during the period under review.

7.3 FOOD SECURITY PROGNOSIS

The county experienced significant biophysical recovery following the enhanced performance of the long rains, both temporally and spatially. The received rains caused healthy recovery of the county's rangelands resulting in increased availability of pasture and browse, hence a significant reduction in grazing distances in the pastoral livelihood zones. Consequently, water access to both livestock and households was good since the cessation of the long rains to date.

Livestock productivity has been enhanced when compared to a similar period in the previous year and in the long-term. Crop farmers especially those who practice rain fed conditions had a good harvest, while those who practice small scale irrigation along rivers expect better farming opportunities until the onset of the short rains season in October. This implies more agricultural and horticultural produce will be produced and supplied in the local markets, a move that will likely push the prices downwards to the benefit of all livelihoods.

With the current recovery in animal body condition, livestock markets have improved significantly hence strengthening the socio-economic wellbeing of majority of households who depend on their animals as their major livelihood. This has improved their purchasing power through improved terms of trade.

The greater part of the county is in the minimal food security phase with a low likelihood of sliding into stressed food security phase.

8. RECOMMENDATIONS

- Mobilize support for total mass vaccination of all livestock species against the deadly Rift Valley Fever.
- Provide support for an active and continuous disease surveillance of all possible disease pandemics.
- Construction and rehabilitation of drainage capillaries especially in Isiolo central.
- Rehabilitation of latrines in areas that experienced flooding in April and May.
- Promote efforts on water and range conservation.
- Promote fodder production under irrigation.
- Promotion of hygiene and sanitation practices especially the Community Led Total Sanitation (CLTS).
- Sensitize farmers on storage best practices during this harvesting season, that is, enhance proper and safe storage of the harvested cereals and pulses.
- Sensitize farmers on fodder harvesting and storage.
- Enhance peace building and conflict resolution mechanisms especially in Isiolo Central where cases of cattle rustling have increased.