

**National Drought Management Authority
 ISIOLO COUNTY
 DROUGHT EARLY WARNING BULLETIN FOR JUNE 2017**



A Vision 2030 Flagship Project



June 2017 EW Phase



Drought Situation & EW Phase Classification

Biophysical Indicators

- The month of June was characterized by poor rainfall performance coupled with intervals of sunny and dry weather conditions.
- The Vegetation Condition Index (VCI) was 10.7 indicating a severe vegetation deficit. Isiolo North VCI value was at Extreme Vegetation deficit.
- The water recharge levels and availability were below normal.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- The condition of pasture and browse was poor characterized by poor regeneration attributed to the rainfall failure.
- Livestock body condition for cattle was poor while that of small stock was fair across all the livelihood zones.
- Crop production was not realised because most crops have dried up before maturity except for those under irrigation.

Access Indicators

- Livestock prices indicated a poor and a declining trend and a steady increase in the prices of food commodities.
- Milk production and consumption per household was 2.5 litres and 1.8 litres respectively

Utilization Indicators

- Percentage of children at risk of malnourishment whose MUAC was below 135mm was 29.8 percent for the period under review which was higher than the long-term average of 16.8 percent.

Early Warning Phase Classification

Livelihood Zone	EW PHASE	TRENDS
Pastoral-All Species	Alarm	Worsening
Agro-Pastoral	Alarm	Worsening
Casual Waged Labour /Charcoal	Alarm	Worsening
County	Alarm	Worsening
Biophysical Indicators	Value	Normal Range/Value
VCI-3month (Isiolo)	10.7	35-50
Water Sources	2	5
Production Indicators	Value	Normal
Livestock Migration Pattern	Abnormal	Normal
Livestock Body Conditions	Score 3	Score 7
Milk Production	2.5	>3.0
Livestock deaths (from drought)	Low No. of deaths	No death
Access Indicators	Value	Normal
Terms of Trade	42	>56
Milk Consumption	1.8 Litres	>2.5Litre
Water for Households	Fair	Good
Utilization indicators	Value	Range/Value
MUAC	29.6	>16.8
Coping Strategy Index (CSI)	20.2	>35
Food Consumption	22 Percent Acceptable	>65 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

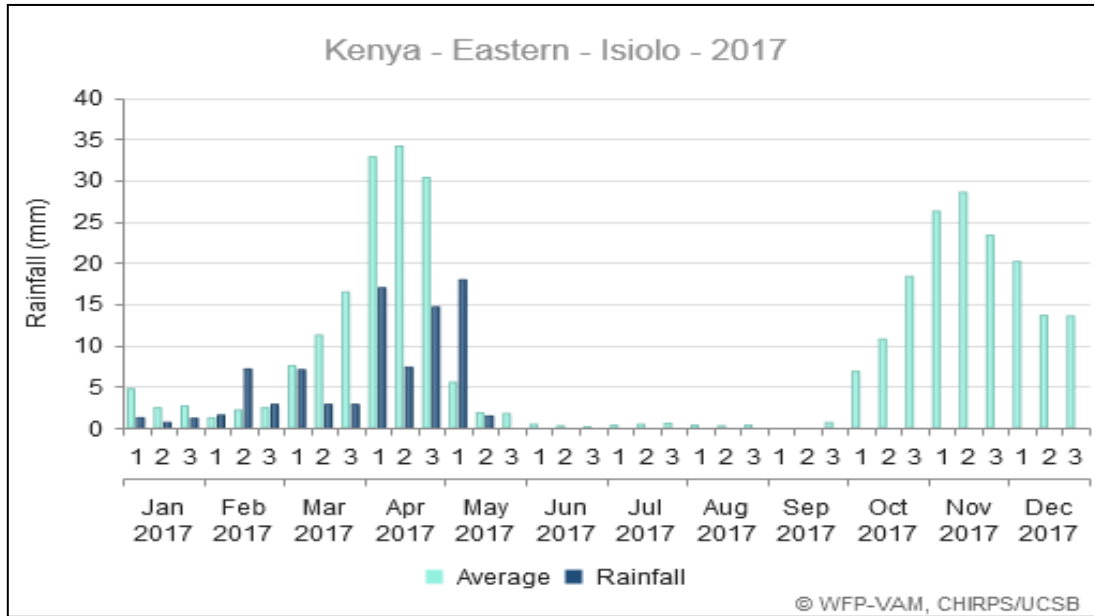
BIO-PHYSICAL INDICATORS

1.0 MEASURING DROUGHT HAZARD

1.1 METEOROLOGICAL DROUGHT

1.1.1 Actual Rainfall

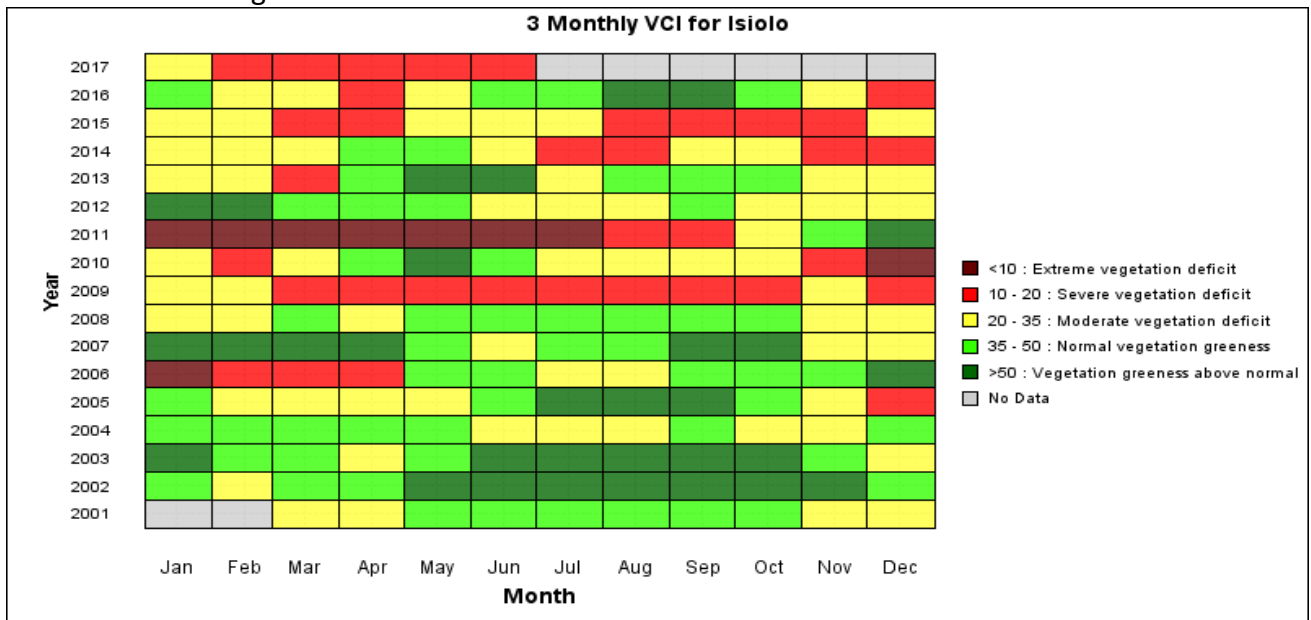
- There was no rainfall received over the month under review.
- With reference to the long-term average, rainfall performance was below normal in comparison to a normal year.
- The following graph shows the rainfall estimates for the period under review.



1.2 AGRICULTURAL DROUGHT

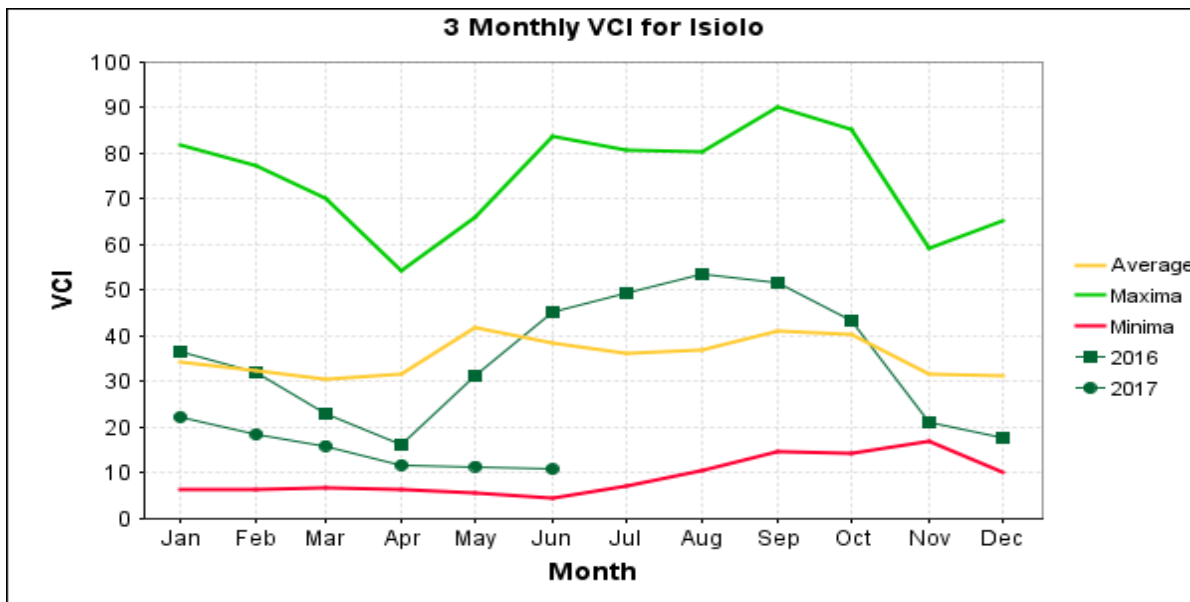
1.2.1 Vegetation Condition Index (VCI)

- The matrix below illustrates the period from January to June 2017, classified as agricultural drought based on VCI thresholds. The matrix shows a retrospective analysis of the vegetation condition as related to drought.



- Isiolo was in Severe Vegetation deficit band within thresholds of 10.7. The County’s vegetation condition deteriorated as suggested by a decrease in the 3-month VCI index from 13 in May 2017 to 10 in June 2017.

- The deteriorating vegetation condition is attributed to the depressed rainfall that was received in the just concluded MAM season as shown in the graph below.



1.2.2 NATURAL VEGETATION AND PASTURE CONDITION

Field Observations (Pasture and Browse Conditions)

Pasture Condition

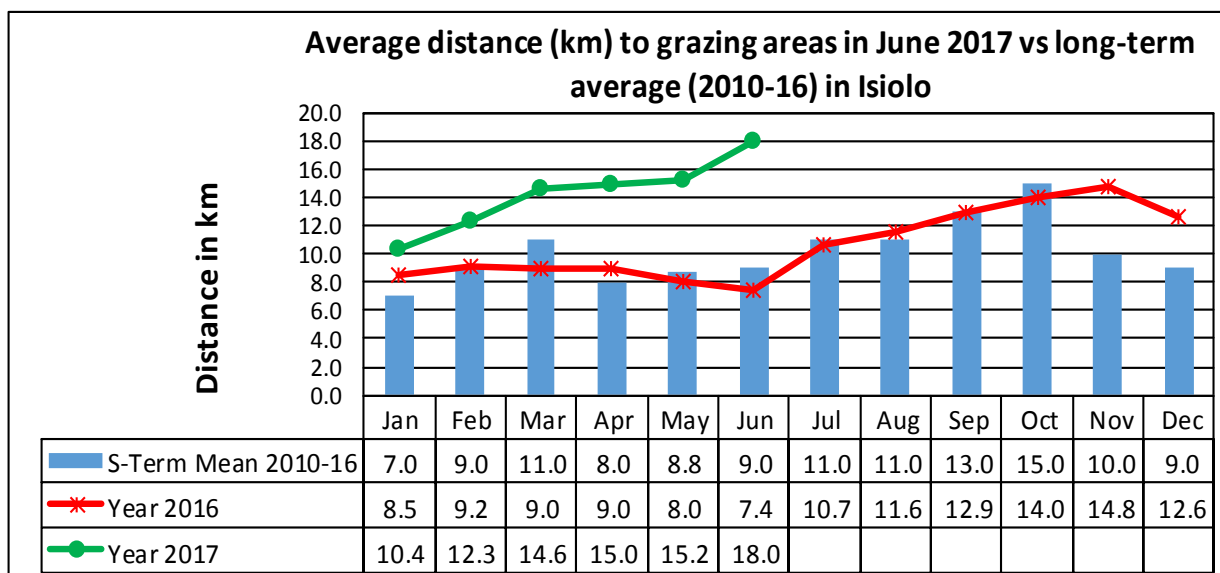
- Pasture condition in terms of quantity and quality was poor in most parts of the county attributed to the poor performance of the MAM rainy season.
- Pasture in most grazing field in the pastoral-all species livelihood zone is almost depleted leading to out-migration of animals northwards to Delbeq.
- The condition could be rated at poor as opposed to the normal fair state during this time of the year across all livelihood zones.

Browse Condition

- Browse condition in terms of quantity and quality was poor attributed to the insignificant significant rate of regeneration from the prior state of exhaustion and the intermittent performance of the MAM 2017 rainy season.
- Most areas registered a decline in *Vegetation Density* based on the Normalized Difference Vegetation Index (NDVI) recorded over the month under review.
- In comparison to a normal year, the available browse amount was below normal.

1.2.3 Distance to Grazing Areas

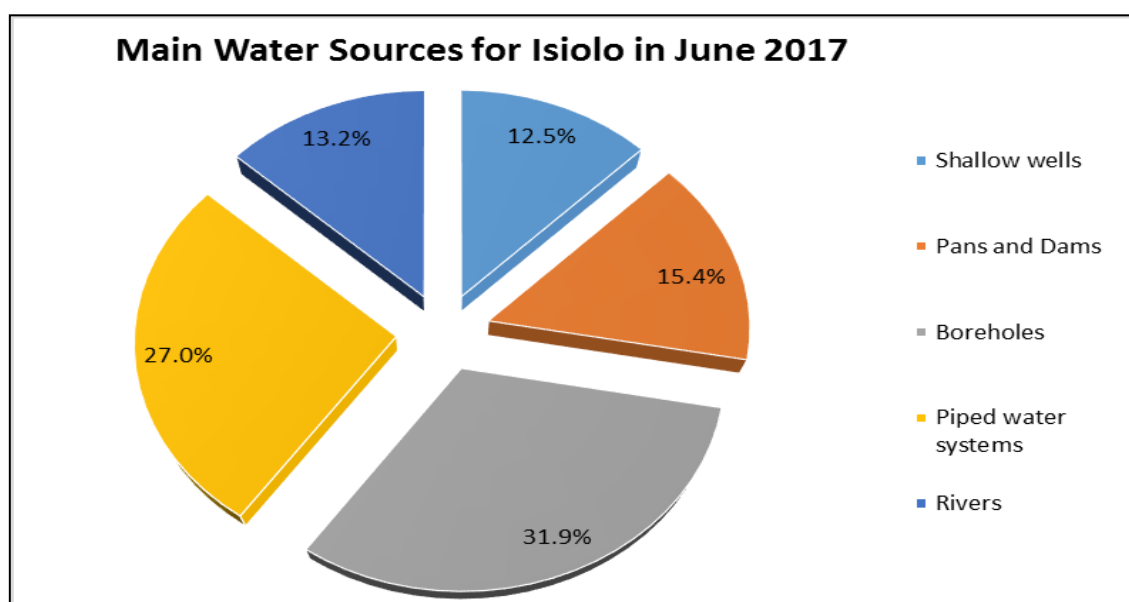
- The county average grazing distance is 15km (May 2017). The distances remained the same as the previous month. The grazing distance is high in drought grazing reserves where animals trek for more than 15km one way.
- Compared to long term mean of the same period, the distance increased by 6.2%.
- There was stability in the average distance to grazing areas where it increased significantly from 15km recorded in May to 18.4km over the period under review attributed to depletion of pasture and browse as an impact of the failed rains on rangeland conditions.
- The longest return distance to grazing areas was recorded in the Pastoral at 26km while Agro-pastoral livelihood zone recorded 14.5km.
- The distance to grazing areas was double the average of 9.0km for this time of the year.



HYDROLOGICAL DROUGHT

1.3 Water Sources and Availability

1.3.1 Main Sources of Water



- Water sources available in the current month were boreholes, sand dams and shallow wells.
- Most shallow wells and sand dams increased in depth and recorded low yield.
- The shallow wells in Hawaye, Dadacha Bassa, Alango, and Dololo Dakiye dried up over the month. Communities in these centres are facing severe water shortages both for human and livestock use.
- Water trucking intervention supported by County Government and NDMA is ongoing.

Ground observations and reports show that the state of water sources was ranked at index 3 in reference to the scale below implying the water availability was below normal for the period.

INDEX	STATE OF WATER	DESCRIPTION
1	EMERGENCY SITUATION	All main water sources have dried up; only few boreholes still yielding significant amounts
2	STRONGLY INADEQUATE	Surface water sources have dried up while the underground water sources are yielding very little amounts of water. Breakages of boreholes contribute to worsen the situation. Acute water shortage

		in many areas within the livelihood.
3	INADEQUATE	Surface water sources have dried up while the underground water sources are yielding modest amounts of water. Concentration of livestock around few water points contribute to spread communicable diseases and to degradation of rangeland
4	DECLINING	The water availability is below normal for the period, but showing declining trends.
5	NORMAL	The water availability is normal for the period
6	GOOD	The water availability is above normal for the period

1.4 EMERGING ISSUES

1.4.1 Insecurity/Conflict/Displacement

- Conflict and insecurity increased in the current month. Fear still persist among the pastoralists in the Cherab ward where herders lost over five thousands (5000) herds of cattle the previous month.
- Tension between Rendille and Boran communities persists around Barchuma, Sabarwawa and Delbeq areas.

1.4.2 Migration

- Livestock still remained concentrated in the drought grazing reserves and the river flood plains, both areas are depleted in terms of pasture and forage.
- There is Livestock out migration from Drought Reserve boreholes of Duma, Yamicha to Arbjahan and Moyale is ongoing.
- Others have migrated towards Laikipia county and private ranches.

1.5 Implication on Food Security

- Livestock are continually getting weak and dying leading into heavy losses of livelihoods for the pastoral community.
- Market functionality was greatly affected due to poor livestock body condition and the subsequent migration to distant grazing areas outside the county.

SOCIO-ECONOMIC INDICATORS

2.0 PRODUCTION INDICATORS

2.1 Livestock Production

2.1.2 Livestock Body Condition

- Livestock body condition for cattle was poor while that of camel was fair across all the livelihood zones attributed to the deprived state of pasture and browse condition coupled with relatively long distances to water sources.
- For most livestock, current body condition can be rated at index 3 as per the threshold scale below.

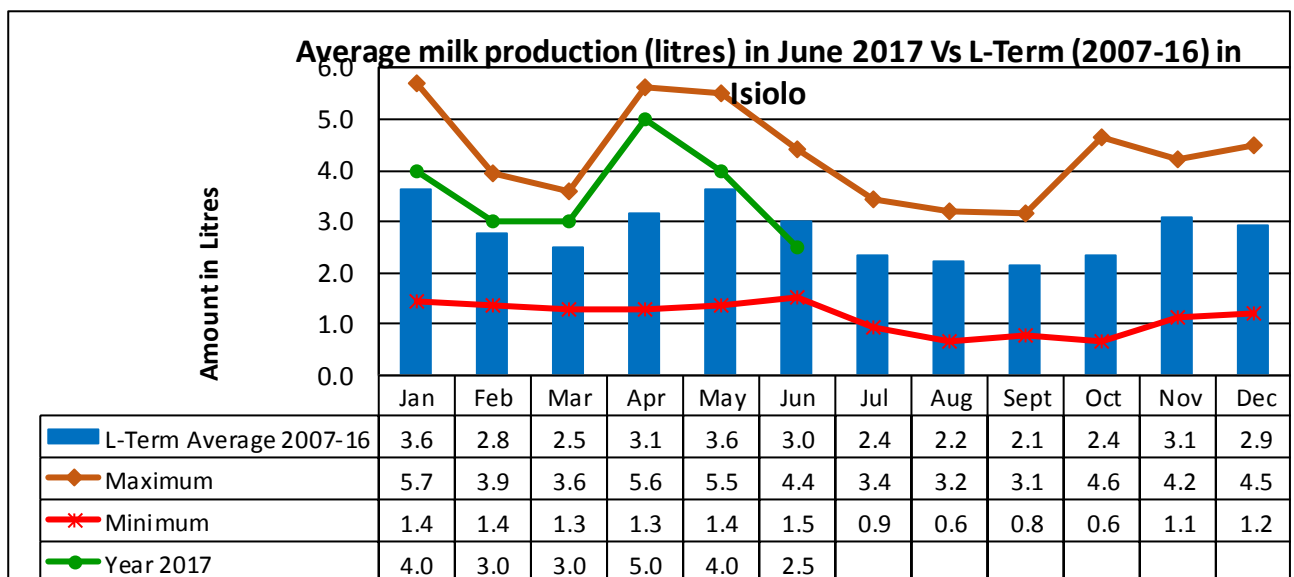
BODY CONDITIONS	SCORE	WARNING STAGE
Emaciated, little muscle left	1	Emergency
Very thin no fat, bones visible	2	
Thin fore ribs visible	3	Alert Worsening/Alarm
Borderline fore-ribs not visible. 12 th & 13 th ribs visible	4	Alert
Moderate. Neither fat nor thin	5	Normal/Alert
Good smooth appearance	6	
Very Good Smooth with fat over back and tail head	7	Normal
Fat, Blocky. Bone over back not visible	8	
Very Fat Tail buried in fat	9	

2.1.3 Livestock Diseases

- There were several incidences of infection and death of goats from sheep and goat pox in Isiolo North sub-county. Other diseases reported during the period under review were Contagious Caprine Pleuropneumonia (CCPP), Trypanosomosis, and Heart Water diseases, which are endemic across all livelihood zones.

2.1.4 Milk Production

- Milk production declined significantly to 2.5 litres per household from 4.0 litres in the previous month.
- Milk production per household was slightly lower than the 10-year average attributed to the reduced TLUs in addition to poor condition of pasture and browse coupled with long distances to water sources.
- Milk production per household was lower than the 10-year average attributed to the reduced TLUs in addition to poor condition of pasture and browse coupled with long distances to water sources and migrations.



2.2 Crop Production

2.2.1. Timeliness and Status of Crops

- All crops under rainfed agriculture in the agro-pastoral livelihood zone wilted due to moisture stress following the failure of rains in most parts of the county.

2.2.2. Pests and Diseases

- There were no major reports of pests' infestation across all the livelihood zones.

2.3 Implication on Food Security

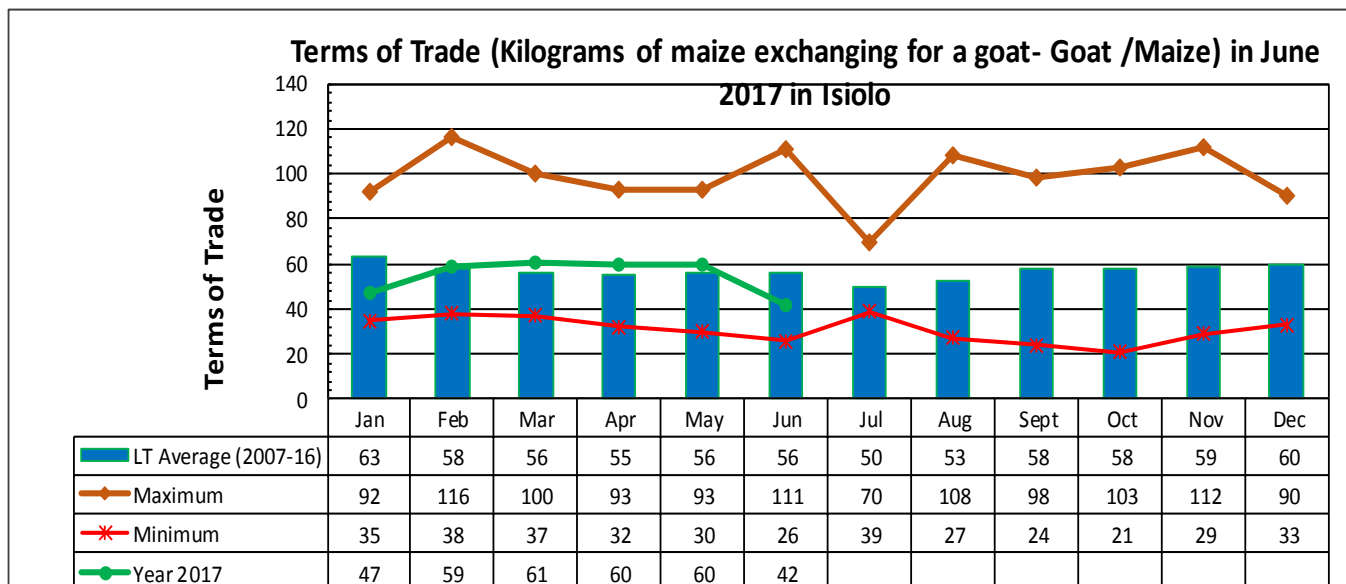
- Animal and crop production deteriorated further due to the limited pasture and water resources leading to the worsening food insecurity at the household level in all livelihood zones. Consequently food prices continually increased thereby eroding household's purchasing power.

3.0 ACCESS INDICATORS

3.1 Livestock Prices

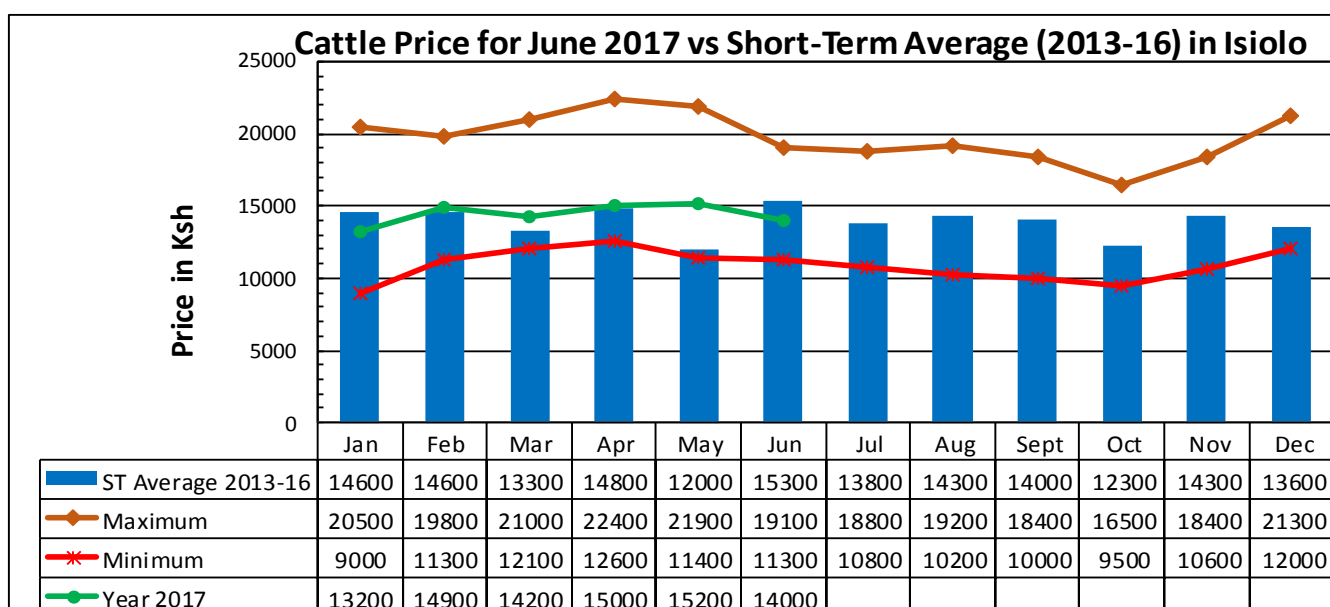
3.1.1 Terms of Trade

- The Terms of Trade (the number of kilograms of maize a household would purchase after a sale of one goat) decreased significantly from 60 kilograms in the previous month to 42 kilograms in the month under review, 2017.
- The ToT for the period under review was 25 percent lower than the long-term average value during the same period.



3.1.2 Cattle Prices

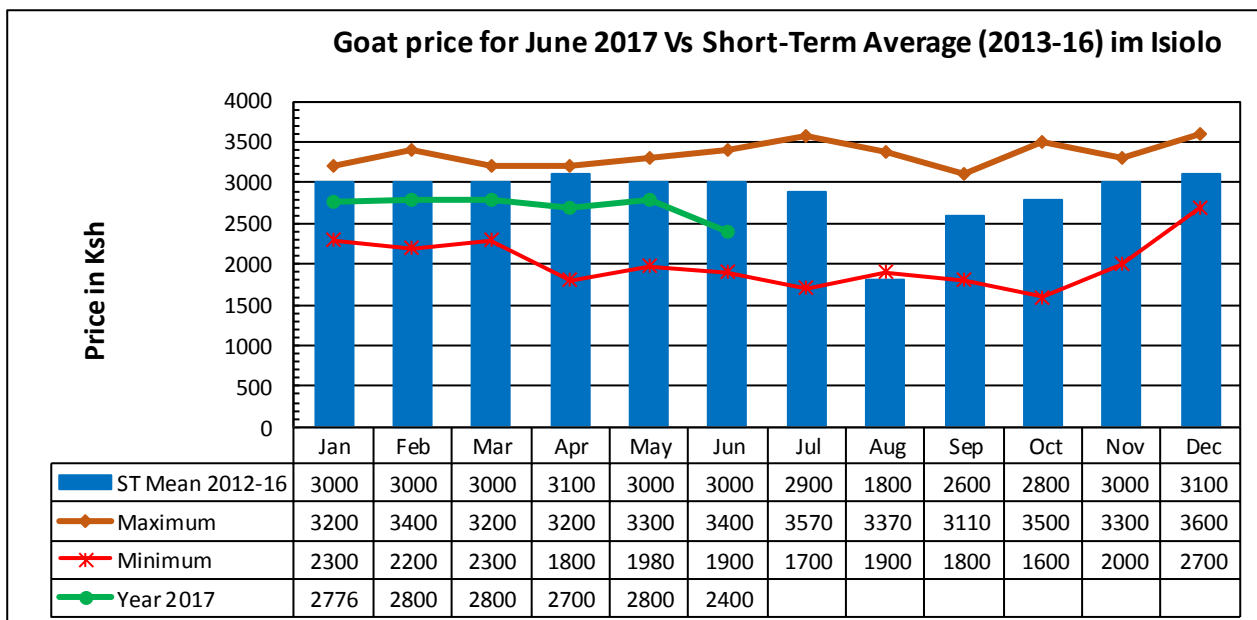
- The average household cattle prices decreased from Ksh.15,200.00 recorded in the previous month to Ksh 14,000.00 in the month under review.
- Cattle prices continued to perform poorly at the farm gate and market levels, a factor that is partially attributed to the low demand and poor condition following the poor condition of pasture in all livelihood zones.
- The current price was 8 percent lower than the four-year short-term average of Ksh 15,300.00.



3.1.3 Goat Prices

- There was stability in the average farm gate goat prices in all livelihood zones where the price decreased from Ksh 2,700.00 in May to Ksh.2,400.00 in the month under review.
- The pastoral livelihood zone recorded the least average price of Ksh.1,800.00 as compared to the agro pastoral livelihood zone price of Ksh. 2,600.00.
- Isiolo North and Isiolo South recorded average price of Ksh 2,200.00 and Ksh 2,600.00 respectively.

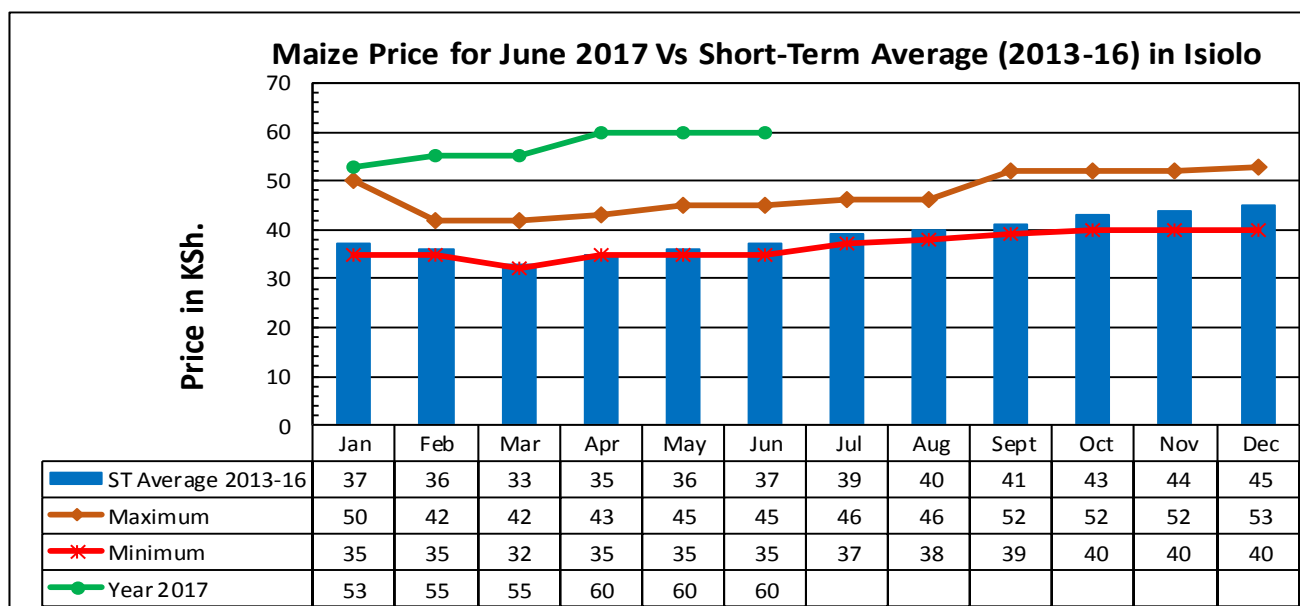
- The average goat price was 24 percent lower than the four-year average of Ksh 3,000.00.



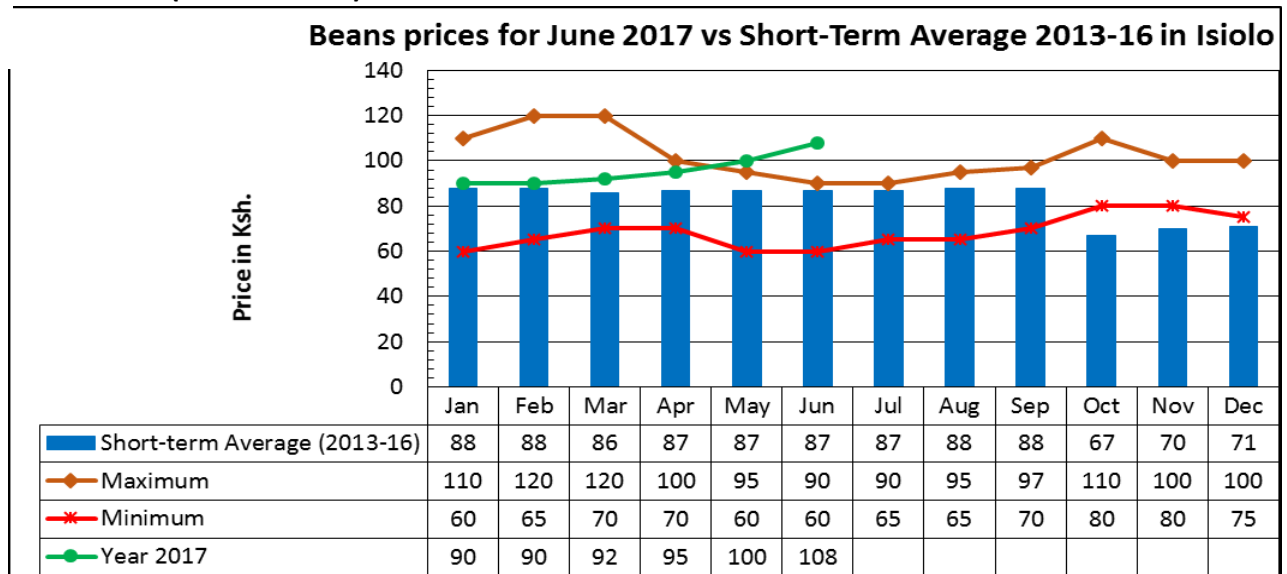
Price of Cereals and Other Food Products

3.2 Maize Prices

- The average market price of a kilogram of maize stabilized at Ksh 60.00 during the period under review. The high price was attributed to the low supply of the commodity due to minimal maize production in the neighbouring counties.
- The average maize price was 62 percent above the four-year average of Ksh 37.00.



3.2 Beans Price (Market Level)

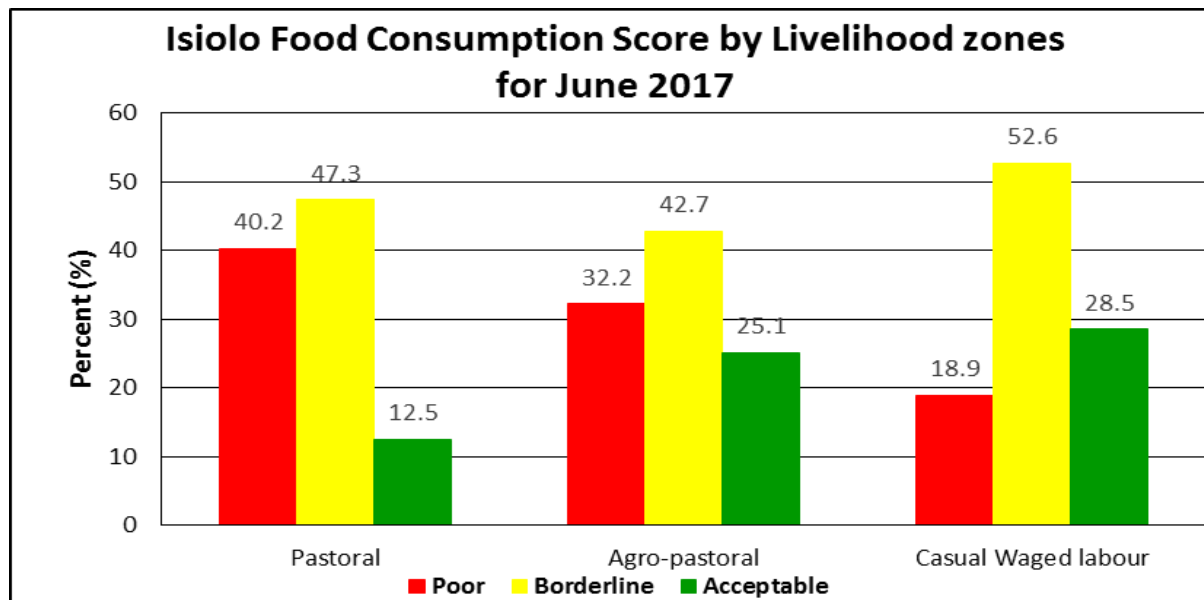


- The county average price of beans was kshs.108.00 per kilogram. The pulse’s price has remained high in the county due to its limited supply in the market following poor production occasioned by poor harvests in the agro-pastoral livelihood zone and the neighbouring counties such as Meru.
- The price was 8.0% higher than the short-term average price of Ksh. 87.00 during the same period of the year.
- The price was highest in the pastoral livelihood zones at an average of ksh 120.00.

3.3 Milk Consumption

- The average milk consumption per household increased slightly to 1.8 litres in the month under review from 2.5 litres recorded in May, 2017. The decrease was attributed to the deteriorating production recorded in all livelihood zones mainly due to inadequate pasture and browse, long distances to water sources.

3.4 Food Consumption Score



- About 80 percent of the households are currently food insecure particularly those in borderline and poor food consumption scores, attributed to poor access to food commodities occasioned by deteriorating crop and milk production, poor incomes and high food prices.

Period	Acceptable (%)	Borderline (%)	Poor (%)
April, 2017	27.2	48.3	24.2
May, 2017	23.2	49.5	28.3
June,2017	22	47.5	30.4

- The poor FCS implies household are not consuming staples and vegetables every day and rarely consuming protein rich food while borderline FCS imply household consuming staple and vegetables every day accompanied by oil and pulse a few times in a week while the acceptable imply households consuming staples, vegetables every day, and frequently accompanied by pulses.

3.5 Availability of Water for Household Consumption

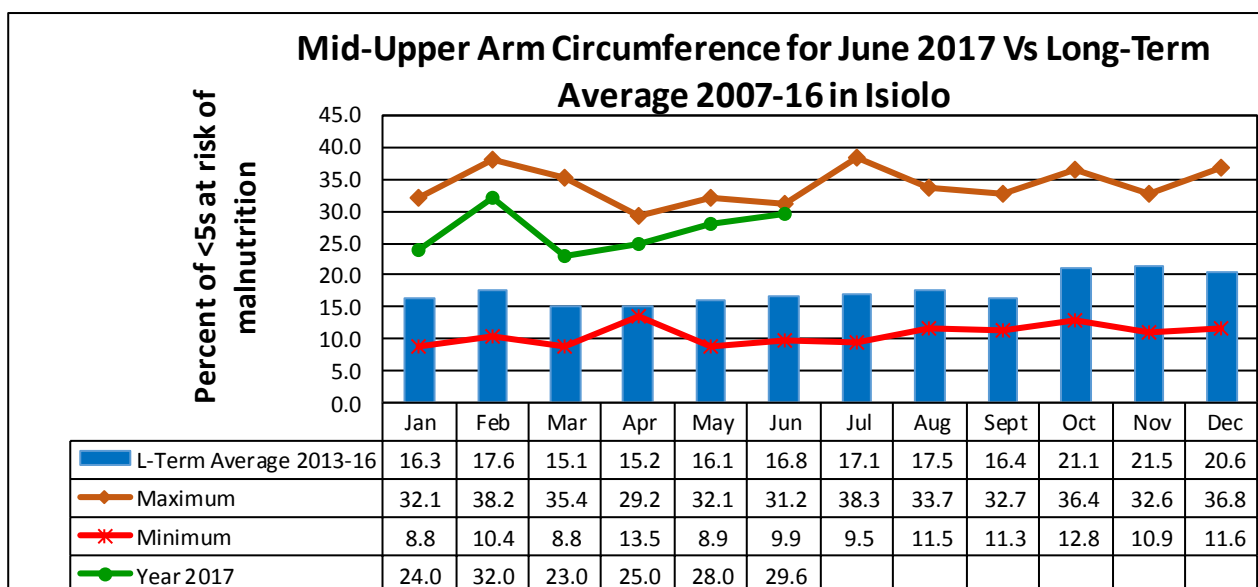
- Household water access average distance to water increased over the month to 6.8km from 5.2km in the previous month. This was attributed to the deteriorating water status as most shallow wells and water pans dried up forcing households to go further to permanent water sources.
- The waiting time was an average of 30minutes in the pastoral livelihood zone as compared to 10 minutes and 5minutes in the Agro-pastoral and casual waged labour respectively.
- The average water distance in pastoral livelihood zones was 10km while the distance was 7.2km in the Agro-pastoral livelihood zone. The lowest distance of 1.1km was recorded in the casual waged labour livelihood zone.

UTILISATION INDICATORS

4.1 Health and Nutrition Status

4.1.1 MUAC

- The proportion of children at risk of malnutrition whose MUAC measurement was below 135 mm threshold for the period under review increased to 29.6 percent as compared to 28.0 percent recorded in the previous month.
- The current high proportion of children at risk of malnutrition was attributed to the reduced amount and frequency of meals and limited dietary diversity mainly due to the worsening food availability.



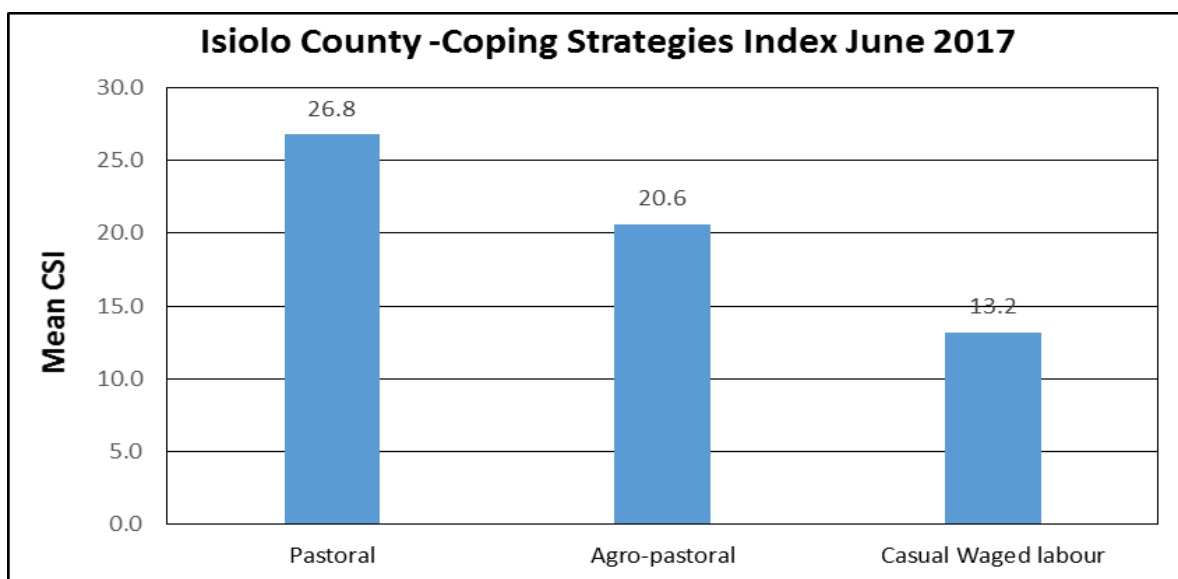
- The proportion of children at risk of malnutrition whose MUAC measurement was below 135mm was above the long-term average of 16.8 percent implying a more worse situation as compared to the long-term mean.

4.1.2 Health

- The prevalence of most common diseases for the general population in Isiolo South and Isiolo North sub-Counties included diseases of the respiratory system, malaria, skin disease, urinary tract infections and rheumatism while those mainly affecting children under five years include: diseases of the respiratory system, pneumonia, malaria, intestinal worms and skin diseases.

4.2 Coping Strategy Index

- The Coping Strategy Index (CSI) increased to 20.2 in the month under review compared to 17.0 in the previous month.
- The increasing index implies a rise in the number and frequency of households employing consumption based coping strategies.
- The highest CSI was recorded in the pastoral livelihood zone at 26.8 compared to 20.6 and 13.2 in the Agro-pastoral and casual labour livelihood zones respectively. This implies that households in the pastoral livelihood zone are employing more severe coping strategies than in the other zones.
- The most commonly employed coping mechanisms over the period included reliance on less preferred and or less expensive food, reduction of the number of meals and reduction in portion or size of meals.



5.0 Food Security Prognosis

The County drought status remained at Alarm stage and the trend is worsening. The rainfall performance in all livelihood zones was depressed and poorly distributed.

- ☒ Livestock disease outbreak; Foot and Mouth Disease (FMD) and Lumpy Skin Disease are still persistent in Sericho and Oldonyiro respectively. This will make cattle body condition to depreciate further.
- ☒ Livestock body condition: Cattle are emaciated and deaths have been reported in three Wards of Sericho, Cherab and Oldonyiro. The deaths are high in Sericho and Cherab Ward.
- ☒ Water shortages are severe in Sericho, Merti and Garbatulla. Shallow wells that were in use dried up in Bassa, Dakiye and Malkagalla and people and livestock are facing severe water shortages.

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Ongoing food and Non-Food Interventions

1. Provision of supplementary livestock feeds to core breeding herds in Dadacha Bassa by FAO targeting 235 households and additional livestock feeds from the National Government.
2. Provision of 25 (10,000 litres) collapsible tanks by FAO and Northern Water Service Board.
3. Provision of 10,000 litres plastic water storage tanks by Northern Water Service Board.
4. Support of food vouchers by ACF to 500 households.
5. Provision of relief food by National Government.
6. Cash transfer by KRCS to 3,800 households in Sericho, Oldonyiro and Cherab wards.

6.2 Recommendations

Type of intervention	Implementer
Provision of timely food aid to vulnerable people	County/National Governments
Expand Cash Transfers/Food to those who are Food Insecure. Currently supported by Kenya Red Cross Society	County Governments, National Government
Food assistance to conflict affected areas	County Government
Enhance livestock market subsidy	National/County Government

B. Non – Food Interventions

Type of intervention	Action
Livestock off take- Slaughter Destocking	National Government
Repairs of the broken pumps in the Drought Reserve Boreholes/Sericho/Iresaboru/Dogogicha	County Government
Pre -positioning of fast moving spares in strategic boreholes and fuel subsidy to strategic boreholes	Partners/LVIA/NDMA/County Government
Peace building and conflict resolution intervention in Belgesh, Hawaye, Kinna, Garbatulla,Delbeq, Kom, Barchuma, Sabarwawa and Bassa	Peace Committees and Forums, County Administration and NDMA
Purchase of livestock feeds to the core breeding herds	National Governments/NDMA/ FAO
Mass screening and integrated medical outreaches	County Government, ACF, KRCS, Doctors of the World, UNICEF and NDMA

Isiolo District : Livelihood Zones

