

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



A Vision 2030 Flagship Project



October 2017 EW Phase



Drought Situation & EW Phase Classification

Biophysical Indicators

- The month of October was characterized by an alternating occurrence of heavy cloud cover, some little rains, insignificant in amount and poorly distributed in space and time.
- The 3-Month Vegetation Condition Index (VCI) was 13.6 indicating a severe vegetation deficit. Isiolo North and Isiolo South were at severe and moderate vegetation deficit respectively.
- The water levels and availability were below normal apart from a few parts that received some rains though little.

Socio Economic Indicators (Impact Indicators)

Production Indicators

- The condition of pasture and browse was poor characterized by bare and depleted grazing areas.
- Livestock body condition for cattle and sheep was poor while that of goats and camel was fair across all the livelihood zones. Deaths of livestock continued in the pastoral livelihood zone.
- Crop production under irrigation was heavily depressed as an impact of the deteriorating water levels.

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 0.9 litres and 0.7 litres respectively.

Utilization Indicators

- Percentage of children at risk of malnourishment whose MUAC was below 135mm was 31.3 percent for the period under review

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)	13.6	35-50
Water Sources	3	5
Production Indicators	Value	Normal
Livestock Migration Pattern	Abnormal	Normal
Livestock Body Conditions	Score 3	Score 7
Milk Production	0.9 Litres	<2.4
Livestock deaths (from drought)	Increasing No. of deaths	No death
Access Indicators	Value	Normal
Terms of Trade	36	>58
Milk Consumption	0.75 Litres	>1.8 Litres
Water for Households	Fair	Good
Utilization indicators	Value	Range/Value
MUAC	31.3	>21.1
Coping Strategy Index (CSI)	24.6	>34
Food Consumption	19.8 Percent	>60 Percent Acceptable
	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

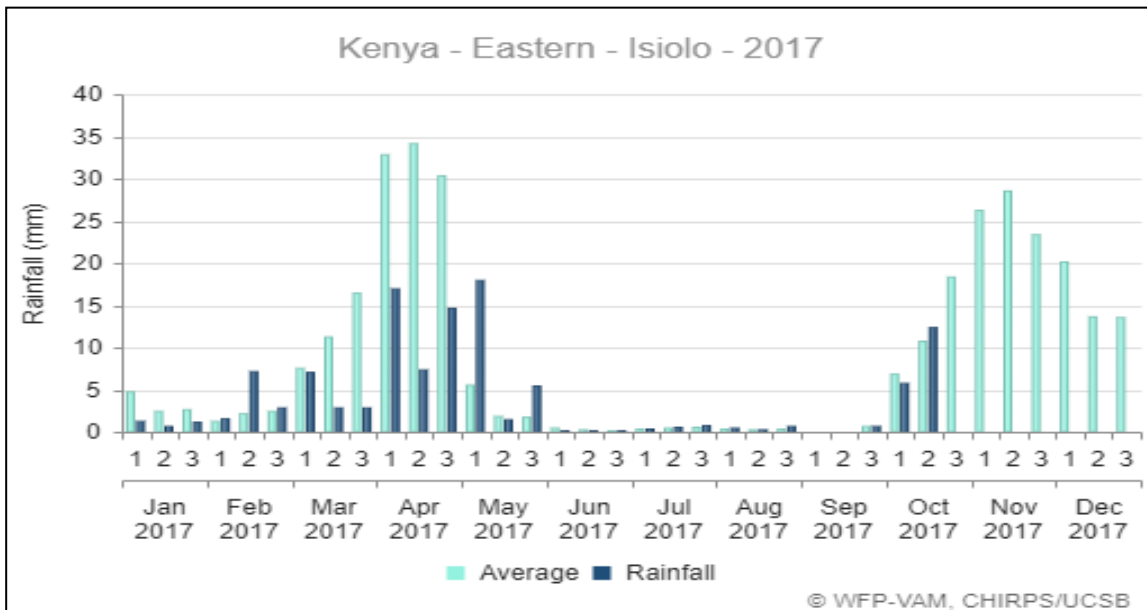
BIOPHYSICAL INDICATORS

1.0 MEASURING DROUGHT HAZARD

1.1 METEOROLOGICAL DROUGHT

1.1.1 Actual Rainfall

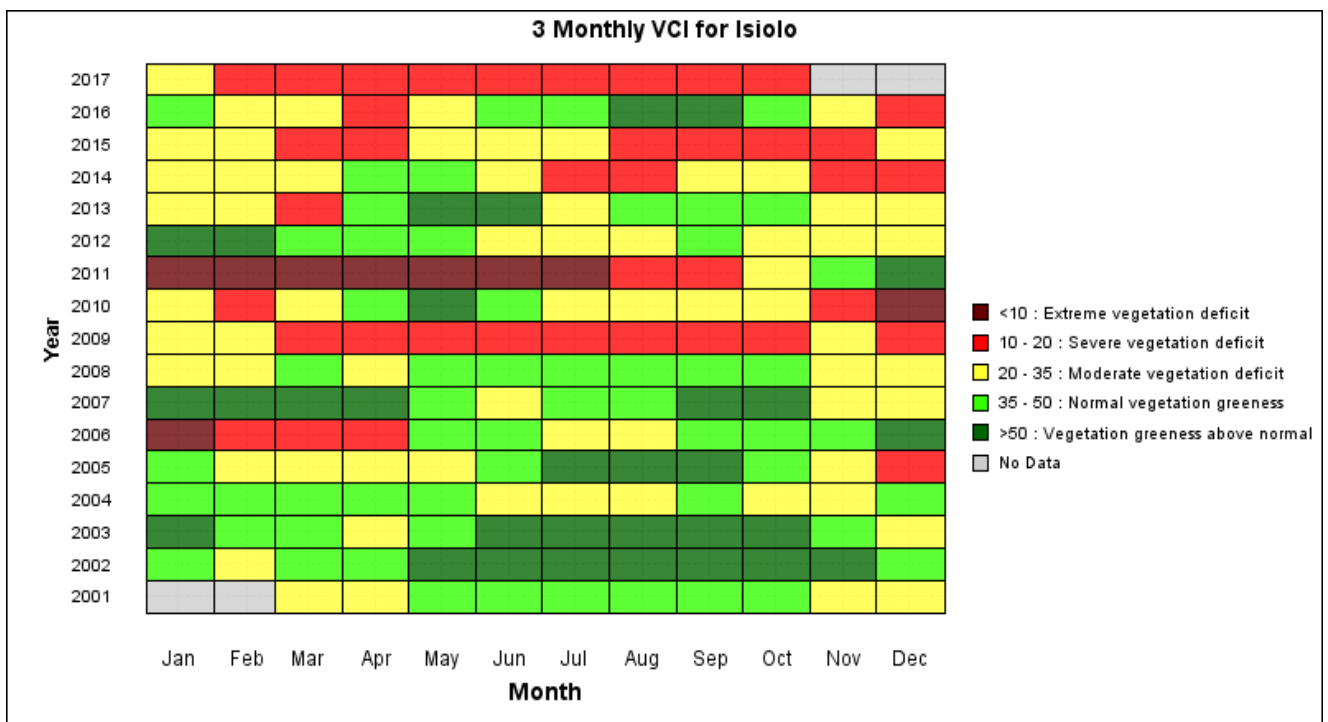
- The county received an average of 5.6mm and 12.3mm of rainfall in the 1st and 2nd dekads of the month respectively. However the rains were poorly distributed spatially and temporarily. A greater percentage of the county has hardly received any significant downpour.
- With reference to the long-term 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 October 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 13.6 implying a persistent prevalence of poor vegetation condition across all livelihood zones.
- The poor vegetation condition is attributed to the depressed rainfall of two consecutive seasons OND 2016 and MAM 2017.

1.2.2 NATURAL VEGETATION AND PASTURE CONDITION
Field Observations (Pasture and Browse Conditions)

Pasture Condition

- The quantity and quality of pasture was extremely poor in all parts of the county attributed to the long dry season. A small section between Oldonyiro and Isiolo Central received very minimal rain in the first and second dekad of the month with no regeneration of pasture.
- Pasture in most grazing fields in the pastoral-all species livelihood zone is depleted and no regeneration is expected as no rains have been received in most parts of the county.
- The condition could be rated as 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 continued dry season. However, the little showers had no impact on the browse condition as the amount is very little during the month under review.
- All 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 average grazing distance for animals left in traditional grazing areas increased worsened further during the month under review. The grazing distances were exceedingly long for herds that migrated to grazing reserves within as well as those outside the county where animals trekked for more than 40km one way.
- Long distances to grazing areas were mainly attributed to the continued depletion of pasture and browse resources following poor regeneration as an impact of the successive failed rainy seasons.
- The longest return distance to grazing areas was recorded in the pastoral at 24.3km while Agro-pastoral livelihood zone recorded 10.4km.

HYDROLOGICAL DROUGHT

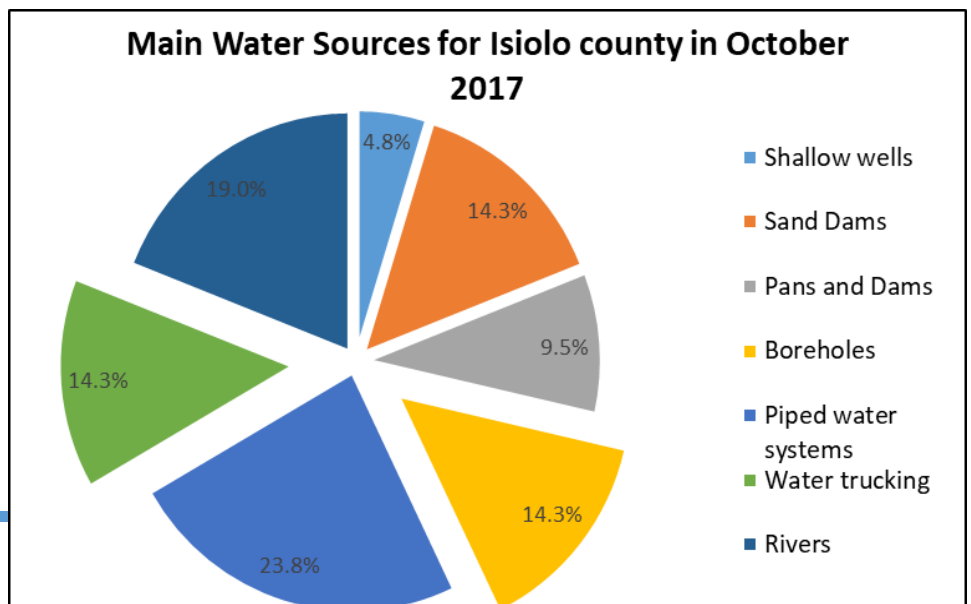
1.3 Water Sources and Availability

1.3.1 Main Sources of Water

Water sources during the month were boreholes, sand dams, rivers and shallow wells.

Most shallow wells in Garbatulla and Merti sub-counties recorded very low yield. However, sand dams in the hilly sections of Oldonyiro ward had a significant recharge after some little rains were received in the region.

Most shallow wells in Hawaye, Dadacha Bassa, Alango, and Dololo Dakiye remained dry in the month of October causing severe water shortages both for livestock and human consumption.



- 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

- Several households were displaced in Merti and surrounding settlements after River Ewaso Nyiro broke its banks submerging a section of the built area.
- Conflict and insecurity decreased in the current month. However, conflict resolution and peace building initiatives are being carried out in all conflict hotspots.
- Tension is high along Isiolo, Meru County borders where cattle rustling is reported.

1.4.2 Migration

- A significant number of herds of animals that had moved to Moyale and Wajir North and West were reportedly migrated back into the county following exhaustion of pasture and browse resources in those regions and were reported to be moving to Laikipia and Samburu counties targeting private ranches and conservancies.
- Pastoralists were reportedly targeting the hilly region towards Oldonyiro, Laikipia and some parts of Samburu as the next grazing area to salvage their weakening animals. There were reported cases of livestock migration from dry grazing reserve boreholes of Duma and Yamicha to Arbahan and Moyale, as others moved towards Isiolo Central and neighbouring sections of Samburu County where some little rains have been received.

1.5 Implication on Food Security

- The long distances of trekking in search of pasture and browse resources has led to continual weakening of animals leading into deaths considered as immense loss of livelihood for the pastoral communities.
- Market functionality was greatly affected due to poor livestock body condition and the subsequent migrations to distant grazing areas outside the county.

SOCIO-ECONOMIC INDICATORS

2.0 PRODUCTION INDICATORS

2.1 Livestock Production

2.1.1 Livestock Body Condition

- Livestock body condition for cattle and sheep was poor while that of camel was fair and on a deteriorating trend across all the livelihood zones attributed to the deprived state of pasture and browse condition coupled with 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	

2.1.2 Livestock Diseases and Pests

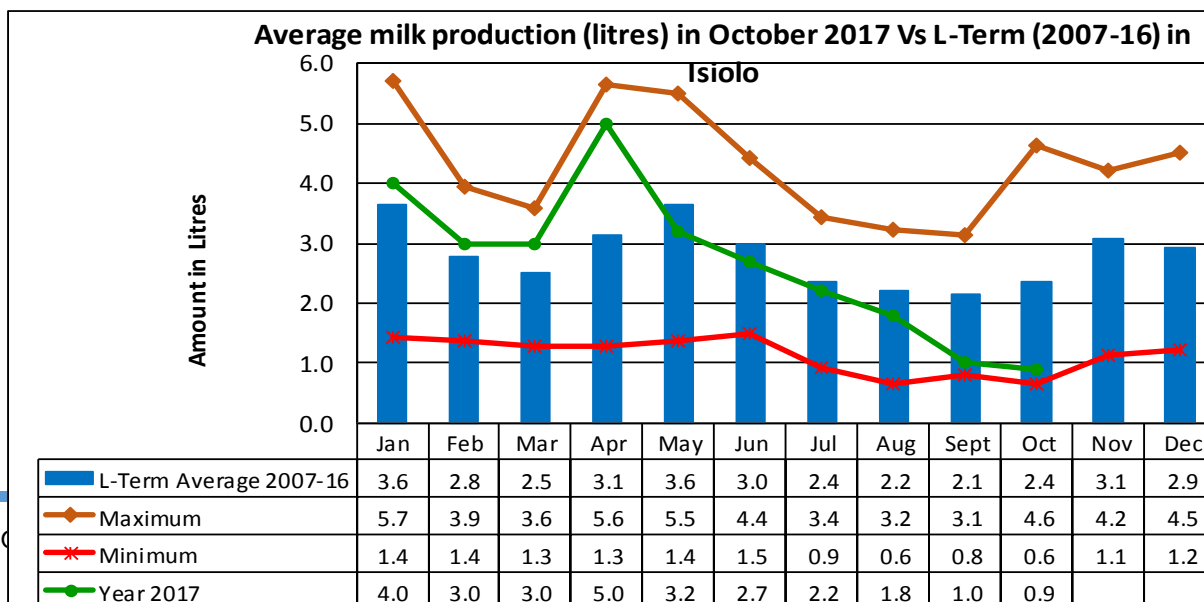
- Ectoparasites and endoparasites (worms) infestation and as well as malnutrition were some of the hinderances to animal production reported over the month under review. Cases of opportunistic and endemic ones such as Contagious Caprine Pleuropneumonia (CCPP) were reported across all livelihood zones.

2.1.3 Livestock Deaths

- Deaths of sheep, goats and cattle were reportedly on the rise during the month under review as most herds that migrated into the neighbouring counties moved back into the county after exhausting the available pasture and browse resources.
- Grazers, cattle and sheep, have been adversely affected by malnutrition due to lack of feed subsequently causing a lot of deaths.

2.1.4 Milk Production

- Milk production maintained a decline trend where the average amount produced at household level was below 0.9 litres as compared to 1.0 litres in the previous month.



- Milk production per household was slightly lower than the 10-year average of 2.4 litres attributed to the prevailing inadequacy of pasture and browse and water resources in all livelihood zones.
- The progressive low milk production could be attributed to reduced TLUs in addition to the prolonged insufficiency of pasture and browse and water resources in the entire county.

2.2 Crop Production

2.2.1. Timeliness and Status of Crops

- Farmers in the Agro-pastoral livelihood zones (around Burat and Kinna area) planted their crops slightly before and after onset of the rains that have been received in some parts of Isiolo South, Isiolo Central and Oldonyiro.
- Crops planted at the onset have germinated and are doing well as weeding activities began for the early planted crops.

2.3 Implication on Food Security

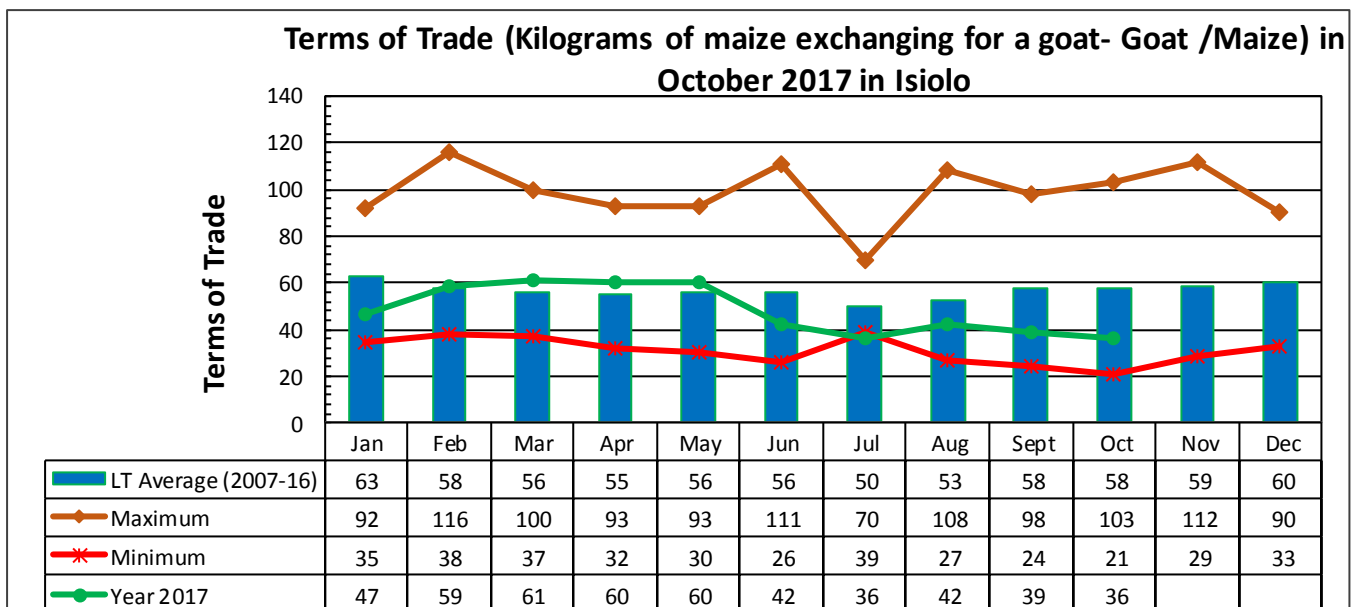
- Animal and crop production deteriorated further due to the limited pasture and water resources leading to the worsening food insecurity at the household level in all livelihood zones. Pastoralists in the entire pastoral livelihood zone are still awaiting the onset of rains which will reverse their livelihoods wellbeing.
- Consequently most food commodities' prices remained relatively high while others increased thereby limiting access to essential dietary needs.

3.0 ACCESS INDICATORS

3.1 Livestock Prices

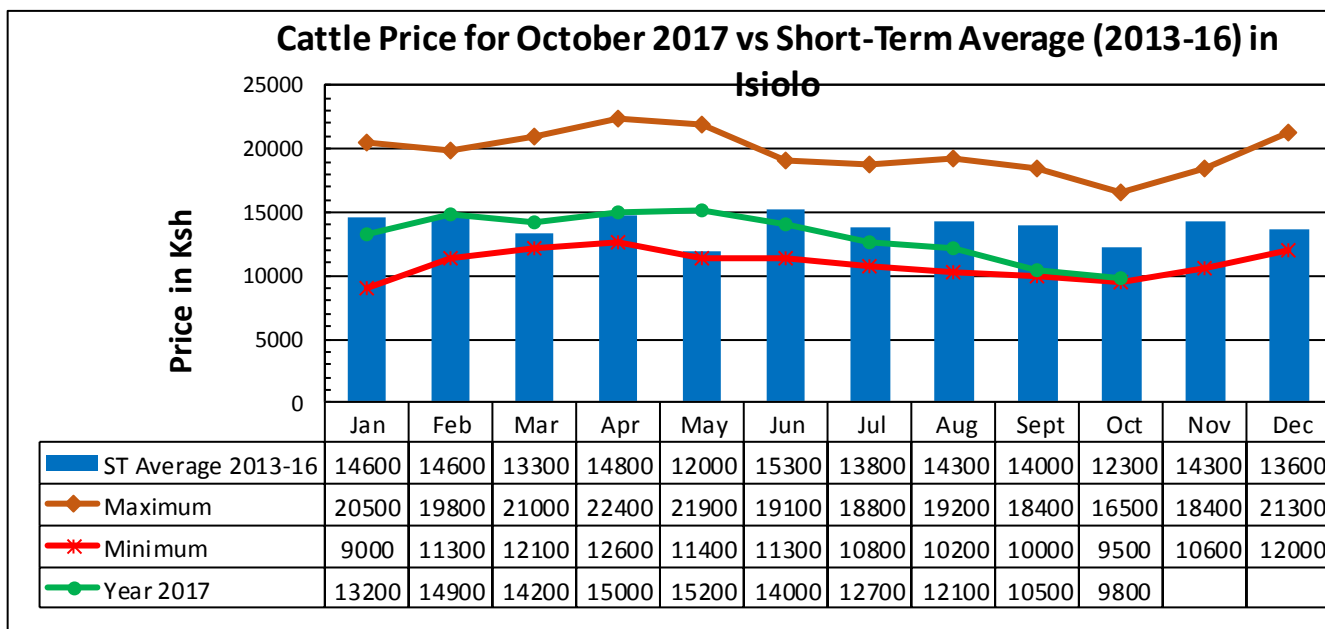
3.1.1 Terms of Trade

- The Terms of Trade (the number of kilograms of maize a household would purchase after a sale of one goat) decreased from 39 kilograms in September to 36 kilograms in the month under review.
- The TOT for the period under review was 38 percent lower than the long-term average value during the same period.



3.1.2 Cattle Prices

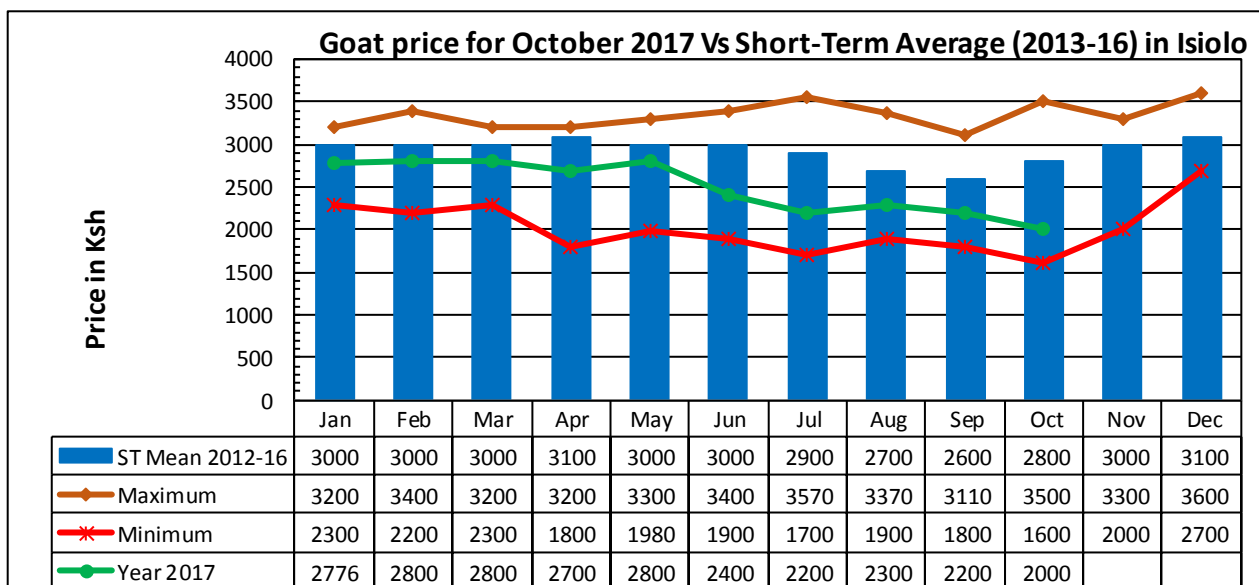
- The average household cattle prices decreased from Ksh.10,500.00 recorded in the previous month to Ksh 9,800.00 in the month under review.
- Cattle prices continued to perform poorly at the farm gate and market levels, a factor that is largely attributed to the poor animal body condition following the prevailing acute of pasture across all livelihood zones.



- The current price was 20.0 percent lower than the four-year short-term average of Ksh 12,300.00.

1.3 Goat Prices

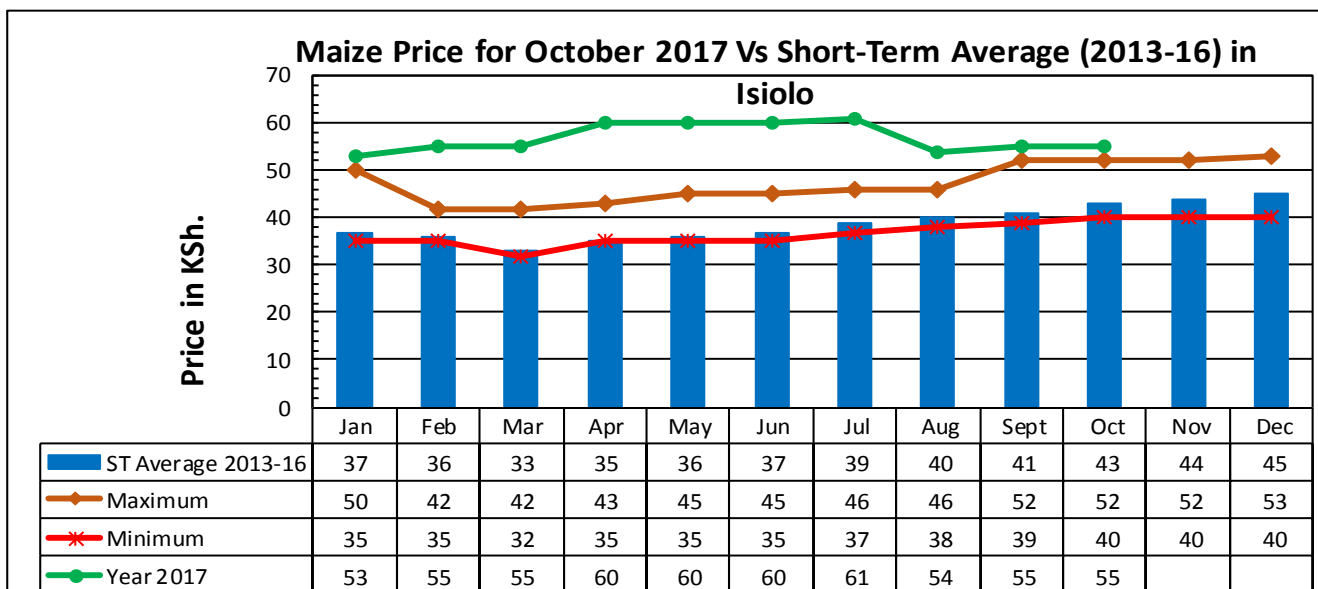
- There was stability in the average farmgate goat prices in all livelihood zones as the price reduced from Ksh.2,200.00 to Ksh.2,000.00 in the month under review. This was attributed to the worsening body condition in all livelihood zones.
- The pastoral livelihood zone recorded the least average price of Ksh.1,700.00 as compared to the agro pastoral livelihood zone price of Ksh. 2,200.00.
- The average goat price was 29 percent lower than the four-year average of Ksh.2,800.00.



3.2 Price of Cereals and Other Food Products

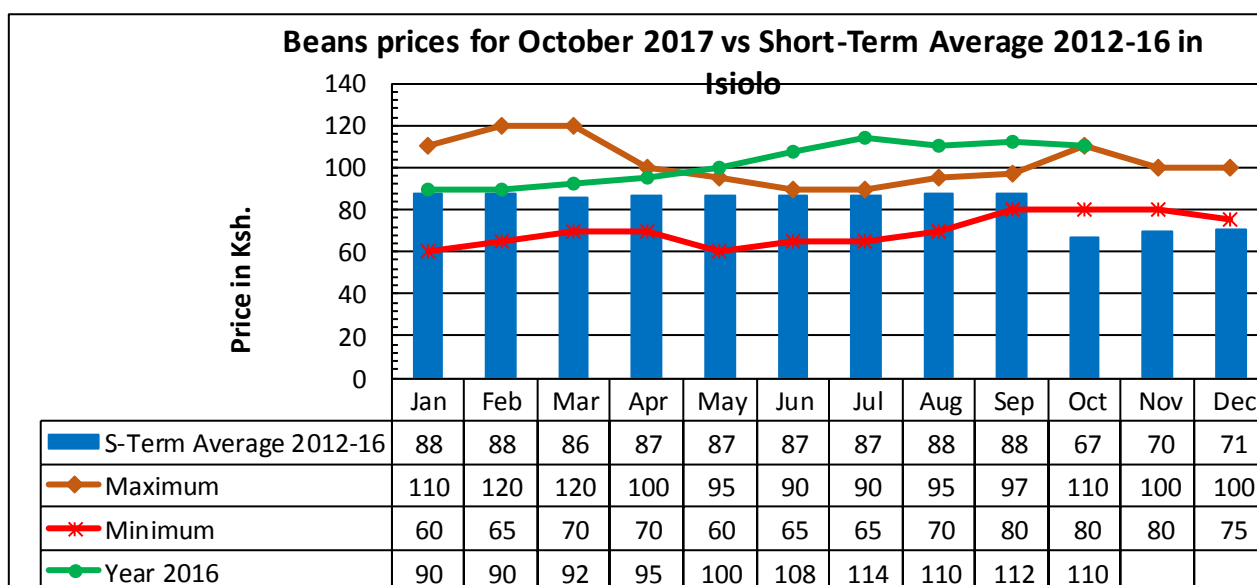
3.2.1 Maize Prices

- The average market price of a kilogram of maize stabilized at Ksh 55.00 during the period under review. The stability was attributed to an uninterrupted supply of the commodity from the neighbourhood and other large scale producing counties.
- The average maize price was 28 percent above the four-year average of Ksh 43.00.



3.2.2 Beans Price (Market Level)

- The county average price of beans was stable after having an insignificant drop from Ksh 112.00 to Kshs.110.00 per kilogram during the month under review. 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.
- The price was 64 percent higher than the short-term average price of Ksh. 67.00 during the same period of the year.
- The highest price was recorded in the pastoral livelihood zones of an average of ksh 120.00.

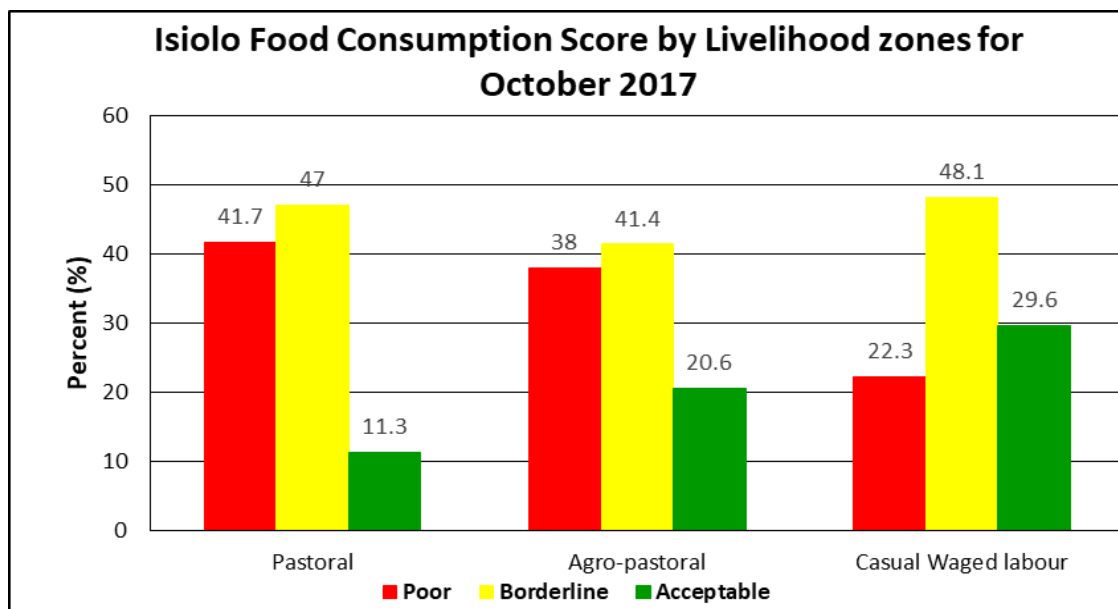


3.3 Milk Consumption

- The average milk consumption per household decreased slightly to 0.75 litres in the month under review from 0.90 litres recorded in the previous month. The decrease was attributed to the deteriorating production recorded in all livelihood zones mainly due to animals' deteriorating health as pasture, browse, and water resources deplete in all livelihood zones.

3.4 Food Consumption Score

- Close to 80 percent of the households in the county were persistently food insecure in the month under review, particularly those in borderline and poor food consumption scores. This has been attributed to poor access to food commodities occasioned by deteriorating animal and crop production, poor incomes and high food prices.



- The poor FCS implies household are not consuming staples and vegetables every day and rarely consuming protein rich food while borderline FCS imply households consuming staples 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 and some meat and milk.

Period	Acceptable (%)	Borderline (%)	Poor (%)
July, 2017	20.4	45.6	33.9
August, 2017	20.2	47.9	31.9
September, 2017	20.3	44.9	34.9
October, 2017	20.5	43	34.3

3.5 Availability of Water for Household Consumption

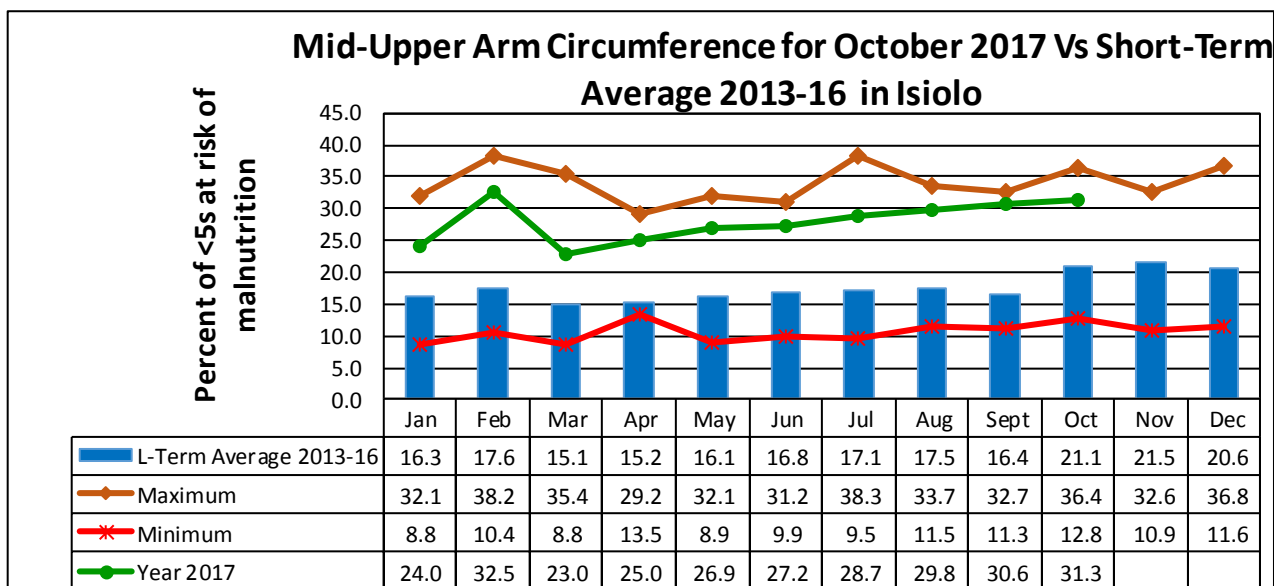
- Household water access average distance to water sources were relatively long at above 8.0km over the month under review. This was attributed to the deteriorating water status as more shallow wells and water pans dried up forcing households to go further to permanent water sources.
- The waiting time was an average of 40 minutes in the pastoral livelihood zone as compared to 12 minutes and 5 minutes in the Agro-pastoral and casual waged labour respectively.
- The average water distance in the pastoral livelihood zones was 14.3km while the distance was 6.7km in the Agro-pastoral livelihood zone. The lowest distance of 1.0 km was recorded in the casual-waged labour livelihood zone.

4.0 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 135mm threshold for the period under review increased insignificantly to 31.3 percent as compared to 30.6 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 deteriorating food availability.



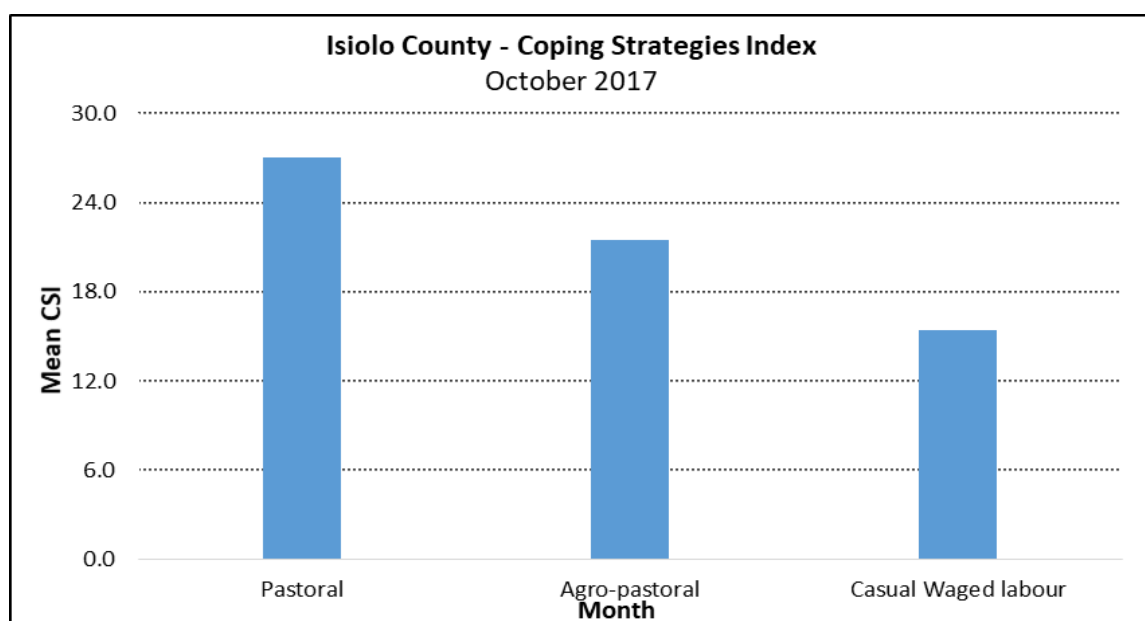
- The proportion of children at risk of malnutrition whose MUAC measurement was below 135mm was above the long-term average of 21.1 percent implying a worse situation as compared to the long-term mean during this time of the year.

4.1.2 Health

- The prevalence of most common diseases for the general population in the county 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 24.6 in the month under review compared to 23.8 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 27 compared to 21.6 and 15.4 in the Agro-pastoral and casual waged labour livelihood zones respectively.
- 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 last season (MAM) rainfall performance in all livelihood zones was depressed and poorly distributed. There was an expectation of rains onset in the month of October but only few parts recorded some insignificant rains. Rangeland conditions in a greater part of the county worsened further as the dry spell progressed resulting into severe scarcity of pasture, browse and water resources leading into massive out-migrations.
- The ability of herders to access good prices for their livestock has been curtailed by periodic migrations which have continued to hamper food accessibility and consumption leading to poor nutrition among the most vulnerable groups. Water shortages are severe in Sericho, Modogashe, Merti and Garbatulla wards. Shallow wells that were in use dried up in Bassa, Dakiye and Malkagalla and people and livestock are facing severe water shortages.
- The food security situation is therefore severe and expected to worsen further as all environmental, production, access and utilization indicators gradually deteriorate until the expected OND rainy season is received with a significant performance.
- The county is therefore at crisis food security phase of the Integrated Phase Classification (IPC 2.0) and with a high probability of drifting into emergency phase.

6.0 CURRENT INTERVENTIONS AND RECOMMENDATIONS

6.1 Ongoing food and Non-Food Interventions

1. Provision of supplementary livestock feeds to core breeding herds by NDMA by providing 4,200 bags of drought pellets in Cherab, Charri, Sericho, Garbatulla and Oldonyiro.
2. Northern Water Service Board Provide 18,000 litres of fuel to support water trucking and strategic boreholes.
3. Support of food vouchers by ACF to 500 households.
4. Cash transfer by KRCS to 3,800 households in Sericho, Oldonyiro and Cherab wards which will continue until February 2018. ACF supports 1,117 households and ACF and Action Aid Kenya supports 500 households with food vouchers.
5. Chakula Kwa Jamii cash transfer programme to 83,000 beneficiaries in the county.
6. Water trucking ongoing in Merti, Sericho and Modogashe by NDMA and Kenya Defence Force supported with four water bowsers for one week.
7. Blanket Supplementary Feeding Programme (BSFP) to 29,538 children between 6-59 months and 7,773 lactating and pregnant women supported by WFP, ACF and Action Aid Kenya.
8. Unicef supported county with 2000 jericans, 2000 buckets and 5000 pieces of bar soaps and distributed to water shortages hot spots in Merti, Sericho, Isiolo Central and Oldonyiro.
9. Slaughter destocking by Kenya Meat Commission (KMC) where 3000 shoats and 3000 herds of cattle targeted to be slaughtered.

6.2 Recommendations

A. Food Interventions

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

B. Non – Food Interventions

Type of intervention	Action
Livestock off take- Slaughter Destocking	NDMA , County Government and National Government
Repairs of the broken pumps in the Drought Reserve Boreholes/Sericho/Iresaboru/Dogogicha	County Government/ NDMA
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/ Caritas Isiolo
Mass screening and integrated medical outreaches	County Government, ACF, AAK, KRCS, Doctors of the World, UNICEF and NDMA

Map showing the county's livelihood zones.

